NATIONAL INFORMATION TECHNOLOGY AUTHORITY

2017

STATISTICAL ABSTRACT

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FOREWORD

This is the second edition of the National Information Technology Authority-Uganda Statistical Abstract produced by the Statistics Department annually.

The NITA-U Statistical Abstract covers information on developments in National Information Technology which is presented on either a Calendar Year (January-December) or Financial Year (July-June) basis, depending on availability of data. It also covers statistics collected within the Authority during the course of normal operations and in conducting its duty as a Government agency in charge of coordination, promotion and monitoring of IT developments in Uganda. Other statistics are collected from other agencies that are involved in the production of IT statistics and other International IT publications.

Copies of this publication are available on the NITA-U website: www.nita.go.ug.
We sincerely hope that this publication will greatly benefit its users.

It is my sincere hope that the statistical information in this publication will be used by the readers to make informed decisions.

James Saaka
Executive Director

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LIST OF ACRONMYS

BPO	Business Process Outsourcing
EGDI	E-Government Development Index
FY	Financial Year
GCI	Global Cybersecurity Index
ICT	Information and Communications Technology
IDI	ICT Development Index
IFMS	Integrated Financial Management System
IT	Information Technology
ITU	International Telecommunications Union
MAN	Metropolitan Area Network
MDAs	Ministries, Departments and Agencies
NBI	National Backbone Infrastructure
NITA-U	National Information Technology Authority-Uganda
NRI	Networked Readiness Index
UGX	Ugandan Shillings
UN	United Nations

EXECUTIVE SUMMARY

This NITA-U Statistical Abstract is an annual publication of some key statistics produced within the Authority under its mandate to coordinate, promote and monitor Information Technology developments. Other statistics are collected from agencies that are involved in the production of Information Technology statistics. The statistics in this publication therefore represent the final product of data collected through surveys, regular reporting forms and data collected in the course of carrying out the Authority's roles.

This publication is divided into four major thematic areas which include; administrative statistics, information technology statistics, ICT performance in the economy and Uganda's ICT rankings on the global scale.

Administrative statistics

This section covers organisational statistics related to people. In the FY 2016/17, the total number of NITA-U staff was 54 compared to 53 recorded in FY 2015/16. The majority (61%) were male and only 39% were female.

Information Technology Statistics

This area covers the national backbone infrastructure, priority IT standards, Certification of IT service providers, awareness of the existence and application of the cyber laws, compliance to IT standards and e-government regulations, capacity building and skilling for e-government, BPO Incubation Centre employment, Internet bandwidth, Internet subscriptions, Internet users, Fixed internet bandwidth pricing and telephone subscriptions.

Of the 204 government offices connected to the NBI, 64% were receiving and utilizing internet bandwidth by end of FY 2016/17.

ICT sector performance in the ICT sector

This includes the ICT sector GDP, trade in ICT goods, ICT sector revenue collections and ICT planned investment.

The percentage share of ICT on GDP at constant prices in 2009/10 prices was 9.6% by the end of FY 2016/17 compared to 8.7% in FY 2015/16. The value of ICT exported goods stood at UGX 82.250 billion in FY 2016/17 compared to UGX 38.198 billion recorded in FY 2015/16. The ICT sector contributed 7.5% to the total revenue collections in FY 2016/17 compared to 7.9% in FY 2015/16. In FY 2016/17, the greatest contribution to ICT sector revenue (88.5%) was realized from Information and Communication services.

Uganda's ICT ranking on the global scale

This comprises the e-government development index, ICT development Index and the networked readiness index.

The UN e-Government Survey 2016 Report reflects that Uganda greatly improved by 28 positions in its global e-government development index from rank 156 globally to rank 128. According to the International Telecommunication Union, Uganda improved from the rank of 158 in 2016 to a rank of 152 in 2017.

In 2016, globally, Uganda dropped its ranking in the overall Networked Readiness Index from the position of 116 in 2015 to 121.

GLOSSARY

Bandwidth:

Bandwidth is used as a synonym for data transfer rate, the amount of data that can be carried from one point to another in a given time period (usually per second). This is expressed in bits (of data) per second (bps). Occasionally, it is expressed as bytes per second (Bps). A modem that works at 57,600 bps has twice the bandwidth of a modem that works at 28,800 bps.

Broadband:

Broadband refers to technologies that provide access to the Internet at download speeds of 256 kbit/s or greater. It includes both fixed broadband technologies and wireless broadband technologies.

Computer:

This means an electronic, magnetic, optical, electrochemical or other data processing device or a group of such interconnected or related devices, performing logical, arithmetic or storage functions; and includes any data storage facility or communications facility directly related to or operating in conjunction with such a device or group of such interconnected or related devices; (Section 2 Electronic Transactions Act, 2011).

For statistical purposes, this will include "a desktop computer, a laptop computer or a tablet or similar handheld computer. It does not include equipment with some embedded computing abilities, such as devices with telephony as a main function, such as mobile or smartphones."

Domestic Internet bandwidth:

This refers to the used capacity for exchanging national Internet traffic. Out of the total national bandwidth available in the country (i.e. the potential capacity of the connections), there is a part that corresponds to the contracted or purchased capacity. This contracted capacity refers to bandwidth put into

service, but not all of which is used; some is held in reserve for restoration or redundancy. This indicator thus refers to the portion of the contracted capacity that is actually used to carry traffic. It refers to the capacity Internet Service Providers use to connect to Internet exchanges.

E-Government:

This is the use of information and communication technologies to deliver public services in a convenient, efficient customer-oriented and cost-effective way.

E-Government Development Index:

The United Nations e-Government Development Index (EGDI) comparatively measures the e-Government readiness of states in terms of the scope and quality of online services (Online Service Index), the development status of telecommunication infrastructure (Telecommunication Infrastructure Index) and the human capital (Human Capital Index).

E-Participation Index:

The e-Participation Index complements the e-Government Index by assessing citizens' use of the available online services and infrastructure.

Fixed broadband:

This comprises of technologies that provide access to the Internet at download speeds of 256 kbit/s or greater over fixed wired technologies (DSL, Cable modem, FTTH/FTTB, Other fixed wired) and fixed wireless technologies (Satellite and terrestrial).

Global Cybersecurity Index (GCI):

This is a survey that measures the commitment of ITU Member States to cybersecurity in order to raise awareness. The GCI is a composite index combining 25 indicators into one benchmark measure to monitor and compare the level of ITU Member States cybersecurity commitment with regard to the five pillars identified by the High-Level Experts Group and endorsed by the Global

Cybersecurity Agenda. These pillars include legal, technical, organizational, capacity building and cooperation.

ICT Development Index:

The ICT Development Index (IDI) developed by the International Telecommunication Union is a measure that serves to monitor and compare developments in information and communication technology across countries. The IDI is composed of ICT access, ICT use and ICT skills components.

ICT goods:

ICT goods are those that are either intended to fulfil the function of information processing and communication by electronic means, including transmission and display, or which use electronic processing to detect, measure and/or record physical phenomena, or to control a physical process.

ICT Sector:

The ICT sector combines manufacturing and services industries whose products primarily fulfil or enable the function of information processing and communication by electronic means, including transmission and display. This comprises ICT manufacturing industries, ICT trade industries and ICT services industries.

ICT services:

ICT services are those intended to enable the function of information processing and communication by electronic means.

IT Certification:

IT Certification is defined as “a formal procedure, by which NITA-U assesses, verifies and attests that a company/person providing information technology products or services meet the minimum requirements and standards.

International Internet bandwidth:

This is the used capacity of international connections between countries for transmitting Internet traffic. Out of the total international bandwidth available in the country (i.e. the potential capacity of the connections), there is a part that corresponds to the contracted or purchased capacity. This contracted capacity refers to bandwidth put into service, but not all of which is used; some is held in reserve for restoration or redundancy. This indicator thus refers to the portion of the contracted capacity that is actually used to carry traffic. If the bandwidth is asymmetric, the incoming (downlink) capacity should be provided.

Information Technology:

This means the science of collecting and using information by means of computer systems and refers to computers, ancillary or peripheral equipment such as printers and scanners, software and firmware services including support services, and related resources and includes any equipment or interconnected systems that are used in the acquisition, storage, manipulation or processing, management, movement, control, display, transmission or reception of data or information.

Information Security:

This means the protection of information and information systems from unauthorised access, use, disclosure, disruption, modification or destruction.

Internet:

This is worldwide public computer network. It provides access to a number of communication services including the World Wide Web and carries e-mail, news, entertainment and data files, irrespective of the device used (not assumed to be only via a computer – it may also be by mobile phone, PDA, game machine, digital TV or other device). Internet access can be via a fixed or wireless network.

Intranet:

This refers to an internal communications network using Internet protocols and allowing communication within an organization (and to other authorized persons). It is typically set up behind a firewall to control access.

Local Area Network (LAN):

This refers to a network connecting computers within a localized area such as a single building, department or site; it may be wireless.

Metropolitan area network (MAN):

A metropolitan area network is similar to a local area network (LAN) but spans an entire city or campus. MANs are formed by connecting multiple LANs. Thus, MANs are larger than LANs but smaller than wide area networks (WAN). MANs are used to build networks with high data connection speeds for cities and towns.

The working mechanism of a MAN is similar to an Internet Service Provider (ISP), but a MAN is not owned by a single organization. Like a WAN, a MAN provides shared network connections to its users. A MAN mostly works on the data link layer, which is Layer 2 of the Open Systems Interconnection (OSI) model.

Mobile broadband:

These are technologies that provide wireless high-speed Internet access at download speeds of 256 kbit/s or greater through mobile devices such mobile phones, laptops, tablets and other mobile Internet devices using portable modems (USB modem /dongle, a data card or built-in device (on some laptops), or a mobile Wi-Fi (or MiFi)). Mobile broadband is available with most 2G, 2.5G, 3G and higher speed mobile technologies.

Mobile broadband-Standard:

These are mobile subscriptions which provide access to the larger Internet with advertised data speeds of 256 kbit/s or greater, which have been used to make an Internet data connection over Internet Protocol in the previous three months.

Standard mobile subscriptions are typical voice subscriptions which also provide access to the Internet but are not purchased separately. Subscriptions which only offer “walled garden” or email-only services (or SMS/MMS only) as well as those offering access to the open Internet but that only have made access to "walled garden" and email-only services in the last three months will not be considered. Bundled offers (i.e., voice and data access) for a unique (flat rate) tariff are to be counted if a data connection has been made in last 3 months.

Mobile broadband-Dedicated:

These are dedicated data services over a mobile network which are purchased separately from voice services either as a standalone service (modem/dongle), i.e. excluding mobile handset users or as an add-on data package to voice services which requires an additional subscription. All dedicated mobile data subscriptions with recurring subscription fees are included as “active data subscriptions” regardless of actual use. Pre-paid mobile broadband plans (i.e. all non- recurrent fee subscriptions) require active use in previous 3 months. Subscriptions which only offer “walled garden” or email-only services (or SMS/MMS only) will not be considered. Bundled offers (i.e., voice and data access) are excluded.

Networked Readiness Index:

The Networked Readiness Index (NRI) measures a nation’s level of preparedness to embrace ICT. It aims at guiding policymakers on the factors that should be taken into account to leverage ICT in national development strategies. The NRI is a composite index consisting of three components: the environment for ICT offered by a given country (political and regulatory; business and innovation environment); the readiness of the country's key stakeholders (individuals, businesses, and governments) to use ICT; and the usage of ICT among these stakeholders.

Website:

This means a location on the internet and a collection of web pages, images, videos, data which are addressed relative to a common Uniform Resource Location (National Information Technology Authority, Uganda (E-Government) Regulations, 2015).

Wide area network (WAN):

This is a network that exists over a large-scale geographical area. A WAN connects different smaller networks, including local area networks (LAN) and metro area networks (MAN). This ensures that computers and users in one location can communicate with computers and users in other locations. WAN implementation can be done either with the help of the public transmission system or a private network.

Wireless broadband:

This comprises of technologies that provide access to the Internet at download speeds of 256 kbit/s or greater over wireless technologies. These include; fixed wireless technologies (satellite broadband and terrestrial) and active mobile-broadband connections to the public Internet.

World Wide Web (WWW):

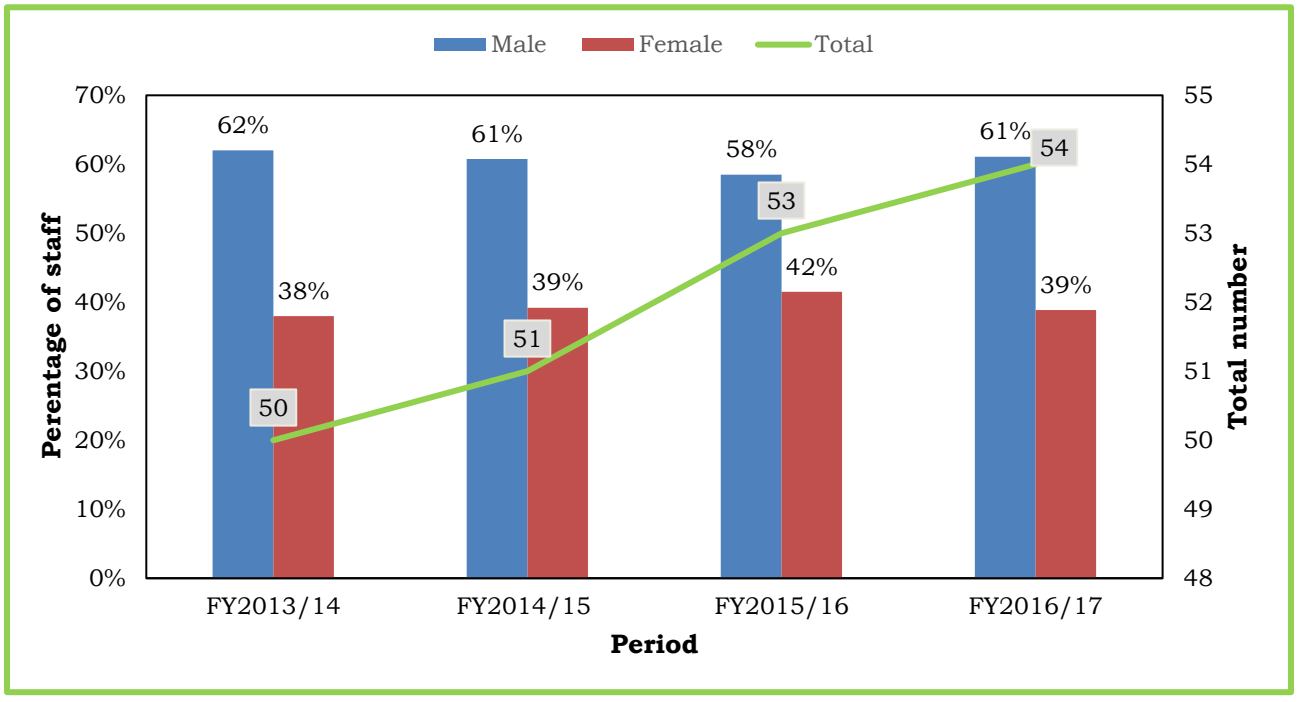
This is a specific category of internet interface that uses hyperlinks and multimedia documents. The www is a system of Internet servers that supports a collection of documents that are written and formatted using the same type of programming language, called Hypertext Markup Language, or HTML.

1. ADMINISTRATIVE STATISTICS

1.1 NITA-U Staff

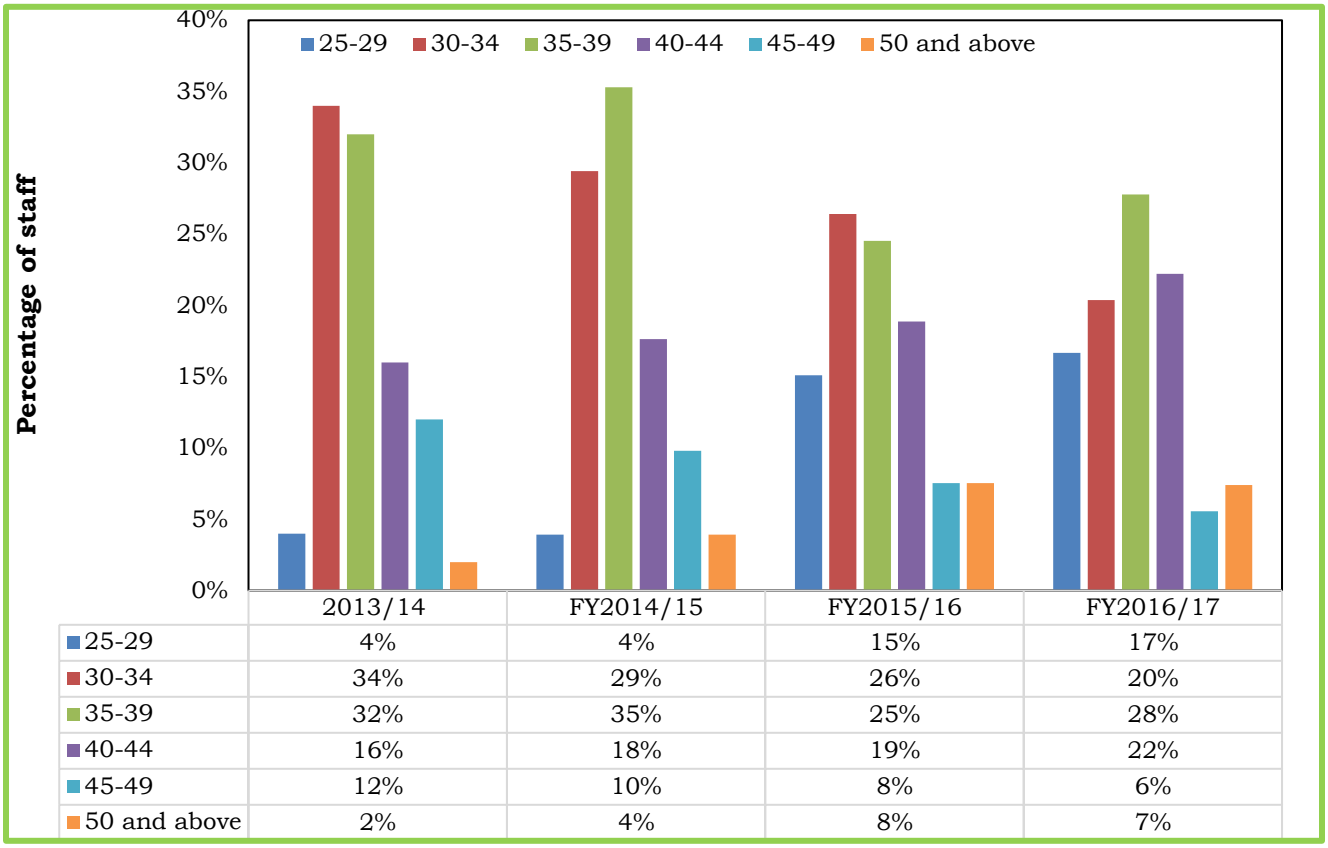
In the FY 2016/17, the total number of NITA-U staff was 54 compared to 53 recorded in FY 2015/16. The majority (61%) were male and only 39% were female in FY 2016/17 compared to 58% and 42% in FY 2015/17 respectively (figure 1.1.1). It is also noted that in FY 2016/17, over one quarter (28%) of the staff were in the age group of 35-39 years compared to FY 2015/16 were majority of the staff (26%) were aged 30-34 years (figure 1.1.2).

Figure 1.1.1: Number of Staff by Gender; FY 2013/14 to FY 2016/17



Source: National Information Technology Authority-Uganda

Figure 2.1.2: Percentage of Staff by Age; FY 2013/14 to FY 2016/17



	2013/14	FY2014/15	FY2015/16	FY2016/17
25-29	4%	4%	15%	17%
30-34	34%	29%	26%	20%
35-39	32%	35%	25%	28%
40-44	16%	18%	19%	22%
45-49	12%	10%	8%	6%
50 and above	2%	4%	8%	7%

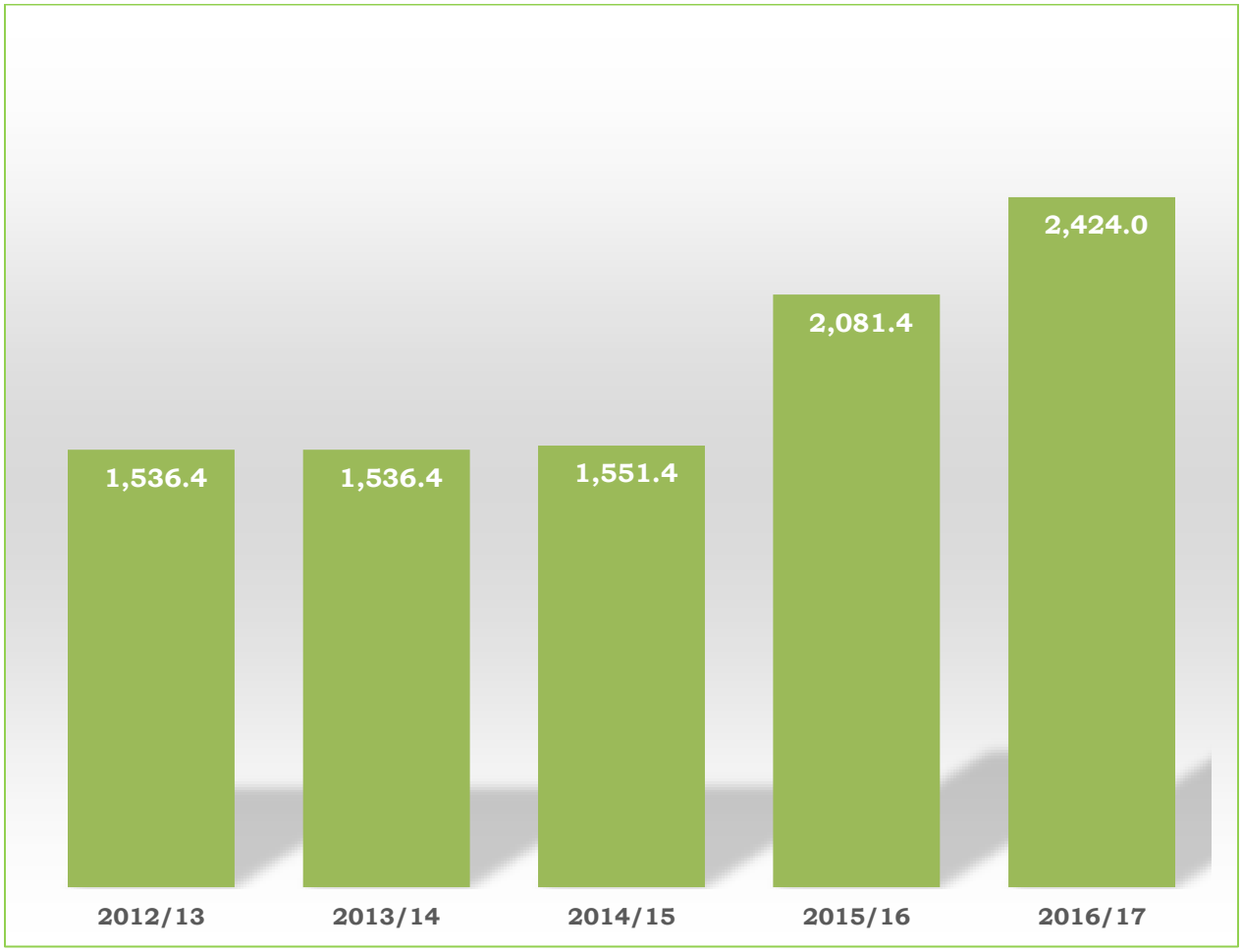
Source: National Information Technology Authority-Uganda

2. INFORMATION TECHNOLOGY STATISTICS

2.1 National Backbone Infrastructure (NBI)

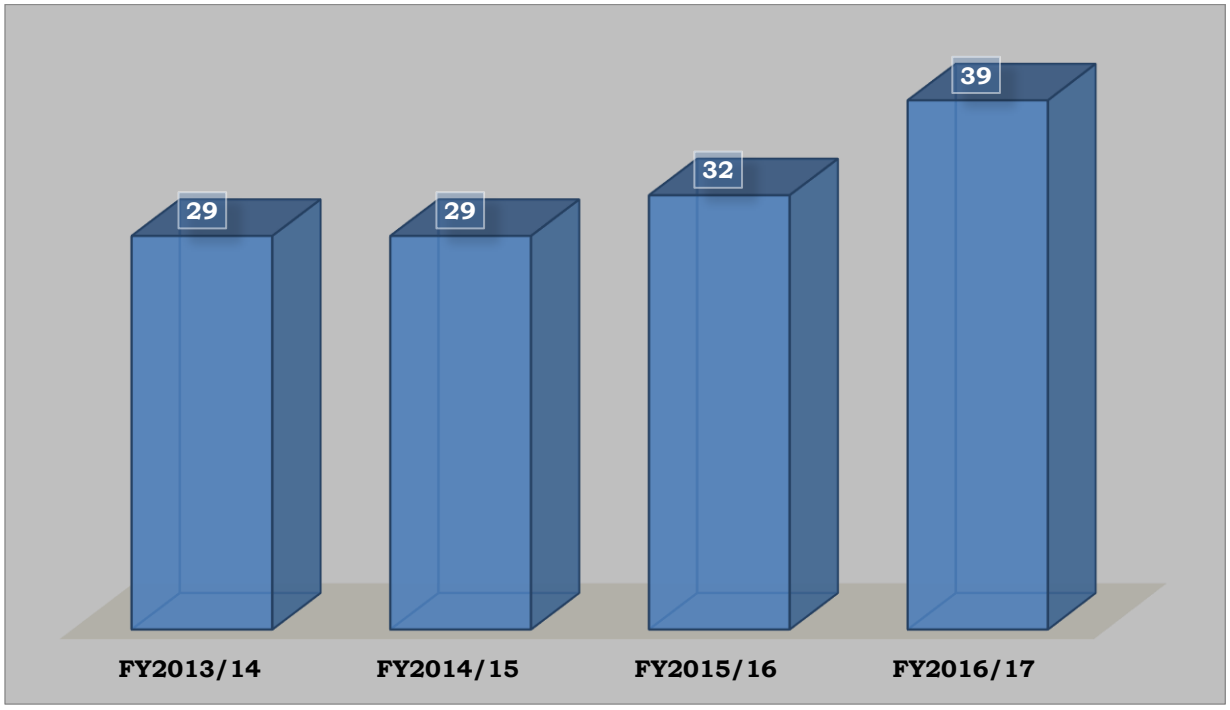
In FY 2016/17, 342.6 Km of fibre Optical Cable were added on the NBI leading to a total of 2,424km (figure 2.1.1). In addition, 7 districts were covered by the NBI making it a total of 39 districts (figure 2.1.2). Similarly, 123 additional government offices/sites were connected to the NBI increasing the total number to 256. Of the total number of connected offices/sites, 151 (59%) were utilizing internet delivered over the NBI (figure 2.1.3). Figure 2.1.4 also shows that in FY 2016/17, 69 government Offices using Integrated Financial Management System over the NBI.

Figure 2.1.1: Kilometres of fibre Optical Cable on the NBI; FY 2012/13-2016/17



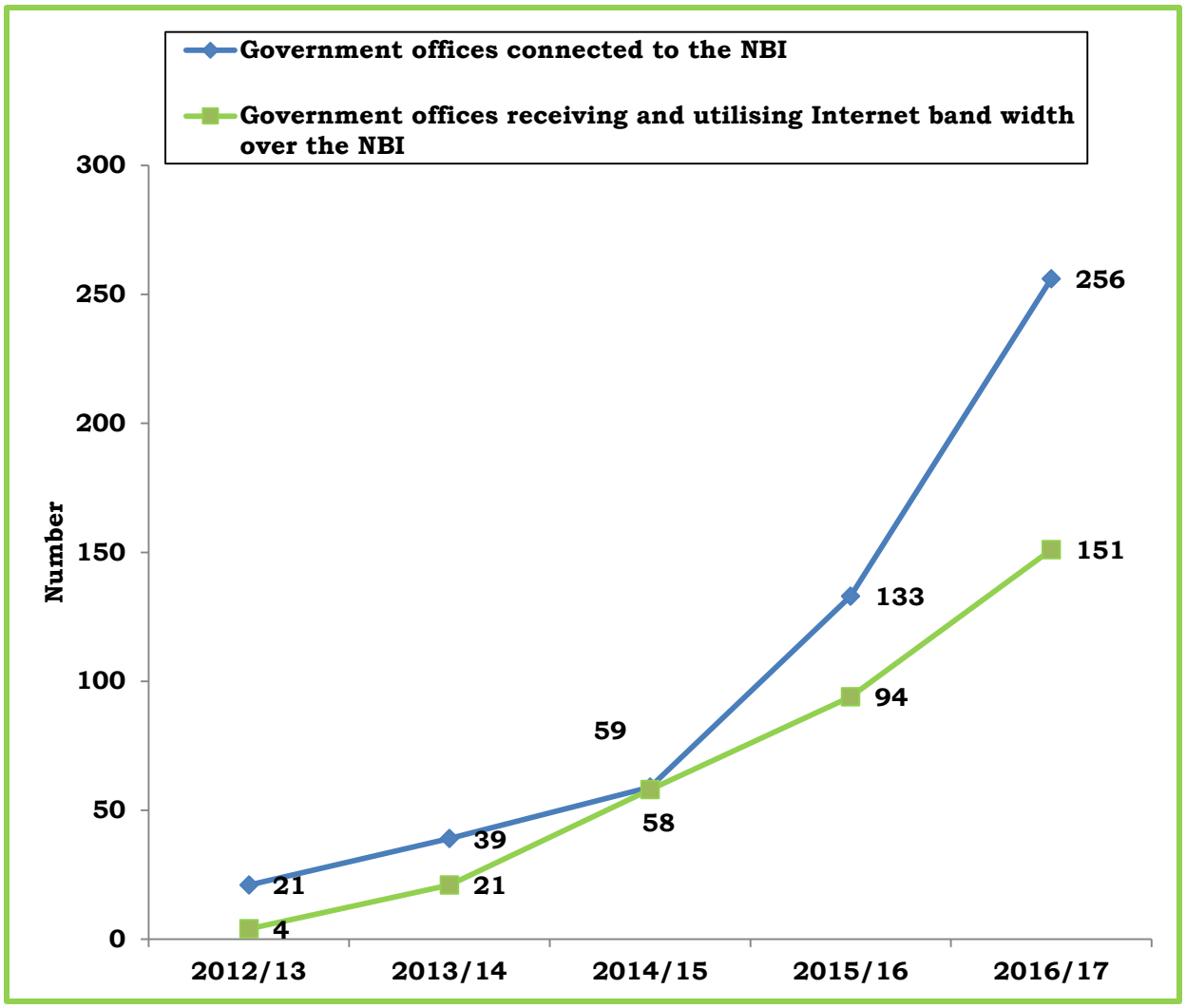
Source: National Information Technology Authority-Uganda

Figure 2.1.2: Cumulative Number of districts covered by the NBI; FY 2013/14-2016/17



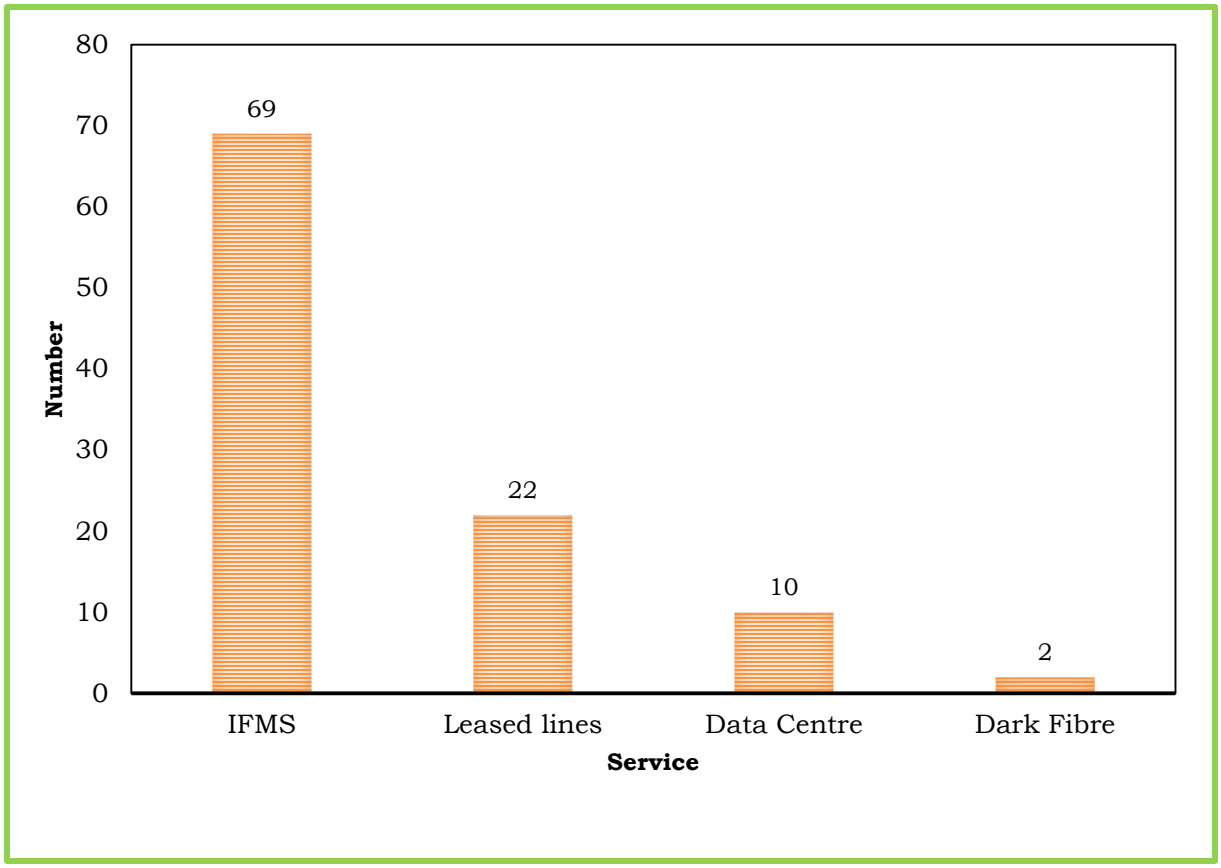
Source: National Information Technology Authority-Uganda

Figure 2.1.3: Cumulative number of connections and usage of Internet Bandwidth over the NBI by Government Offices; FY 2012/13-2016/17



Source: National Information Technology Authority-Uganda

Figure 2.1.4: Number of government Offices using other services over the NBI; FY 2016/17



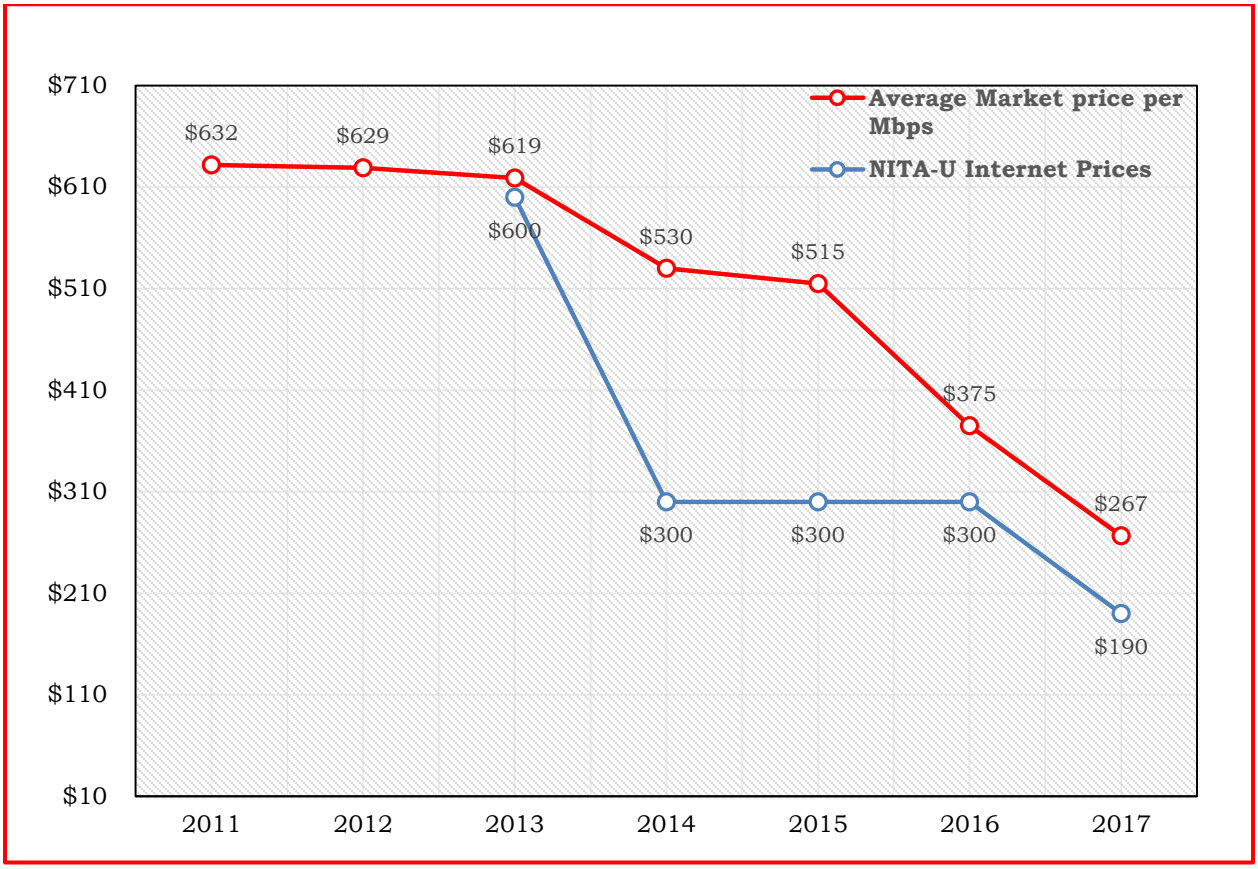
Source: National Information Technology Authority-Uganda

2.2 Fixed Internet bandwidth pricing (1Mbps);

The Internet Bandwidth to MDAs and Local Governments through the NBI was provisioned at USD 300 for 1Mbps per month in 2016 and it was the lowest on the market. This reduction in the cost of Internet Bandwidth also forced the Telecom companies to reduce their Internet Bandwidth prices for the citizens thereby bringing down the cost of Internet in the country. With the price lowered for Government agencies, the market followed suit to an average of USD 267 in 2017. NITA-U in the FY2016/17 procured internationally and competitively a company to provide Indefeasible Right of use for Internet bandwidth for 15 years,

this has enabled NITA-U to lower the price of Internet to USD 190 per Mbps (figure 2.2.1).

Figure 2.2.1: Market price and NITA-U price for 1Mbps; 2011-2017



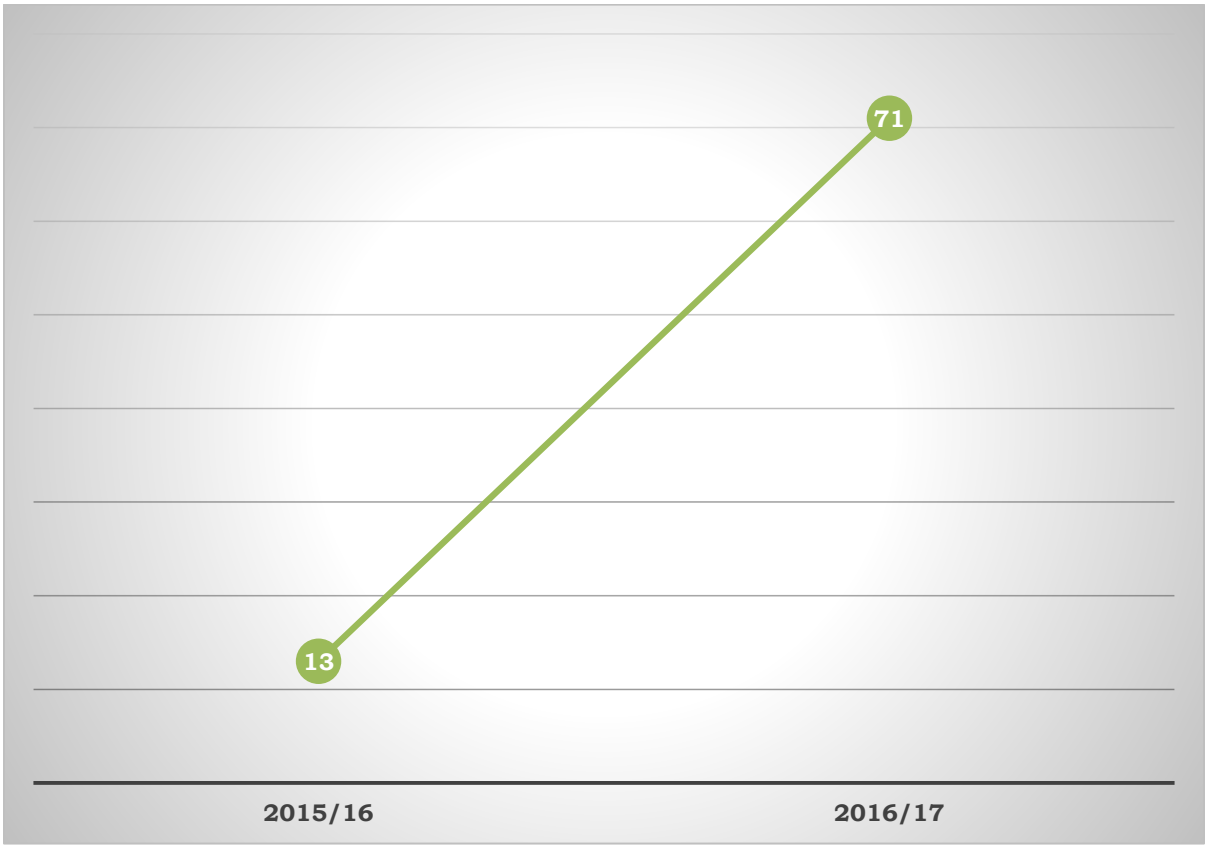
Source: National Information Technology Authority-Uganda

2.3 Snapshot of e-government services

NITA-U has developed an e-services web portal (http://www.ecitizen.go.ug) towards easing access to online services developed by MDAs/LGs. The number informational and transactional services that could be accessed via the portal increased from 13 in FY 2015/16 to 71 in FY 2016/17 (figure 2.3.1).

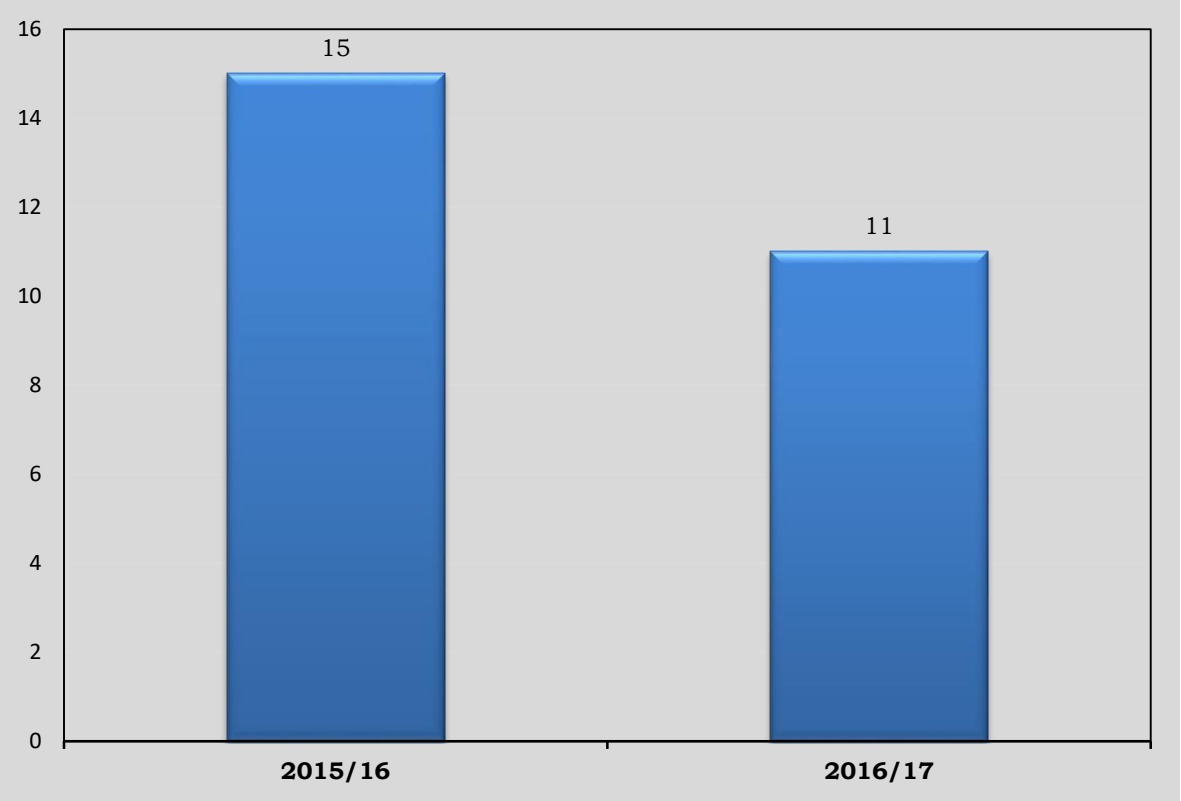
Furthermore in FY 2016/17, NITA-U developed 11 websites to support MDA/LGs as per the National guidelines for development and management of websites (figure 2.3.2).

Figure 2.3.1: Number of e-services accessed through the e-citizens Portal; FY 2015/16-2016/17



Source: National Information Technology Authority-Uganda

Figure 2.3.2: Number of websites developed; FY 2015/16-2016/17

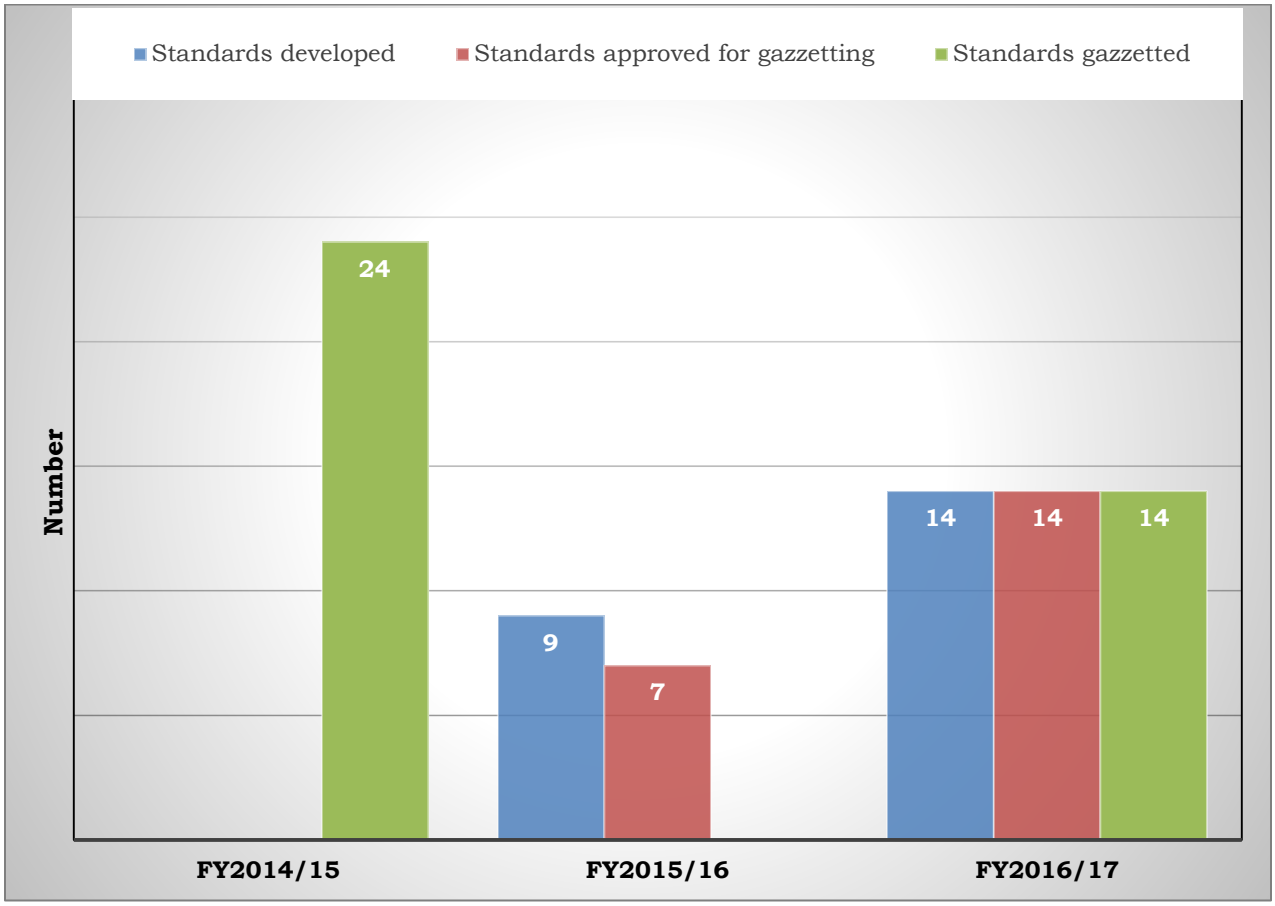


Source: National Information Technology Authority-Uganda

2.4 Priority IT Standards

In FY 2016/17, 14 National IT Standards were developed and approved by the National Standards Council under the Uganda National Bureau of Standards. (Figure 2.4.1).

Figure 2.4.1: Number of IT Standards gazzeted; FY 2014/15-2016/17



Source: National Information Technology Authority-Uganda

2.5 Compliance to IT standards and e-government regulations

NITA-U conducts compliance assessments in entities against the standards for structured cabling and guidelines; Standards for the acquisition of IT Hardware & Software; E-Government Regulations, 2015 and the Electronic transactions Act.

In FY 2016/17, 10 MDAs were assessed against the standards for structured cabling and guidelines and Standards for the acquisition of IT Hardware & Software and their compliance levels were on average 64% and 73% respectively. In addition, 5 MDAs were assessed against the E-Government Regulations, 2015 and 35% was the average score on compliance (table 2.5.1). However, follow-ups are being made with these entities to ensure compliance.

Table 2.5.1: Number of Compliance Assessments and Compliance levels;

Financial Year	Number of Entities assessed	Compliance levels (average score)			
		Structured Cabling Standards, 2013	**Hardware & Software Standards, 2013**	**E-Government Regulations, 2015**	**Electronic transactions Act**
2013/2014	17 MDAs	55%			
2014/2015	9 online service providers				57%
2015/2016	21 MDAs	65%	74%		
2016/2017	10 MDAs	64%	73%		
	5MDAs			35%	

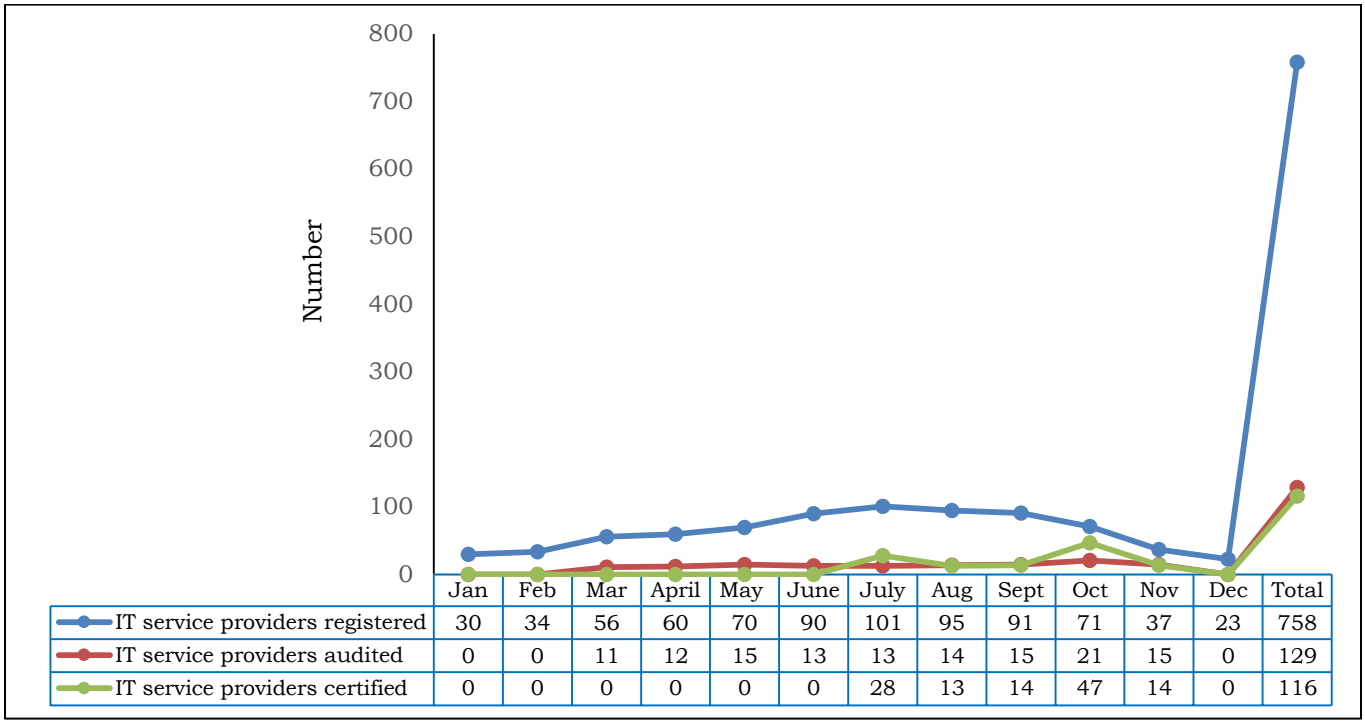
Source: National Information Technology Authority-Uganda

2.6 Certification of IT Service Providers

The National Information Technology Authority- Uganda (NITA-U has been working on modalities for certifying and authenticating IT Service Providers and IT Training Institutions in Uganda for systematic growth of the sector and warrant of better quality IT services for the consumers.

By the end of December 2017, a total of 116 IT Service Providers had been assessed and certified under the Certification Framework as shown in figure 2.6.1 below.

Figure 2.6.1: Number of IT Service Providers certified as at 2017



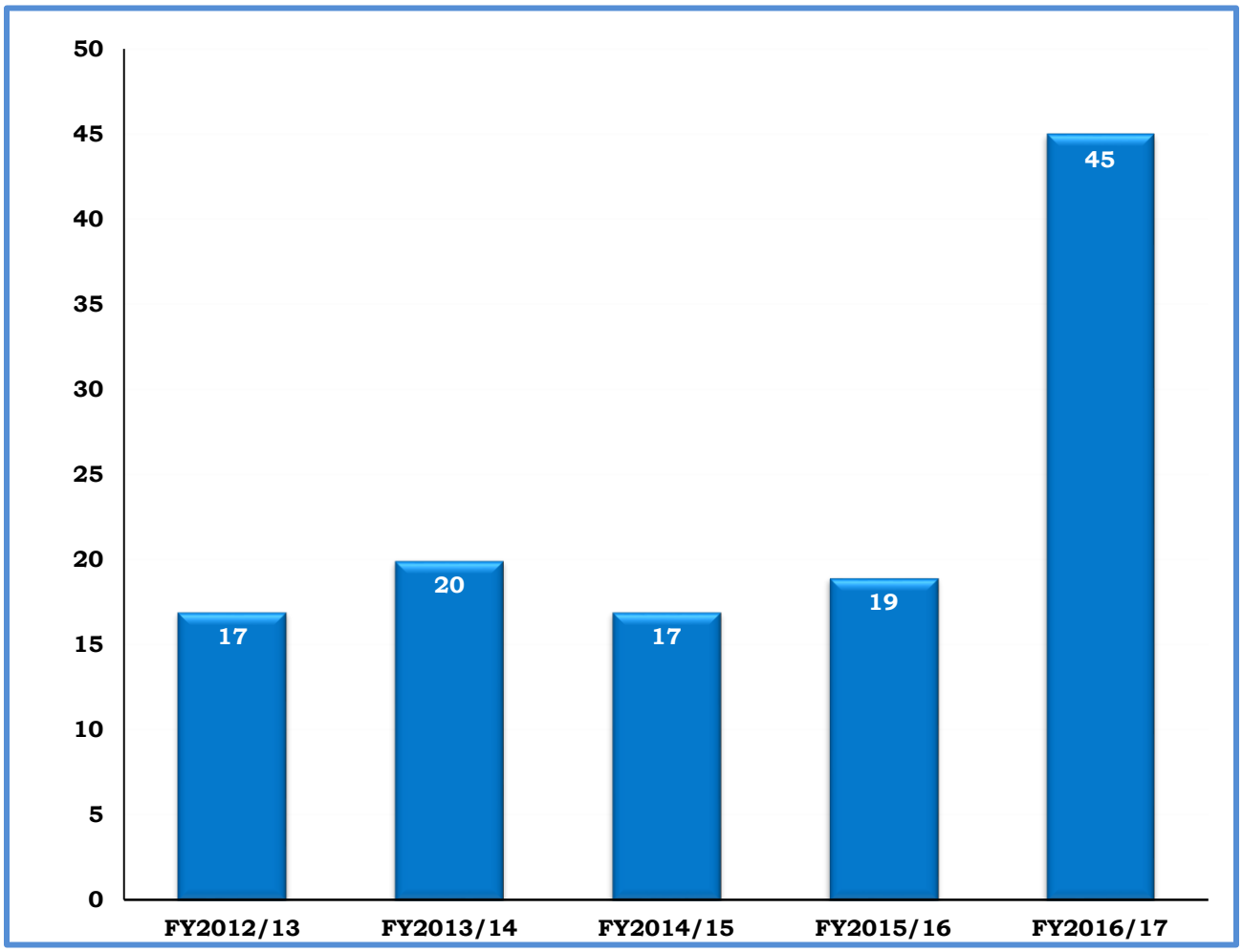
	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
IT service providers registered	30	34	56	60	70	90	101	95	91	71	37	23	758
IT service providers audited	0	0	11	12	15	13	13	14	15	21	15	0	129
IT service providers certified	0	0	0	0	0	0	28	13	14	47	14	0	116

Source: National Information Technology Authority-Uganda

2.7 Cyber Laws Awareness

Sensitization activities to enhance awareness of the existence and application of the Cyber laws have been conducted over the years. In FY 2016/17, 45 awareness sessions were conducted across the MDAs and Local Governments compared to 19 sessions conducted in FY 2015/16 (figure 2.7.1).

Figure 2.7.1: Number of sensitization sessions on Cyber laws; FY 2012/13-2016/17

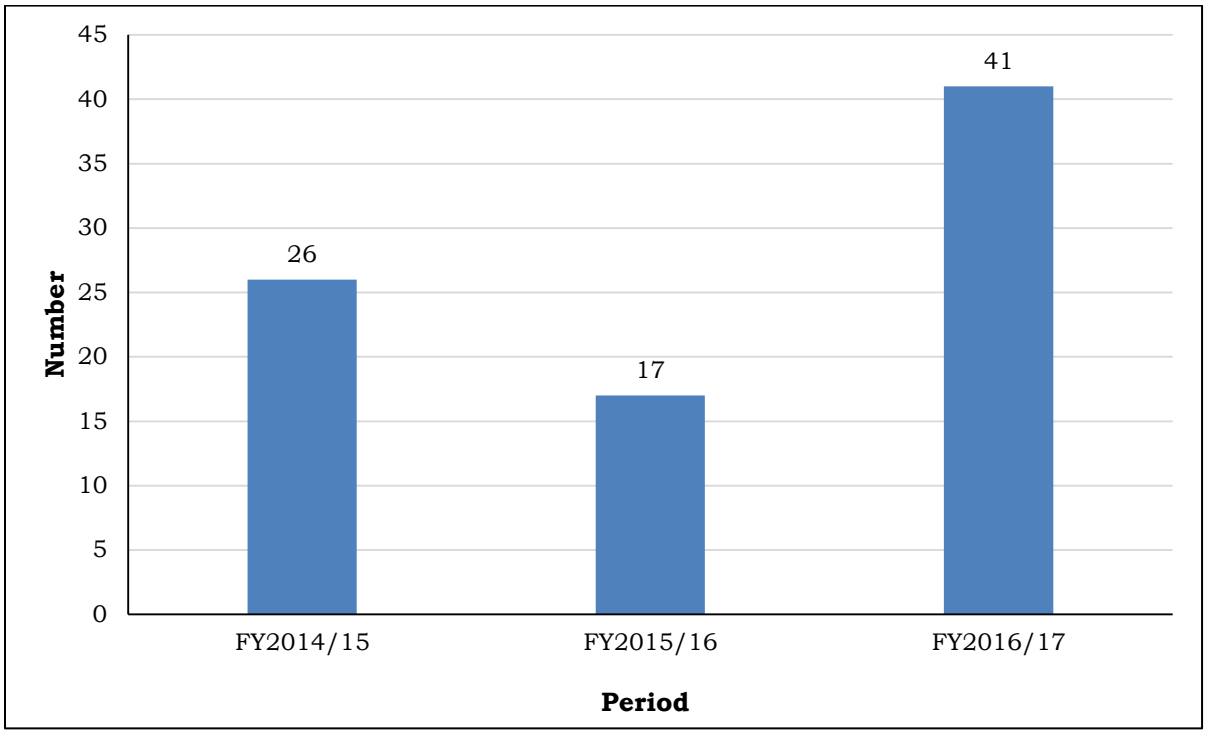


Source: National Information Technology Authority-Uganda

2.8 Cyber Security Awareness

In FY 2016/17, 41 Information Security awareness sessions targeting numerous stakeholder groups in the areas of risk management, CERT, implementation of Security Controls, Audits, Cyber laws, amongst others while 17 sessions were conducted in FY 2015/16 (figure 2.8.1).

Figure 2.8.1: Number of Cyber Security Awareness Events; FY 2014/15-2016/17

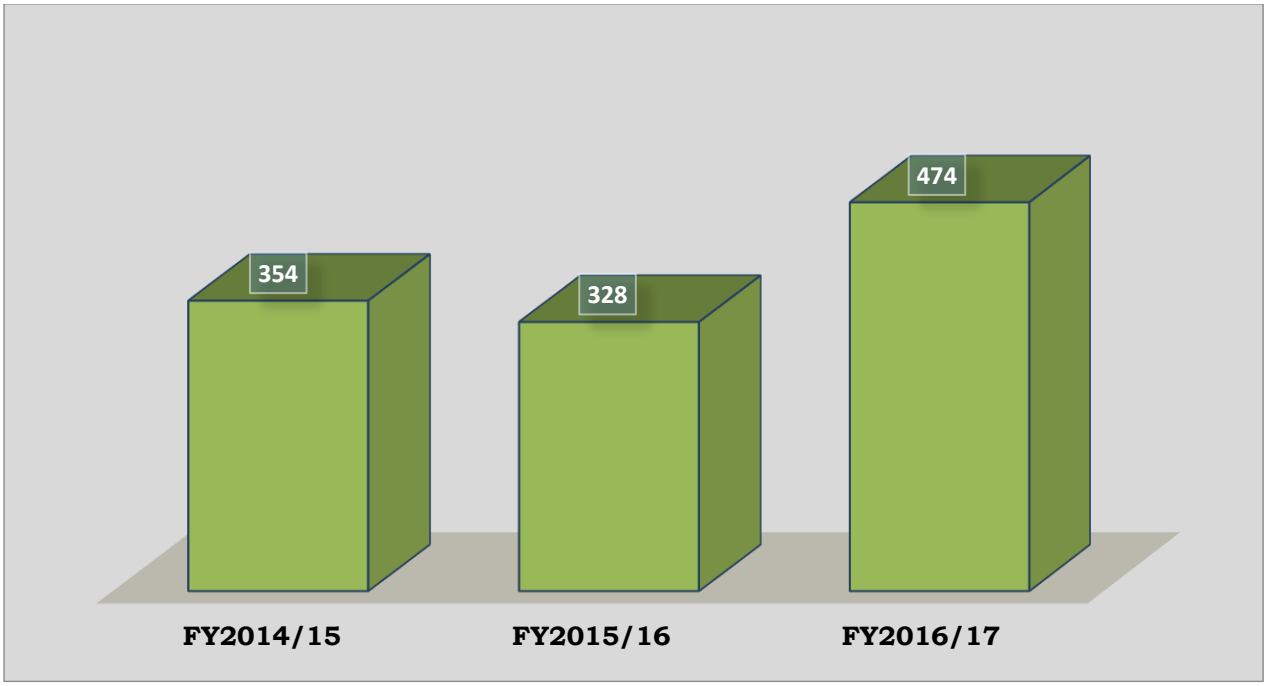


Source: National Information Technology Authority-Uganda

2.9 Capacity building and skilling for e-government services

NITA-U conducts training and builds capacity for e-government services to ensure increased uptake and effective utilisation among government employees. During the FY 2016/17, 474 government employees trained in various e-government services compared to 328 government employees trained in FY 2015/16 (figure 2.8.1).

Figure 2.8.1: Number of government employees trained in e-government services; FY 2014/15-2016/17

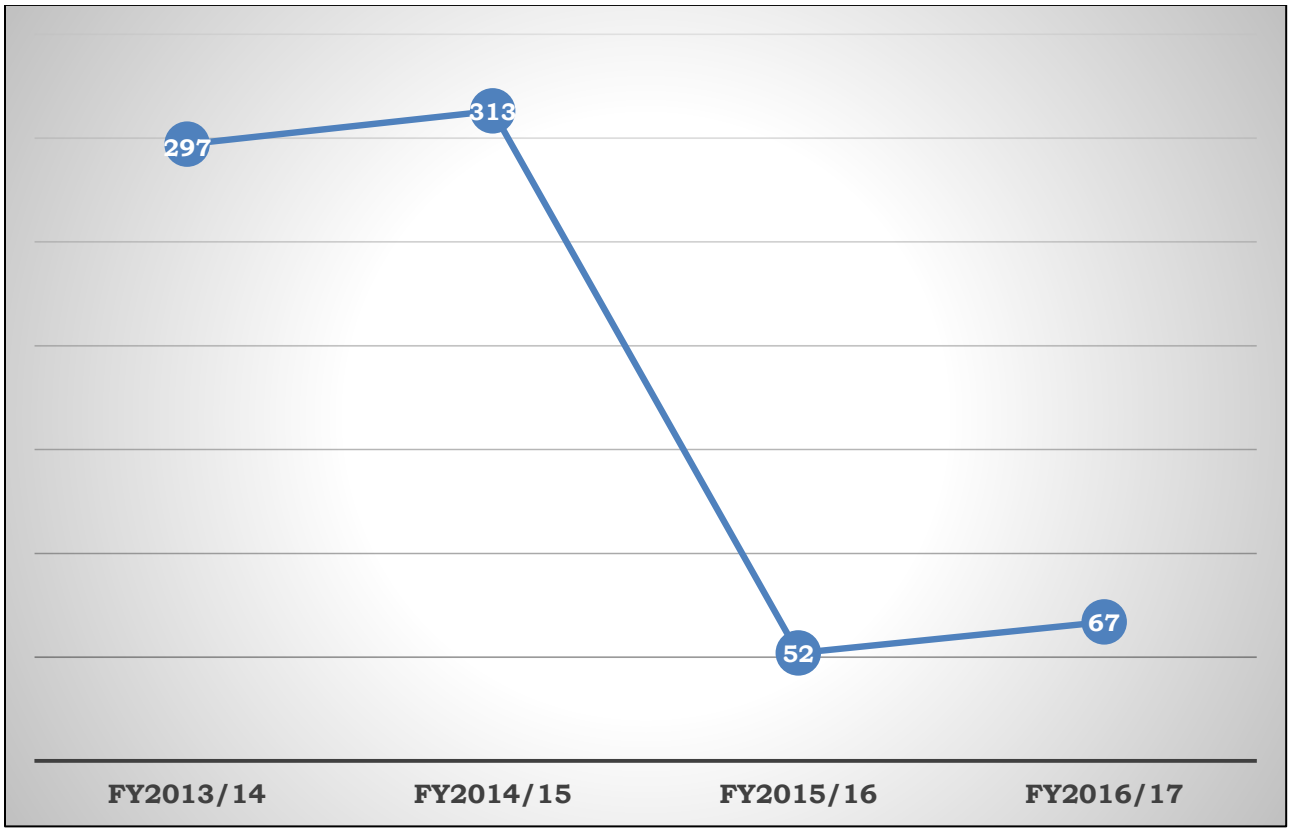


Source: National Information Technology Authority-Uganda

2.10 BPO Incubation Center Employment

The total number of people employed at the BPO Incubation Center improved from 52 in FY 2015/16 to 67 in FY 2016/17. From FY 2014/15 to FY 2015/16 there was a decline of 83 percent in the number of people employed at the BPO Incubation Center. This decline was attributed to the fact that the BPO firms' incubation period (3 years) had ended.

Figure 2.10.1: Number of people employed at the BPO Centre; FY 2013/14-FY 2016/17



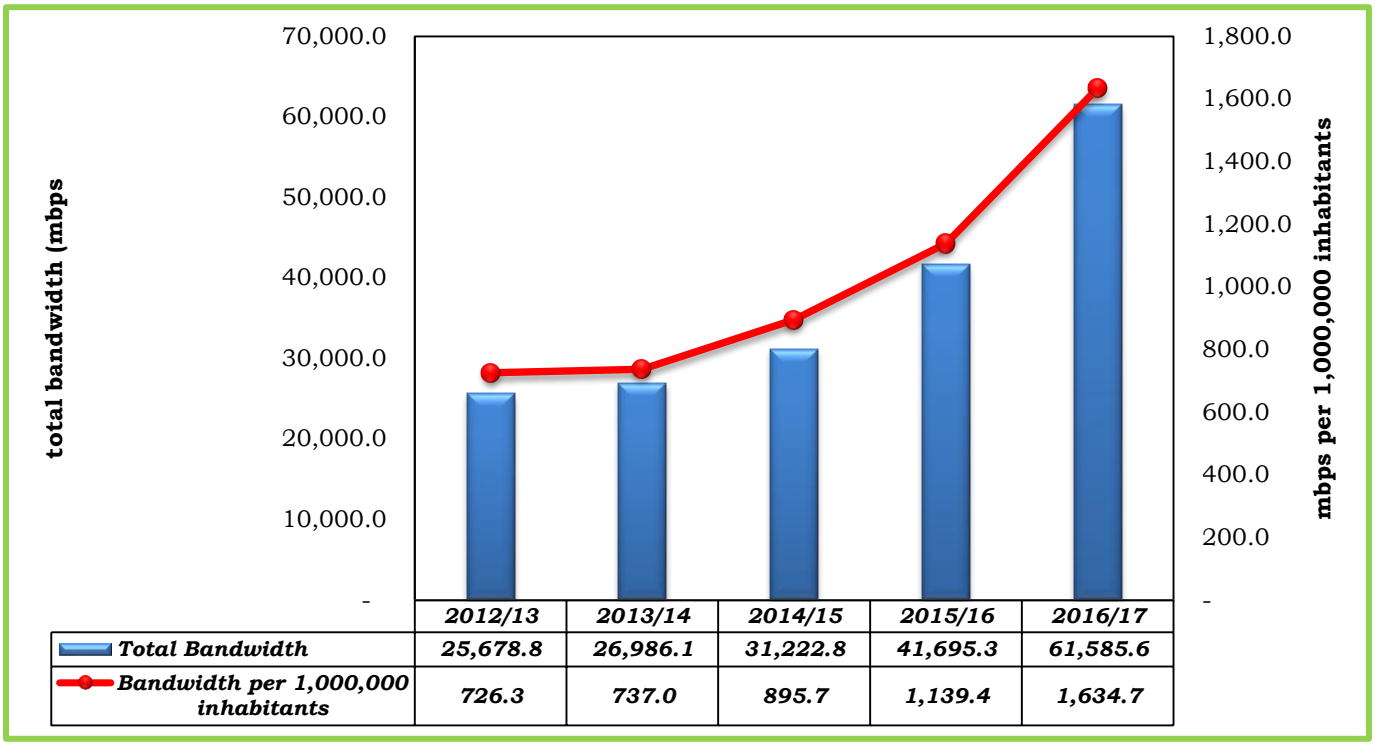
Source: National Information Technology Authority-Uganda

2.11 Bandwidth

The total bandwidth grew from 41,695.5Mbps in the previous financial year to 61,585.6Mbps Mbps in FY2016/17, resulting into a 43 percent growth

in bandwidth per 1 million inhabitants. This means increased network capacity to carry larger volume of information from one location to the next. This indirectly leads to improved network performance hence higher speed internet services to internet users (figure 2.11.1).

Figure 2.11.1: Total bandwidth and bandwidth per million inhabitants; FY 2012/13- FY 2016/17



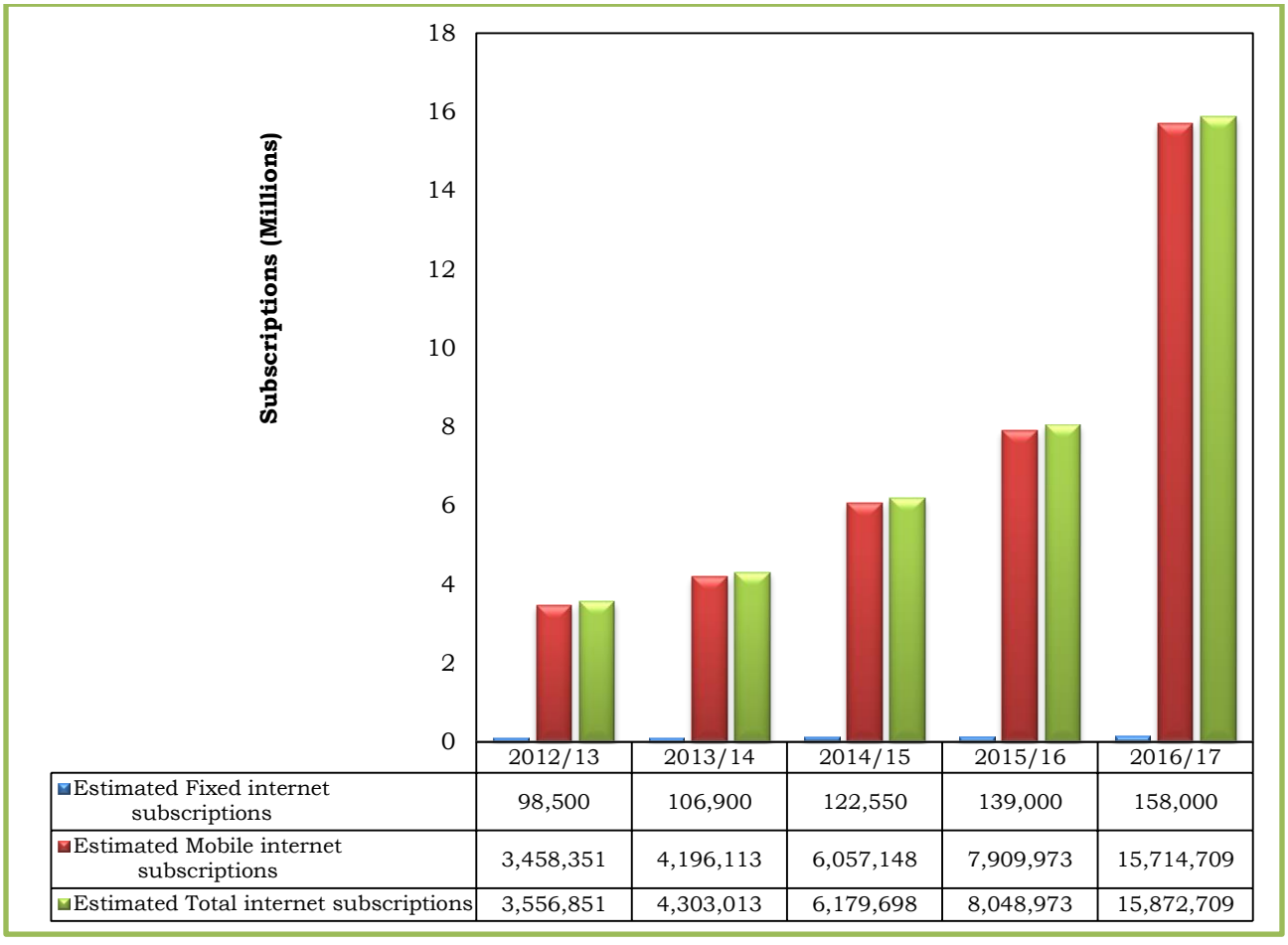
	2012/13	2013/14	2014/15	2015/16	2016/17
Total Bandwidth	25,678.8	26,986.1	31,222.8	41,695.3	61,585.6
Bandwidth per 1,000,000 inhabitants	726.3	737.0	895.7	1,139.4	1,634.7

Source: Uganda Communications Commission

2.12 Internet subscriptions

As estimated, the number of mobile internet subscriptions in FY 2016/17 doubled from about 7.9 million in FY2015/16 to 15.7 million. There was also a 13.7 percent growth in fixed internet subscriptions from 139,000 to 158,000 subscriptions in the same period. The estimated total internet subscriptions increased by 97 percent from about 8.1 million in FY2015/16 to about 15.9 million in FY2016/17 (figure 2.12.1).

Figure 2.12.1: Estimated Internet subscriptions; FY 2012/13 to FY 2016/17



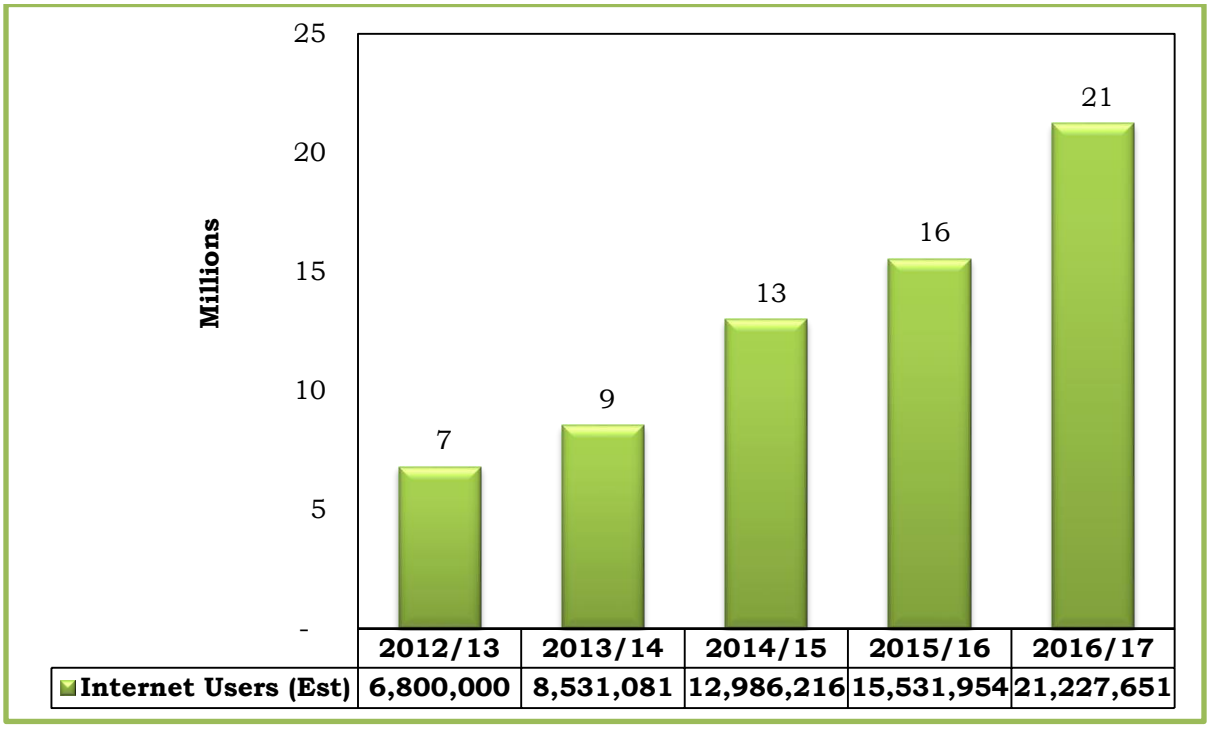
	2012/13	2013/14	2014/15	2015/16	2016/17
Estimated Fixed internet subscriptions	98,500	106,900	122,550	139,000	158,000
Estimated Mobile internet subscriptions	3,458,351	4,196,113	6,057,148	7,909,973	15,714,709
Estimated Total internet subscriptions	3,556,851	4,303,013	6,179,698	8,048,973	15,872,709

Source: Uganda Communications Commission

2.13 Internet users

The estimated total internet users increased by 37 percent from about 15.3 million in FY2015/16 to 21.2 million in FY2016/17 resulting into an internet penetration of 44.8 percent (figure 2.13.1).

Figure 2.13.1: Estimated internet users; FY 2012/13 to FY 2016/17

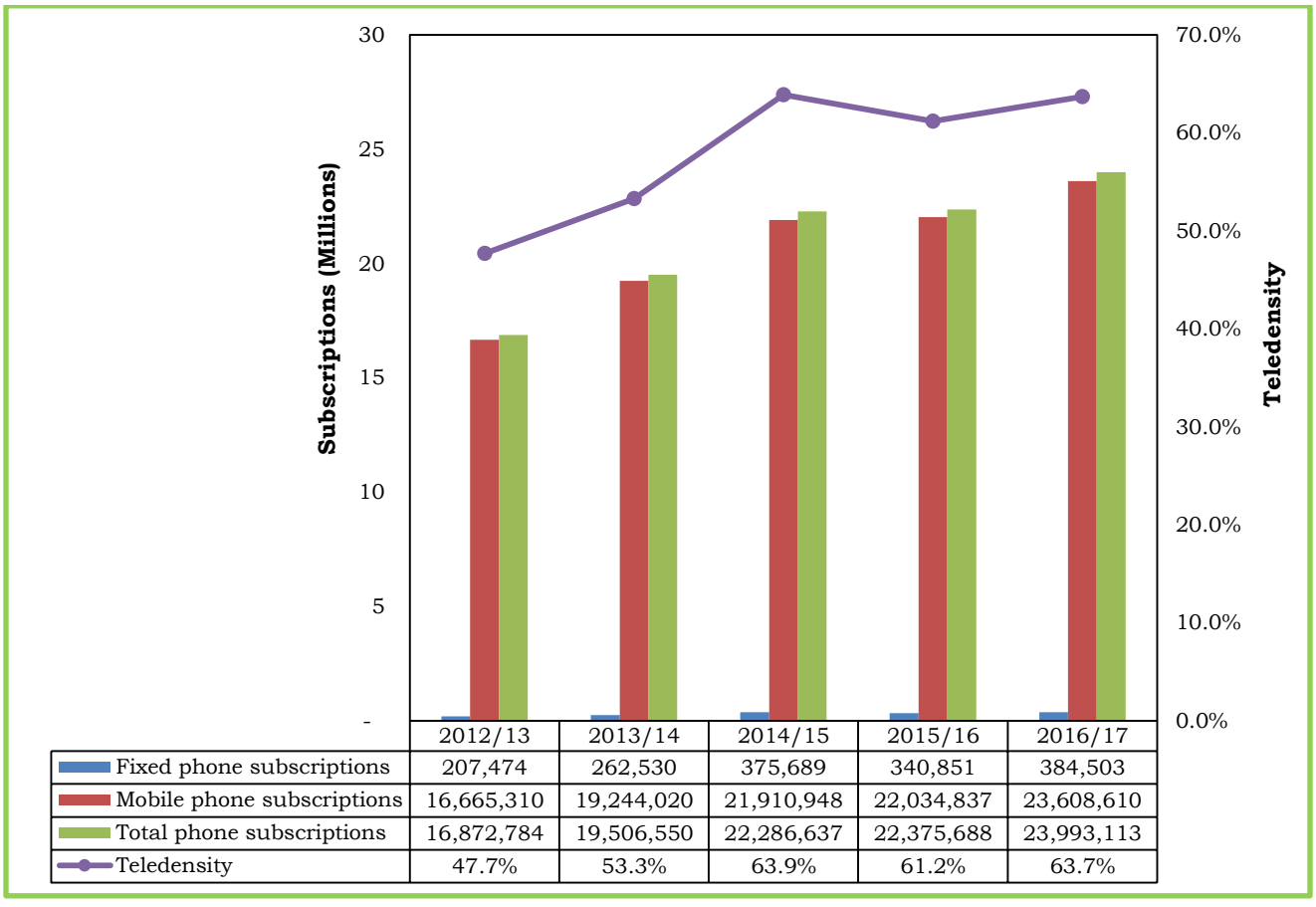


Source: Uganda Communications Commission

2.14 Phone subscriptions

In FY 2016/17, an increase of 7.1 percent from 22 million active mobile phone subscriptions in FY 2015/16 to a total of 22.6 million was recorded. A total of 384,503 active fixed phone subscriptions was recognised in the FY 2016/17 compared to 340,851 subscriptions in FY 2015/2016. In addition, the total telephone phone subscriptions resulted into a 4.1 percent increase in tele-density, from 62.1 percent in FY 2015/16 to 63.7 percent in FY 2016/17 (figure 2.14.1).

Figure 2.14.1: Fixed, Mobile phone and Total phone Subscriptions and Teledensity; FY 2012/13 to FY 2016/17



	2012/13	2013/14	2014/15	2015/16	2016/17
Fixed phone subscriptions	207,474	262,530	375,689	340,851	384,503
Mobile phone subscriptions	16,665,310	19,244,020	21,910,948	22,034,837	23,608,610
Total phone subscriptions	16,872,784	19,506,550	22,286,637	22,375,688	23,993,113
Teledensity	47.7%	53.3%	63.9%	61.2%	63.7%

Source: Uganda Communications Commission

3. ICT SECTOR PERFORMANCE IN THE ECONOMY

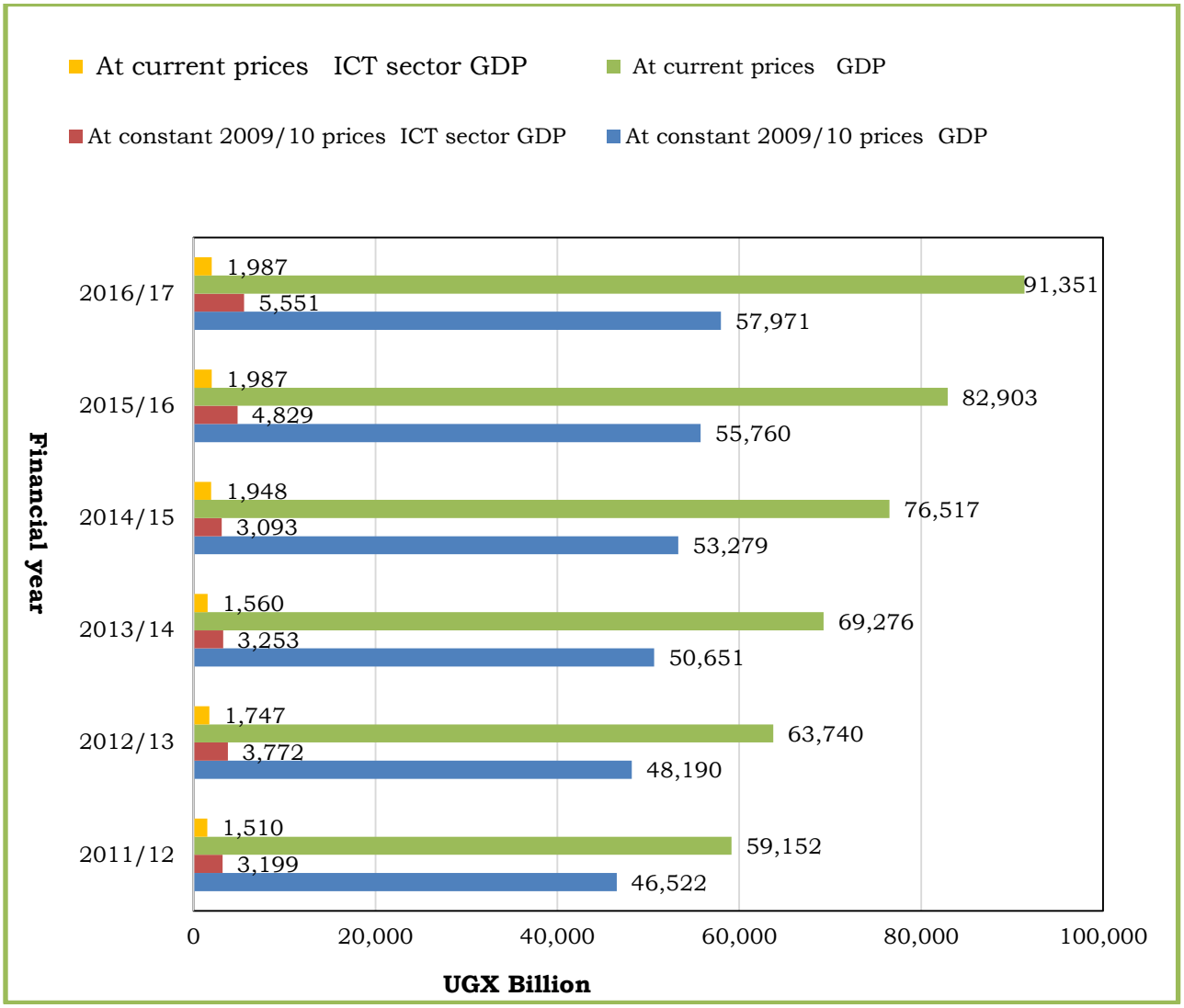
3.1 Gross Domestic Product (GDP)

The value of ICT sector activities at constant (2009/10) prices was UGX 5.6 billion in FY 2016/17 in FY 2016/17 compared to UGX 4.8 billion in FY 2015/16 (figure 3.1.1). Also in the FY 2016/17, ICT GDP at constant (2009/10) prices growth rate was 14.9 percent (figure 3.1.3).

The contribution of ICT sector activities to the national GDP at current prices accounted for 9.6 percent in FY 2016/17 compared to 8.7 percent in FY 2015/16 (figure 3.1.2).

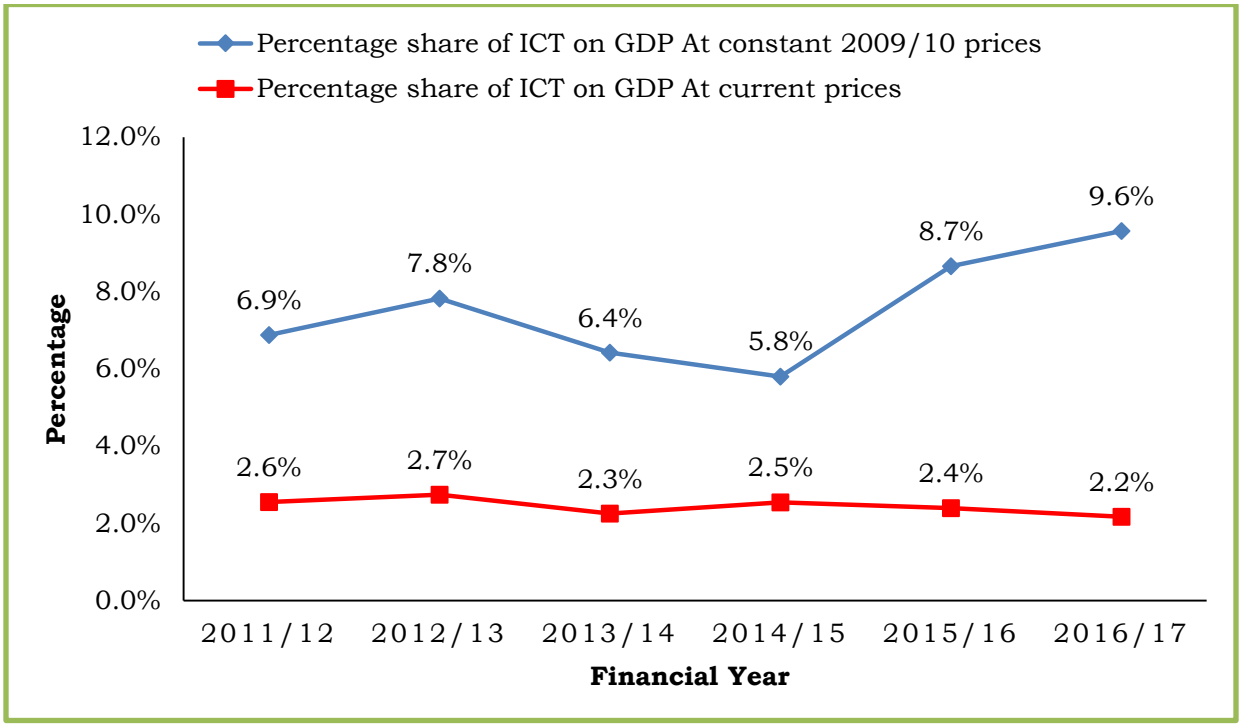
In FY 2016/17, around 95 percent of value added of the ICT sector was generated by activities of Information and Communication services.

Figure 3.1.1: Total GDP and ICT sector GDP for FY 2011/12 to FY 2016/17 (UGX Billions);



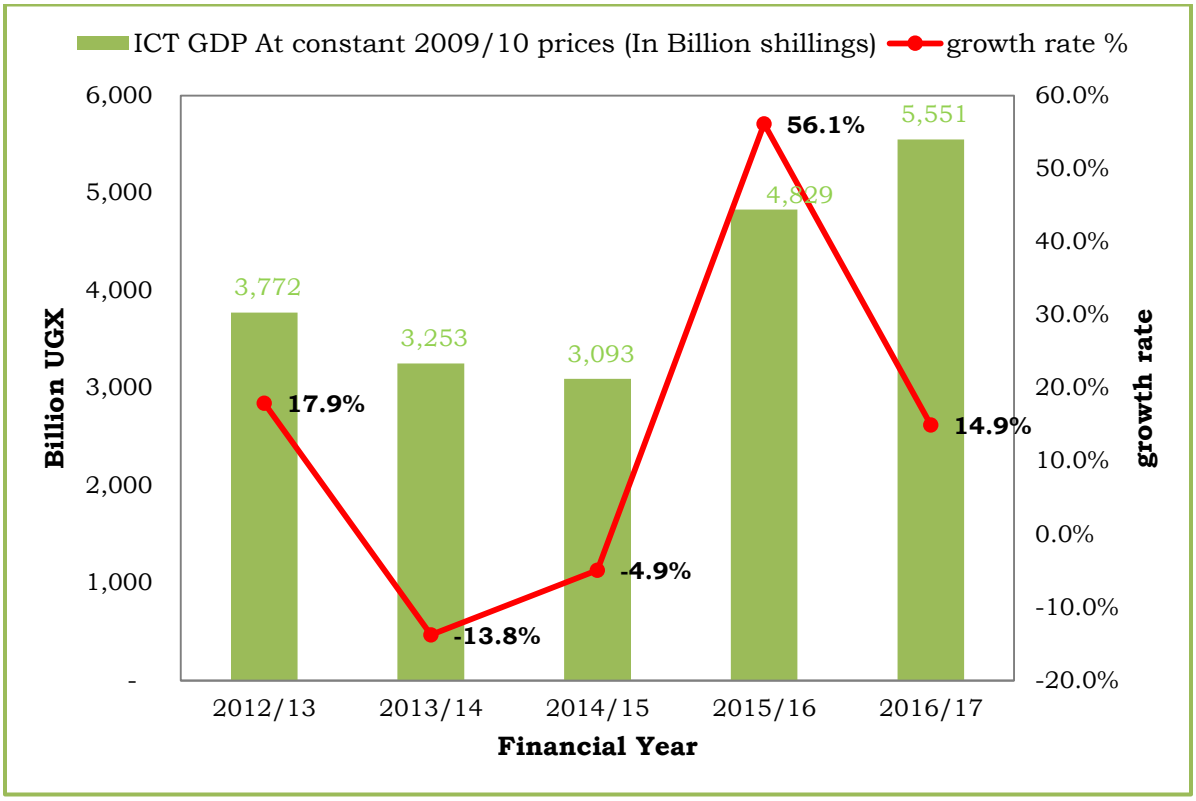
Source: Uganda Bureau of Statistics

Figure 3.1.2: Percentage share of ICT on total GDP for FY 2011/12 to FY 2016/17



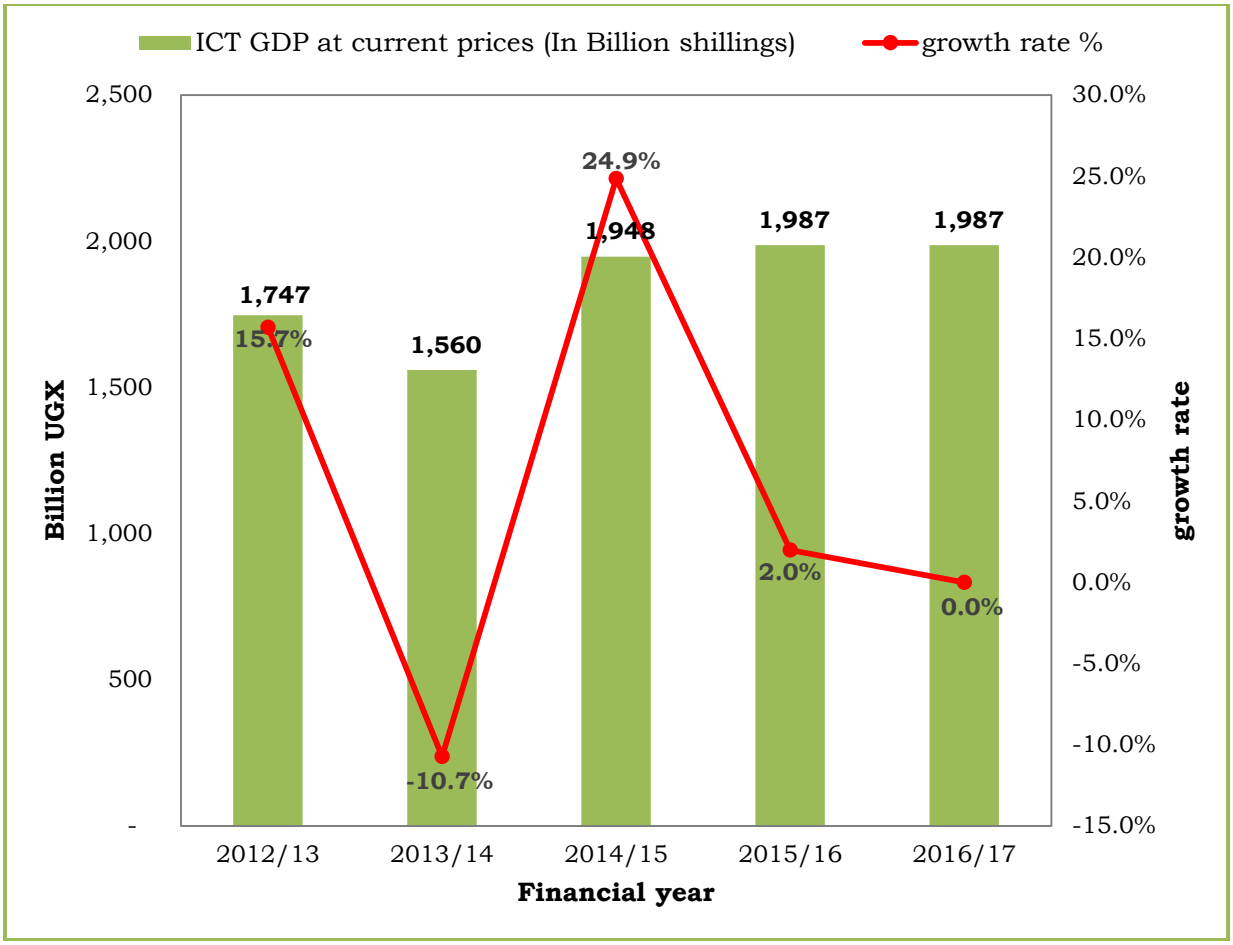
Source: Uganda Bureau of Statistics

Figure 3.1.3: ICT Gross value added at constant 2009/10 prices and Growth rates for FY 2011/12 to FY 2016/17



Source: Uganda Bureau of Statistics

Figure 3.1.4: ICT Gross value added at current prices and Growth rates for FY 2012/13 to FY 2016/17



Source: Uganda Bureau of Statistics

Table 3.1.1: Percentage share of ICT activities on total GDP at Constant 2009/10 Prices for FY 2011/12 to FY 2016/17

Activity	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Information and Communication	6.83%	7.79%	6.40%	5.79%	8.64%	9.56%
Postal and Courier services	0.04%	0.03%	0.02%	0.02%	0.02%	0.01%
Manufacturing	0.001%	0.001%	0.001%	0.001%	0.001%	0.002%
ICT	**6.9%**	**7.8%**	**6.4%**	**5.8%**	**8.7%**	**9.6%**

Source: Uganda Bureau of Statistics

Table 3.1.2: Percentage share of ICT activities on total GDP at Current Prices for FY 2011/12 to FY 2016/17

Activity	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Information and Communication	2.51%	2.70%	2.20%	2.51%	2.38%	2.16%
Postal and Courier services	0.05%	0.04%	0.03%	0.02%	0.02%	0.01%
Manufacturing	0.002%	0.001%	0.001%	0.001%	0.002%	0.002%
ICT	**2.6%**	**2.7%**	**2.3%**	**2.6%**	**2.4%**	**2.2%**

Source: Uganda Bureau of Statistics

Table 3.1.3: ICT Gross value added at Constant 2009/10 Prices for FY 2011/12 to FY 2016/17 by GDP sectors (UGX Million)

Sector	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Industry	**589**	**436**	**518**	**534**	**796**	**878**
Manufacturing	***589***	***436***	***518***	***534***	***796***	***878***
Computer, Electronic and Optical Products	*589*	*436*	*518*	*534*	*796*	*878*
Service	**3,198,074**	**3,771,635**	**3,252,701**	**3,092,452**	**4,828,104**	**5,549,855**
Information and Communication	***3,178,312***	***3,755,836***	***3,241,511***	***3,083,343***	***4,818,162***	***5,543,894***
Audio-Visual Production and Distribution services	*31,203*	*26,382*	*16,448*	*21,310*	*42,585*	*36,519*
Broadcasting and Programming services	*117,565*	*132,377*	*114,065*	*103,584*	*138,397*	*129,752*
Computer Programming, Consultancy and Related services	*25,511*	*35,716*	*16,570*	*23,374*	*27,641*	*18,156*
Information Services	*25,360*	*26,726*	*12,607*	*12,970*	*40,333*	*37,125*
Telecommunications services	*2,978,673*	*3,534,636*	*3,081,821*	*2,922,104*	*4,569,205*	*5,322,342*
Other Service Activities	***67***	***69***	***53***	***54***	***73***	***78***
Repair of Computers and Personal and Household Goods service	*67*	*69*	*53*	*54*	*73*	*78*
Transportation and Storage	***19,695***	***15,730***	***11,136***	***9,055***	***9,869***	***5,884***
Postal and Courier services	*19,695*	*15,730*	*11,136*	*9,055*	*9,869*	*5,884*
ICT GDP	**3,198,663**	**3,772,071**	**3,253,219**	**3,092,985**	**4,828,900**	**5,550,733**
Total GDP	**46,521,732**	**48,190,422**	**50,651,173**	**53,278,885**	**55,759,857**	**57,970,612**

Source: Uganda Bureau of Statistics

Table 3.1.4: ICT Gross value added at Current Prices for FY 2011/12 to FY 2015/16 by GDP sector (UGX Million)

Sector	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Industry	**954**	**682**	**778**	**810**	**1,326**	**1,510**
Manufacturing	***954***	***682***	***778***	***810***	***1,326***	***1,510***
Computer, Electronic and Optical Products	954	682	778	810	1,326	1,510
Service	**1,509,397**	**1,746,690**	**1,559,232**	**1,947,086**	**1,985,325**	**1,985,120**
Information and Communication	***1,481,686***	***1,721,689***	***1,539,661***	***1,932,507***	***1,970,693***	***1,976,589***
Audio-Visual Production and Distribution services	40,228	36,381	23,546	30,995	66,064	60,141
Broadcasting and Programming services	151,618	182,644	163,723	151,129	216,236	213,817
Computer Programming, Consultancy and Related services	32,736	48,889	23,665	33,853	42,890	29,616
Information Services	32,929	36,918	17,993	18,882	62,799	60,835
Telecommunications services	1,224,175	1,416,856	1,310,735	1,697,648	1,582,704	1,612,179
Other Service Activities	***79***	***87***	***71***	***73***	***108***	***131***
Repair of Computers and Personal and Household Goods service	*79*	*87*	*71*	*73*	*108*	*131*
Transportation and Storage	***27,632***	***24,914***	***19,500***	***14,506***	***14,525***	***8,400***
Postal and Courier services	*27,632*	*24,914*	*19,500*	*14,506*	*14,525*	*8,400*
ICT GDP	**1,510,351**	**1,747,372**	**1,560,009**	**1,947,896**	**1,986,652**	**1,986,630**
Total GPD	**59,152,262**	**63,740,292**	**69,276,043**	**76,516,734**	**82,902,727**	**91,351,423**

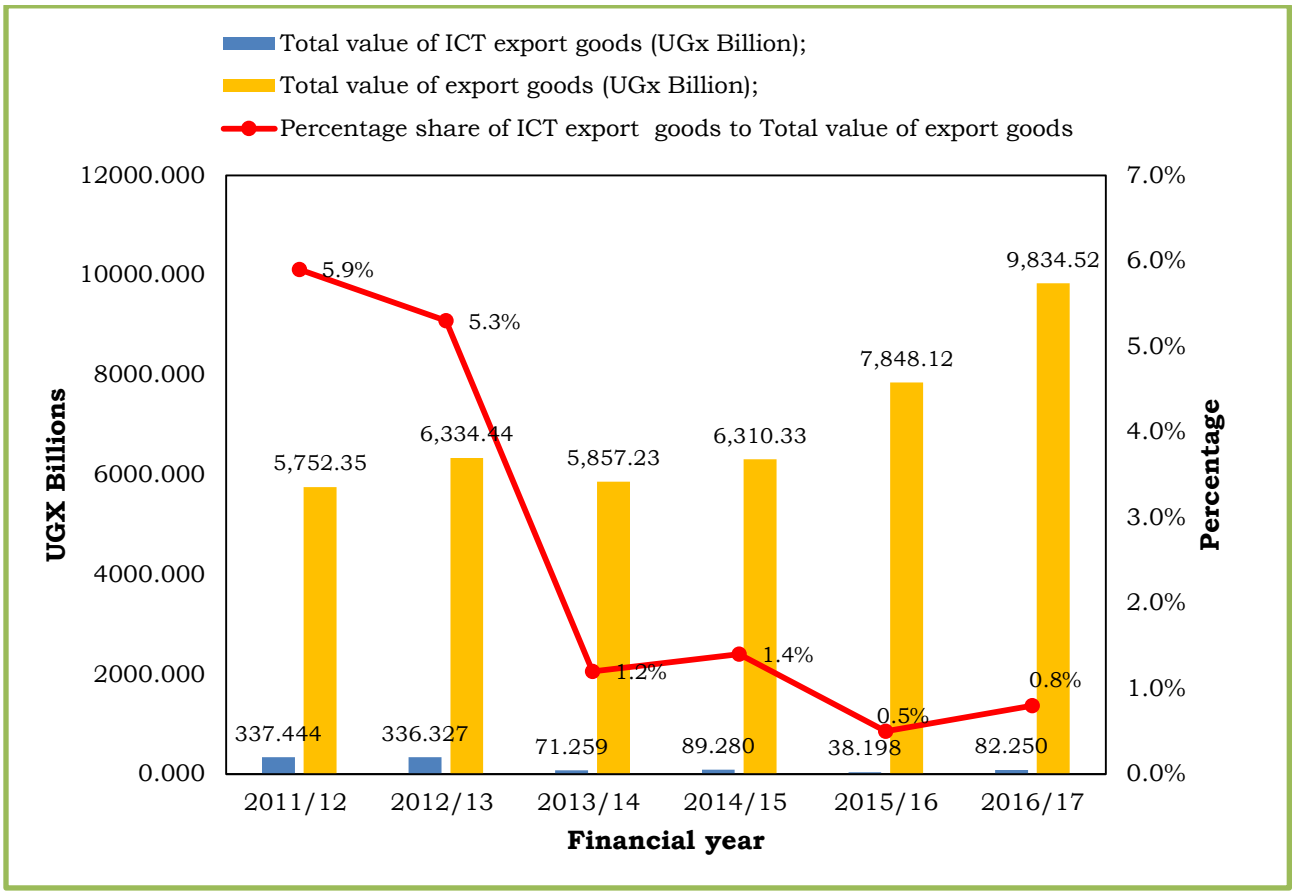
Source: Uganda Bureau of Statistics

3.2 Trade in ICT goods

During the FY 2016/17, the total formal ICT goods export earnings was estimated at UGX 82.3 billion translating into a 0.8 percent share to total formal goods export earnings (figure 3.2.1).

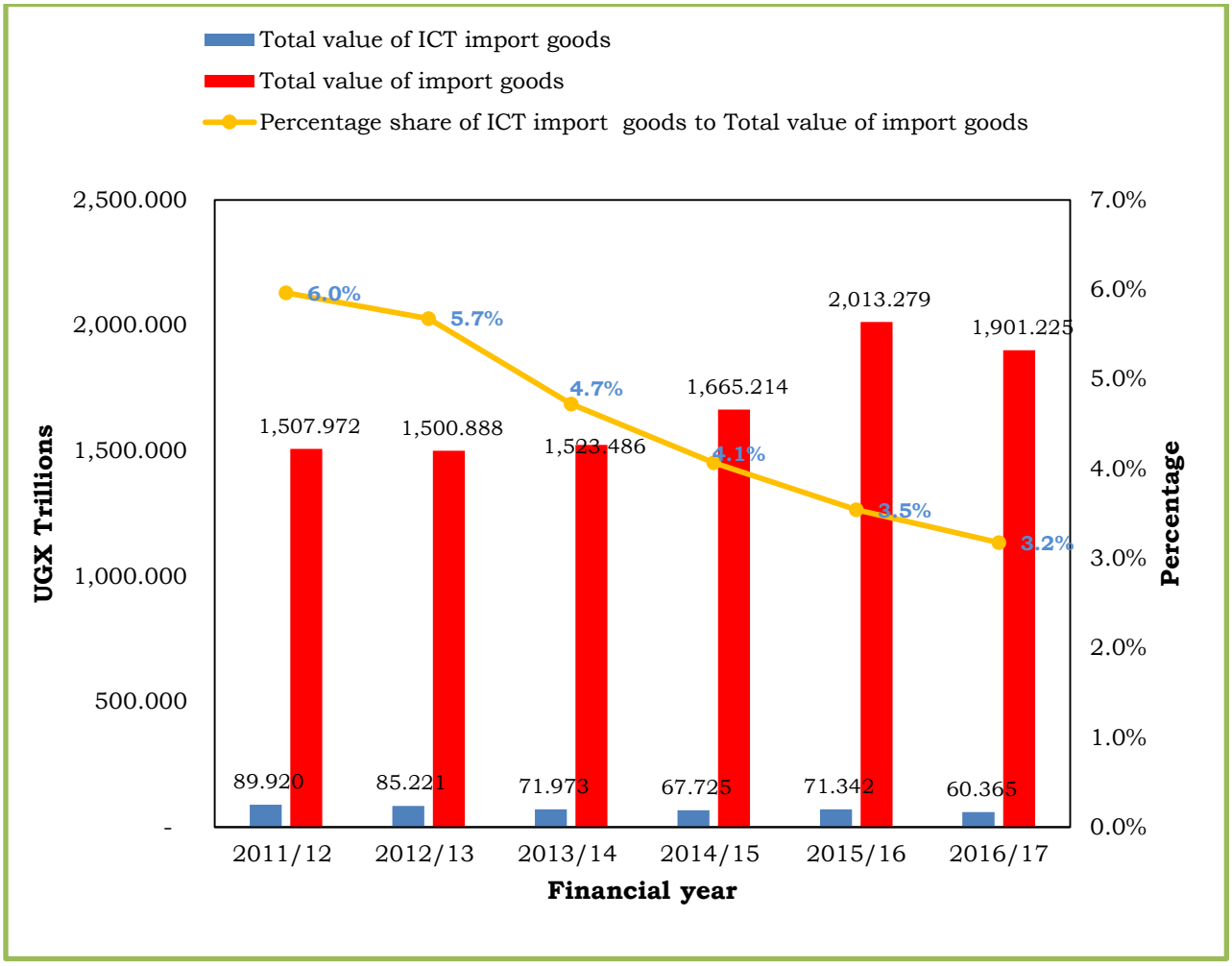
During the FY 2016/17, the total formal ICT goods imports bill in stood at total at UGX 60.4 billion translating into a 3.2 percent share to total formal goods import bill (figure 3.2.2).

Figure 3.2.1: Summary of formal ICT export goods; FY 2011/12 – 2016/17



Source: Uganda Bureau of Statistics

Figure 3.2.2: Summary of formal ICT import goods; FY 2011/12 – 2015/16;

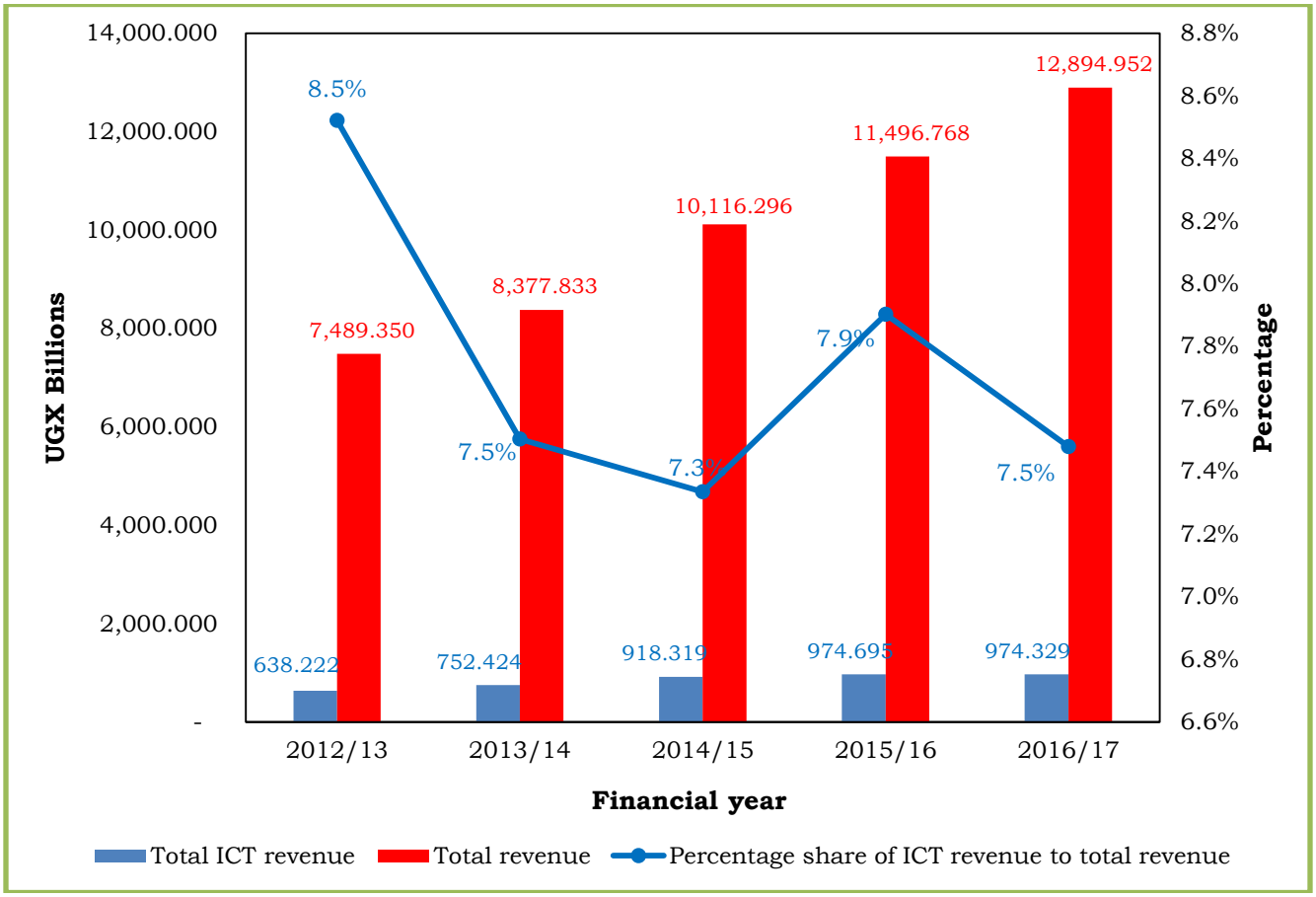


Source: Uganda Bureau of Statistics

3.3 ICT Sector Revenue Collections

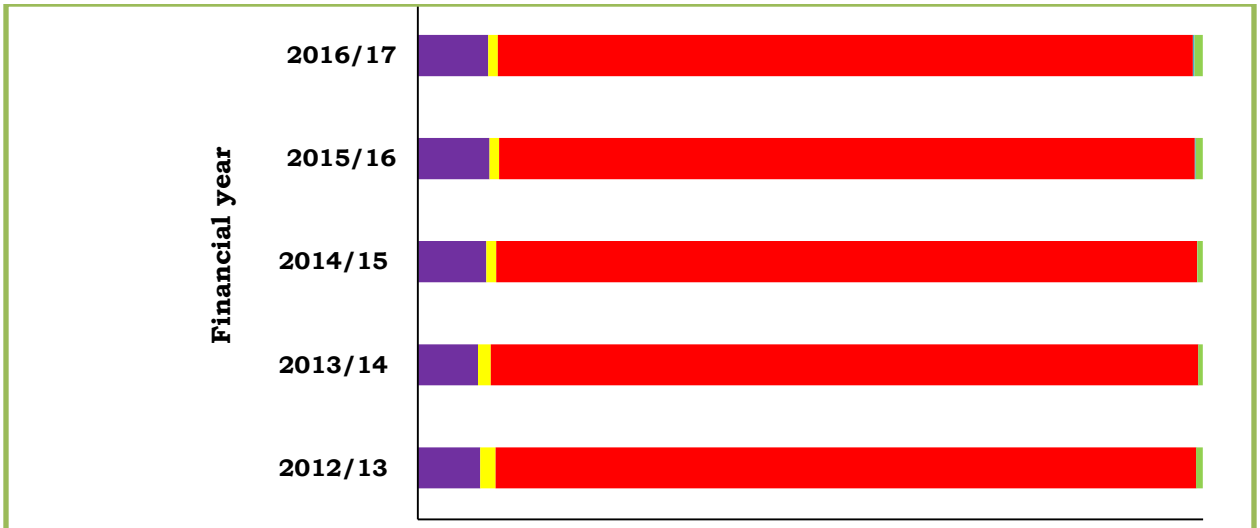
ICT sector Gross Revenue collections in FY 2016/17 was UGX 974.3 billion which was almost similar to the previous FY 2015/16. This resulted into a 7.5 percent contribution to the Total Gross Revenue Collection (figure 3.3.1). The information and communication services sub-sector contributed 88.5 percent to the ICT sector gross revenue (figure 3.3.2).

Figure 3.3.1: ICT sector Gross Revenue Collections to Total Gross Revenue Collections [UGX Billion]; FY 2012/13 – 2016/17



Source: Uganda Revenue Authority

Figure 3.3.2: Percentage share of subsectors to ICT sector Gross Revenue Collections; FY 2012/13 – 2016/17



	2012/13	2013/14	2014/15	2015/16	2016/17
ICT Manufacturing	0.1%	0.1%	0.1%	0.1%	0.1%
ICT Wholesaling	7.9%	7.6%	8.6%	9.1%	8.9%
Postal and courier activities	2.0%	1.7%	1.3%	1.2%	1.2%
Information and communication	89.2%	90.1%	89.3%	88.6%	88.5%
Activities of Mobile Money	0.0%	0.0%	0.0%	0.1%	0.2%
Repair of computers and personal and household goods	0.9%	0.6%	0.7%	0.9%	1.1%

Source: Uganda Revenue Authority

Table 3.3.1: Gross Revenue Collections from ICT activities to ICT sector Gross Revenue; FY 2012/13 – 2016/17 (UGX Billion);

Sub-sector	2012/13	2013/14	2014/15	2015/16	2016/17
ICT Manufacturing	**0.424**	**0.467**	**0.776**	**0.612**	**0.643**
2610-Manufacture of electronic components and boards	*0.418*	*0.460*	*0.681*	*0.503*	*0.387*
2620-Manufacture of computers and peripheral equipment	*0.004*	*0.007*	*0.018*	*0.019*	*0.014*
2630-Manufacture of communication equipment	*0.000*	*0.000*	*0.000*	*0.000*	*0.019*
2680-Manufacture of magnetic and optical media	*0.002*	*0.000*	*0.078*	*0.091*	*0.223*
ICT Wholesaling	**50.482**	**57.140**	**79.382**	**88.407**	**86.865**
4651-Wholesale of computers, computer peripheral equipment and software	*24.565*	*24.709*	*44.045*	*50.810*	*42.967*
4652-Wholesale of electronic and telecommunications equipment and parts	*25.917*	*32.431*	*35.337*	*37.597*	*43.898*
Transportation and storage	**12.454**	**12.430**	**11.699**	**11.916**	**11.865**
5310-Postal activities	*2.958*	*2.127*	*1.883*	*1.782*	*1.715*
5320-Courier activities	*9.496*	*10.303*	*9.816*	*10.134*	*10.150*
Information and communication	**569.343**	**678.031**	**819.650**	**863.493**	**862.426**
5820-Software publishing	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*
6110-Wired telecommunications activities	*557.266*	*665.048*	*798.849*	*839.158*	*829.913*
6130-Satellite telecommunications activities	*0.000*	*0.000*	*0.000*	*0.014*	*0.018*
6190-Other telecommunications activities	*1.883*	*1.828*	*4.483*	*4.018*	*9.851*
6201-Computer programming activities	*0.086*	*0.173*	*0.424*	*0.981*	*2.872*
6202-Computer consultancy and computer facilities management activities	*2.953*	*2.932*	*6.395*	*8.402*	*9.462*
6209-Other information technology and computer service activities	*5.906*	*6.557*	*7.449*	*8.441*	*7.869*
6311-Data processing, hosting and related activities	*1.249*	*1.487*	*2.050*	*2.442*	*2.439*
6312-Web portals	*0.000*	*0.006*	*0.000*	*0.038*	*0.002*
Financial and insurance activities	**0.019**	**0.022**	**0.156**	**1.455**	**1.822**
6620-Activities of Mobile Money	*0.019*	*0.022*	*0.156*	*1.455*	*1.822*
Other service activities	**5.501**	**4.334**	**6.656**	**8.811**	**10.707**
9511-Repair of computers and peripheral equipment	*5.379*	*4.192*	*6.129*	*7.573*	*9.173*
9512-Repair of communication equipment	*0.103*	*0.112*	*0.113*	*0.096*	*0.089*
9521-Repair of consumer electronics	*0.018*	*0.030*	*0.414*	*1.143*	*1.445*
ICT revenue	**638.222**	**752.424**	**918.319**	**974.695**	**974.329**

Source: Uganda Revenue Authority

Table 3.3.2: Percentage share of activities to ICT sector Gross Revenue Collections; FY 2012/13 – 2016/17 (UGX Billion);

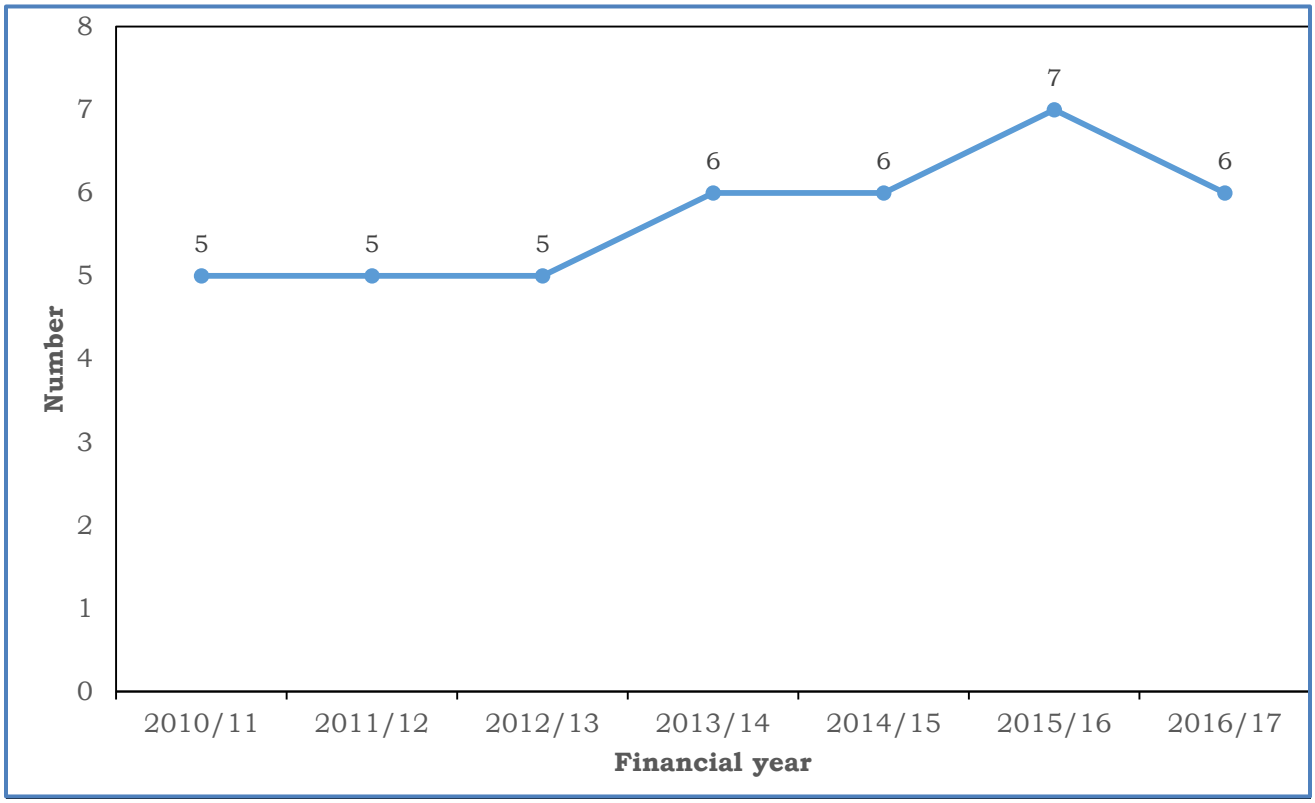
Sub-sector	2012/13	2013/14	2014/15	2015/16	2016/17
ICT Manufacturing	**0.07%**	**0.06%**	**0.08%**	**0.06%**	**0.07%**
2610-Manufacture of electronic components and boards	*0.07%*	*0.06%*	*0.07%*	*0.05%*	*0.04%*
2620-Manufacture of computers and peripheral equipment	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
2630-Manufacture of communication equipment	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
2680-Manufacture of magnetic and optical media	*0.00%*	*0.00%*	*0.01%*	*0.01%*	*0.02%*
ICT Wholesaling	**7.91%**	**7.59%**	**8.64%**	**9.07%**	**8.92%**
4651-Wholesale of computers, computer peripheral equipment and software	*3.85%*	*3.28%*	*4.80%*	*5.21%*	*4.41%*
4652-Wholesale of electronic and telecommunications equipment and parts	*4.06%*	*4.31%*	*3.85%*	*3.86%*	*4.51%*
Transportation and storage	**1.95%**	**1.65%**	**1.27%**	**1.22%**	**1.22%**
5310-Postal activities	0.46%	0.28%	0.21%	0.18%	0.18%
5320-Courier activities	1.49%	1.37%	1.07%	1.04%	1.04%
Information and communication	**89.21%**	**90.11%**	**89.26%**	**88.59%**	**88.51%**
5820-Software publishing	0.00%	0.00%	0.00%	0.00%	0.00%
6110-Wired telecommunications activities	87.32%	88.39%	86.99%	86.09%	85.18%
6130-Satellite telecommunications activities	0.00%	0.00%	0.00%	0.00%	0.00%
6190-Other telecommunications activities	0.30%	0.24%	0.49%	0.41%	1.01%
6201-Computer programming activities	0.01%	0.02%	0.05%	0.10%	0.29%
6202-Computer consultancy and computer facilities management activities	0.46%	0.39%	0.70%	0.86%	0.97%
6209-Other information technology and computer service activities	0.93%	0.87%	0.81%	0.87%	0.81%
6311-Data processing, hosting and related activities	0.20%	0.20%	0.22%	0.25%	0.25%
6312-Web portals	0.00%	0.00%	0.00%	0.00%	0.00%
Financial and insurance activities	**0.00%**	**0.00%**	**0.02%**	**0.15%**	**0.19%**
6620-Activities of Mobile Money	0.00%	0.00%	0.02%	0.15%	0.19%
Other service activities	**0.86%**	**0.58%**	**0.72%**	**0.90%**	**1.10%**
9511-Repair of computers and peripheral equipment	0.84%	0.56%	0.67%	0.78%	0.94%
9512-Repair of communication equipment	0.02%	0.01%	0.01%	0.01%	0.01%
9521-Repair of consumer electronics	0.00%	0.00%	0.05%	0.12%	0.15%

Source: Uganda Revenue Authority

3.4 ICT planned investment

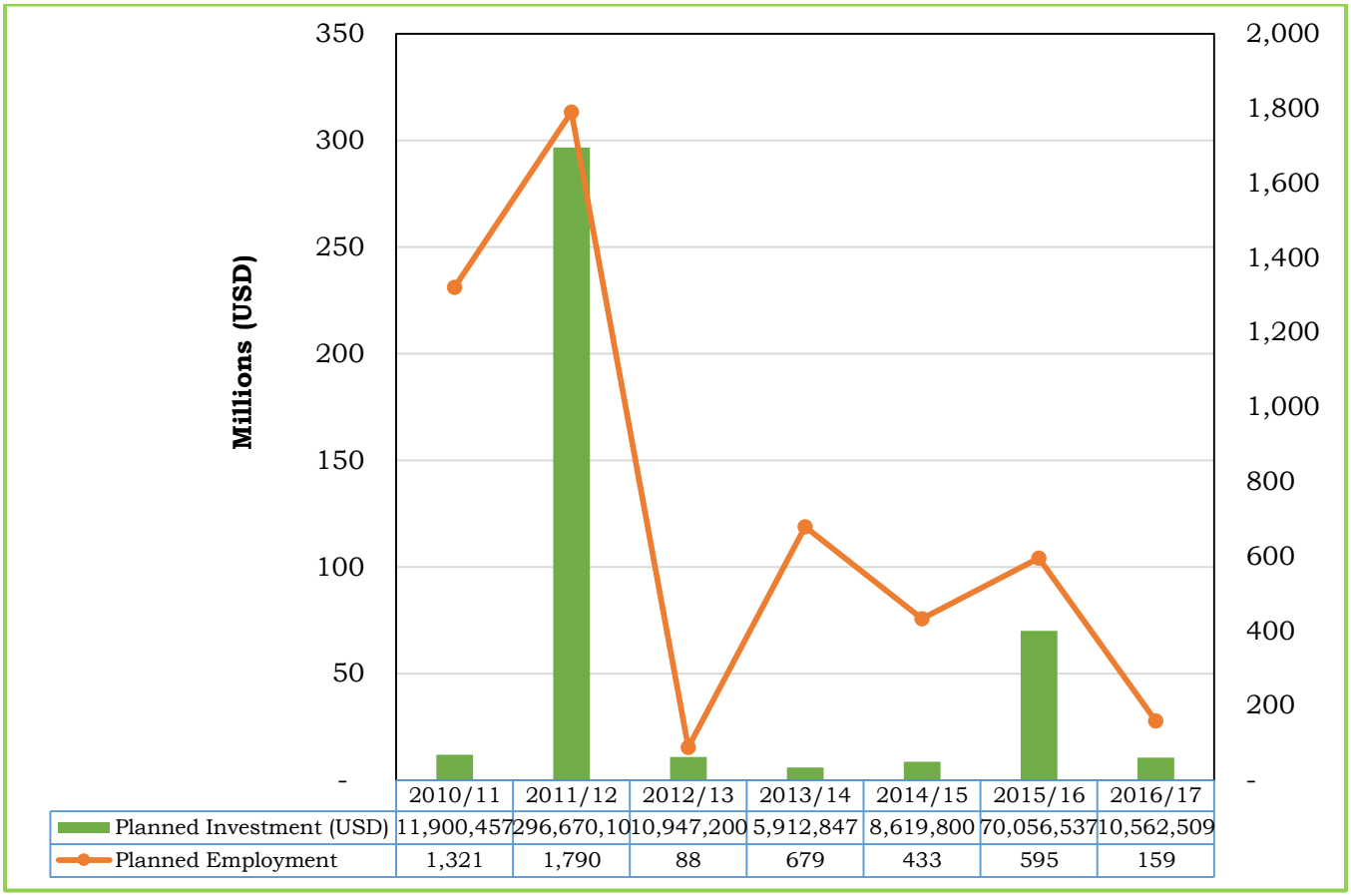
The average number of licensed companies to carry out investments in ICT related projects/services over the years is six (figure 3.4.1). Similarly, the total number of planned jobs to serve in ICT investments declined by 73 percent from 595 in FY 2015/16 to 159 in FY 2016/17 (figure 3.4.2). Furthermore, there was a decline of 85 percent in the planned capital investment from USD 70.1 million in FY 2015/16 to USD10.6 million in FY 2016/17 (figure 3.4.3).

Figure 3.4.1: Number of licensed companies to carry ICT services; FY 2012/13 – 2016/17



Source: Uganda Investment Authority

Figure 3.4.2: ICT planned capital investment (USD) and Planned employment; FY 2010/11-2016/17



	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Planned Investment (USD)	11,900,457	296,670,101	10,947,200	5,912,847	8,619,800	70,056,537	10,562,509
Planned Employment	1,321	1,790	88	679	433	595	159

Source: Uganda Investment Authority

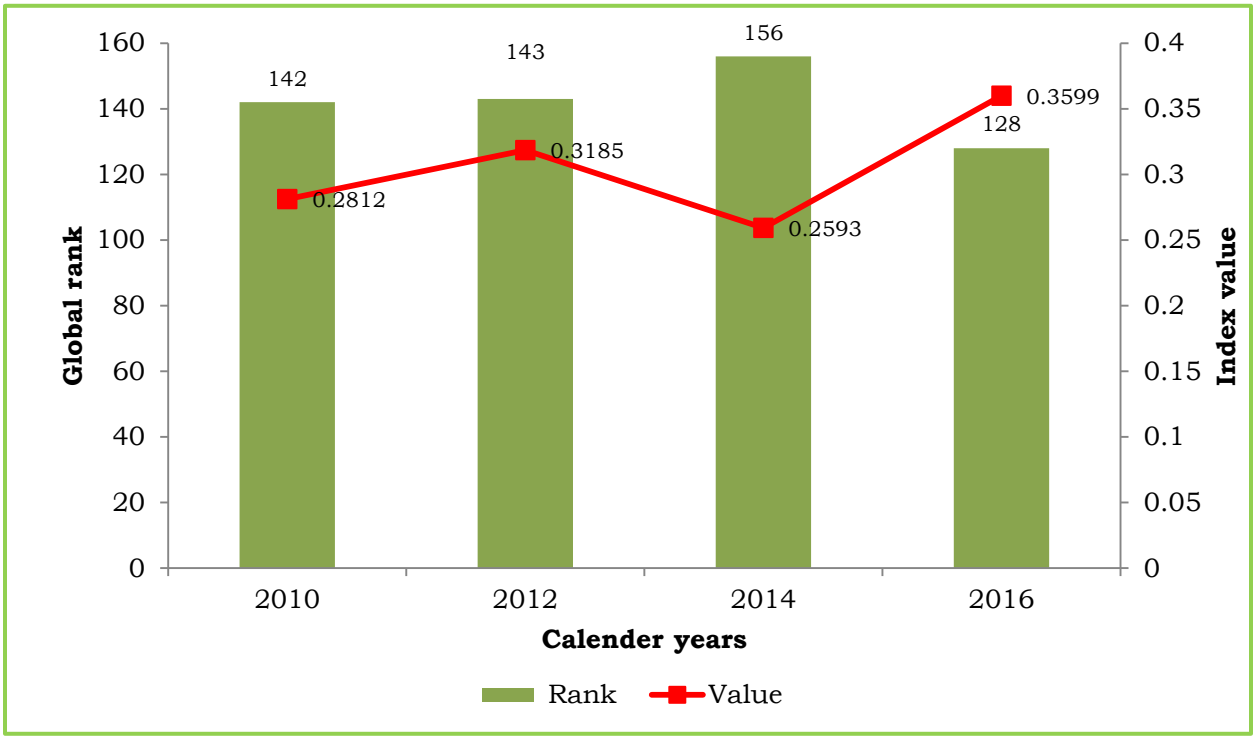
4. UGANDA'S ICT RANKINGS ON THE GLOBAL SCALE

4.1 E-Government Development Index (EGDI)

The UN e-Government Survey 2016 Report reflects that Uganda greatly improved by 18 positions in its global e-government development index from rank 156 globally to rank 128. The 2016 E-Government status for Uganda is estimated at 36 percent compared to the World's average of 49.2 percent (figure 4.1.1).

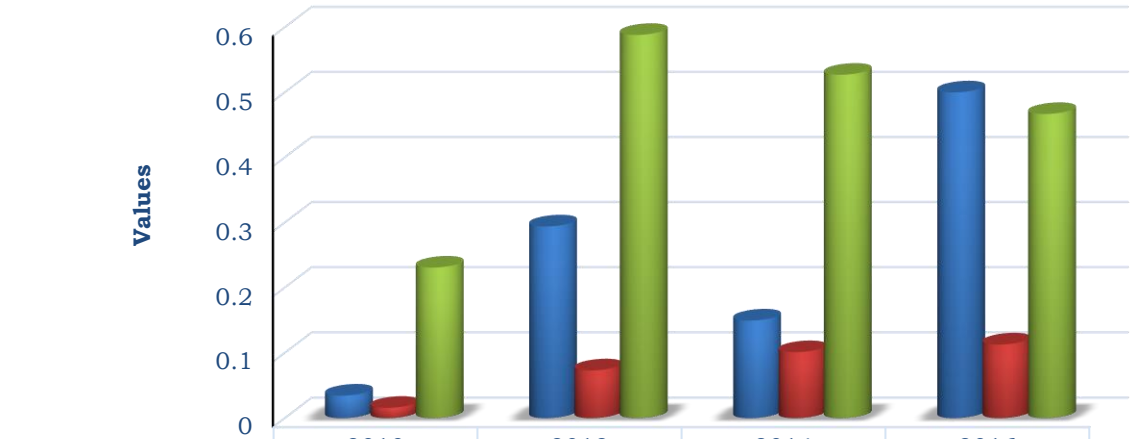
The Online Service status for Uganda improved from 14.9 percent in 2014 to 50 percent in 2016 compared to the 20 percent average for Least Developed Countries (LDCs). In addition, Telecommunication Infrastructure status is estimated at 11.2 percent from 10.1 percent in 2014 and Human Capital component declined from 52.7 percent in 2014 to 46.7 percent in 2016 compared to the LDCs' average of 11.5 percent and 38.8 percent respectively (figure 4.1.2).

Figure 4.1.1: Uganda's egovernment ranking; 2010-2016



Source: UN E-Government Survey Reports

Figure 4.1.2: Uganda's E-government ranking by components; 2010-2016



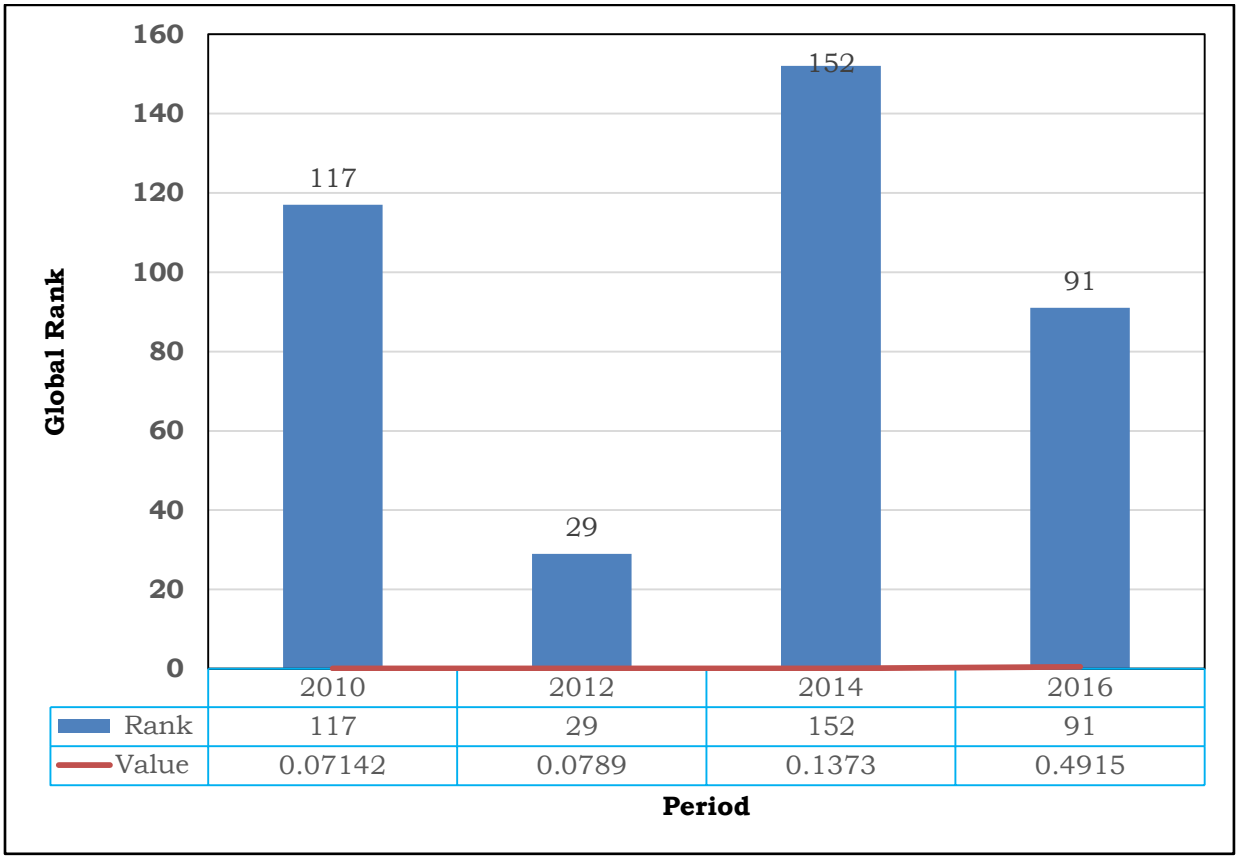
	2010	2012	2014	2016
Online Service	0.0345	0.2941	0.1496	0.5
Telecommunication Infrastructure	0.0158	0.0732	0.1011	0.1129
Human Capital	0.2309	0.5883	0.5271	0.4668

Source: UN E-government Reports

4.2 E-Participation Index

The e-Participation Index complements the e-Government Index by assessing citizens' use of the available online services and infrastructure. In 2016, Uganda stood at position 91 of 193 countries, up from position 117 in 2010, 109 in 2012, and 152 in 2014 (figure 4.2.1).

Figure 4.2.1: Uganda's e-Participation Index; 2010-2016

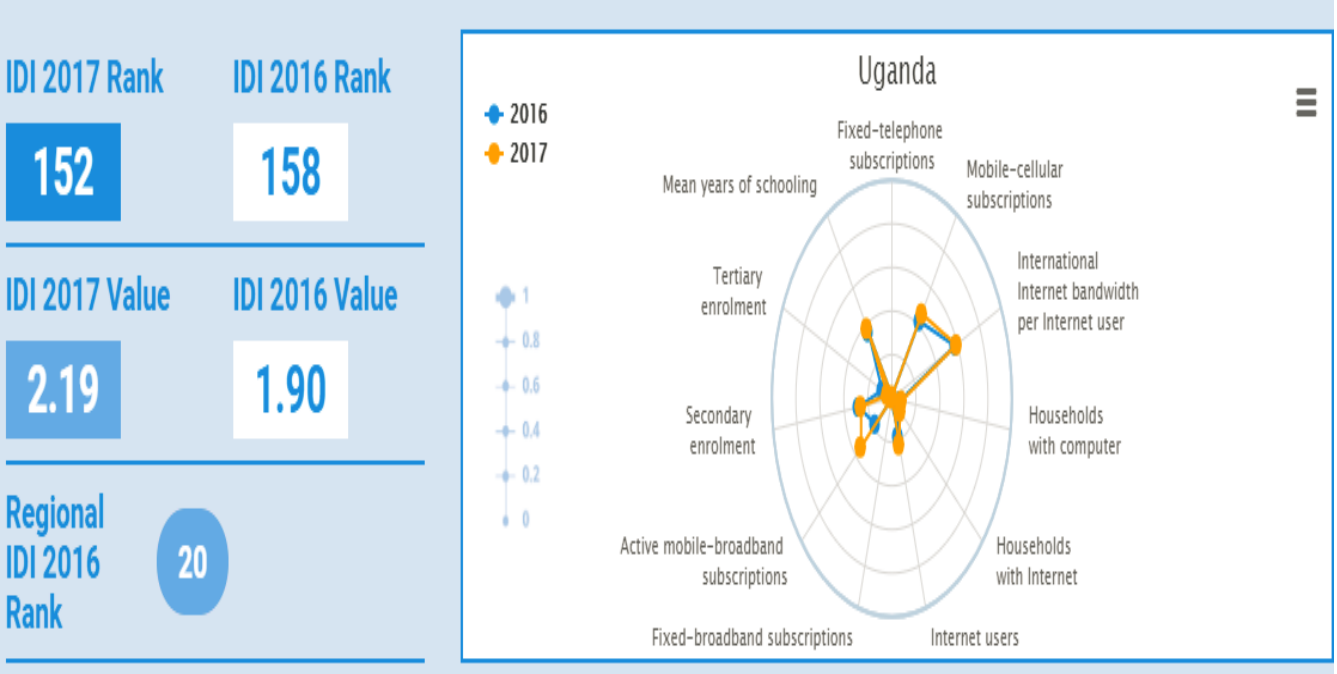


Source: UN E-government Reports

4.3 ICT Development Index (IDI)

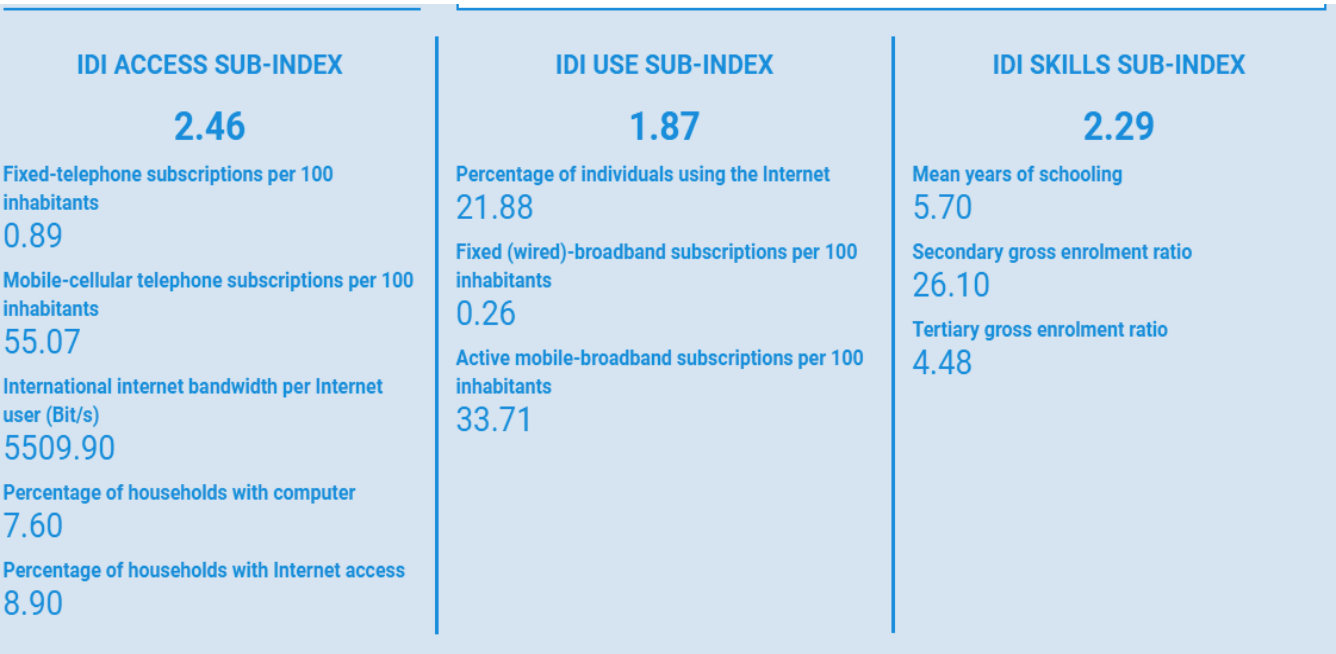
Uganda improved by six places from rank 158 in 2016, to rank 152 out of 176 countries in 2017. The IDI value has also improved from 1.9 in 2016 to 2.19 on a scale of 1 to 10, lowest to highest respectively (Figure 4.3.1).

Figure 4.3.1: Uganda's ICT Development Index; 2016 and 2017



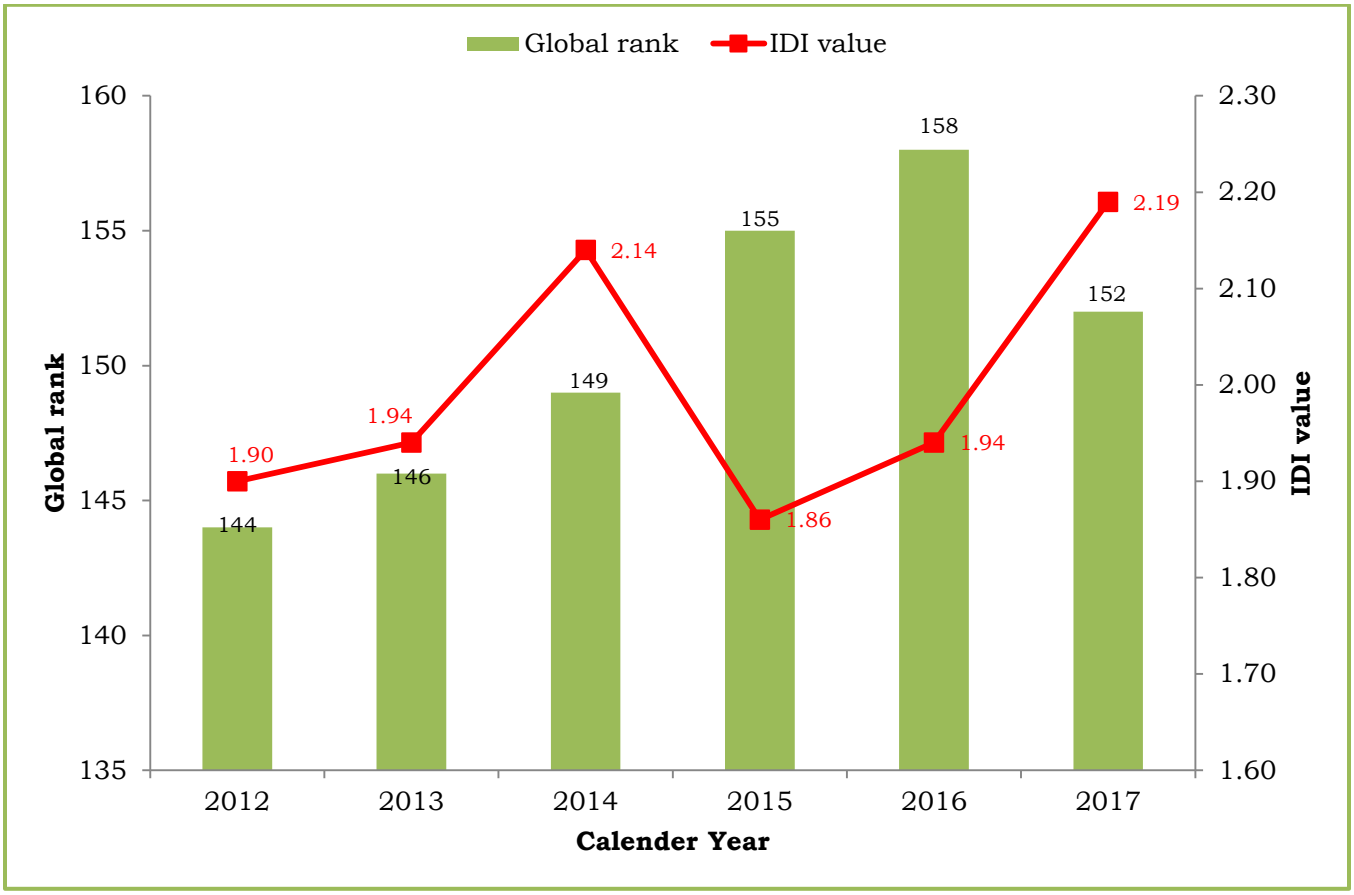
Source: ITU database

Figure 4.3.1: Uganda's ICT Development Sub-indices; 2017



Source: ITU database

Figure 4.3.3: Uganda's ICT Development Index; 2012-2017



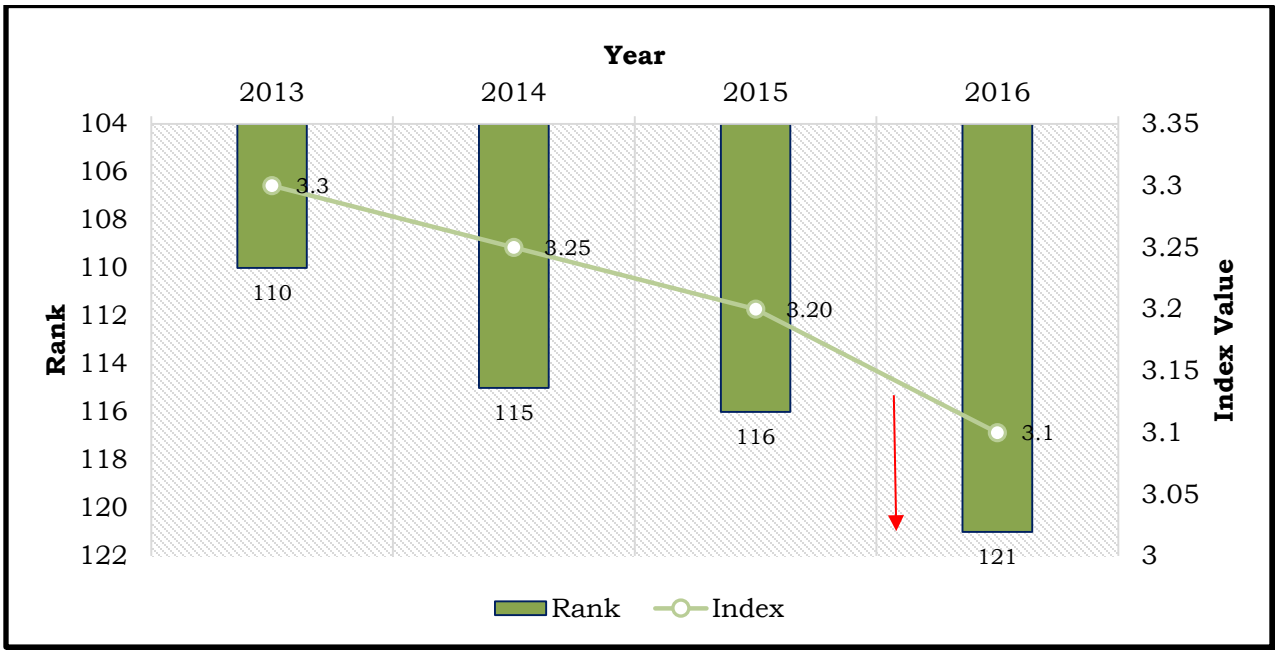
Source: Measuring Information Society reports by ITU

4.4 Networked Readiness Index (NRI)

In 2016, Uganda's NRI score was 3.1 on a scale of 1 to 7, placing it in position 121 out of 139 countries reviewed from a position of 116 in 2015 (figure 4.4.1). This drop is attributed to the drop in the use of mobile phones in Uganda due to the decline in affordability. The drop in affordability had resulted from the increasing government charges on mobile telecommunication services including excise duty on airtime, phone calls and mobile money transfers, as well as withholding tax on mobile money transfer charges.

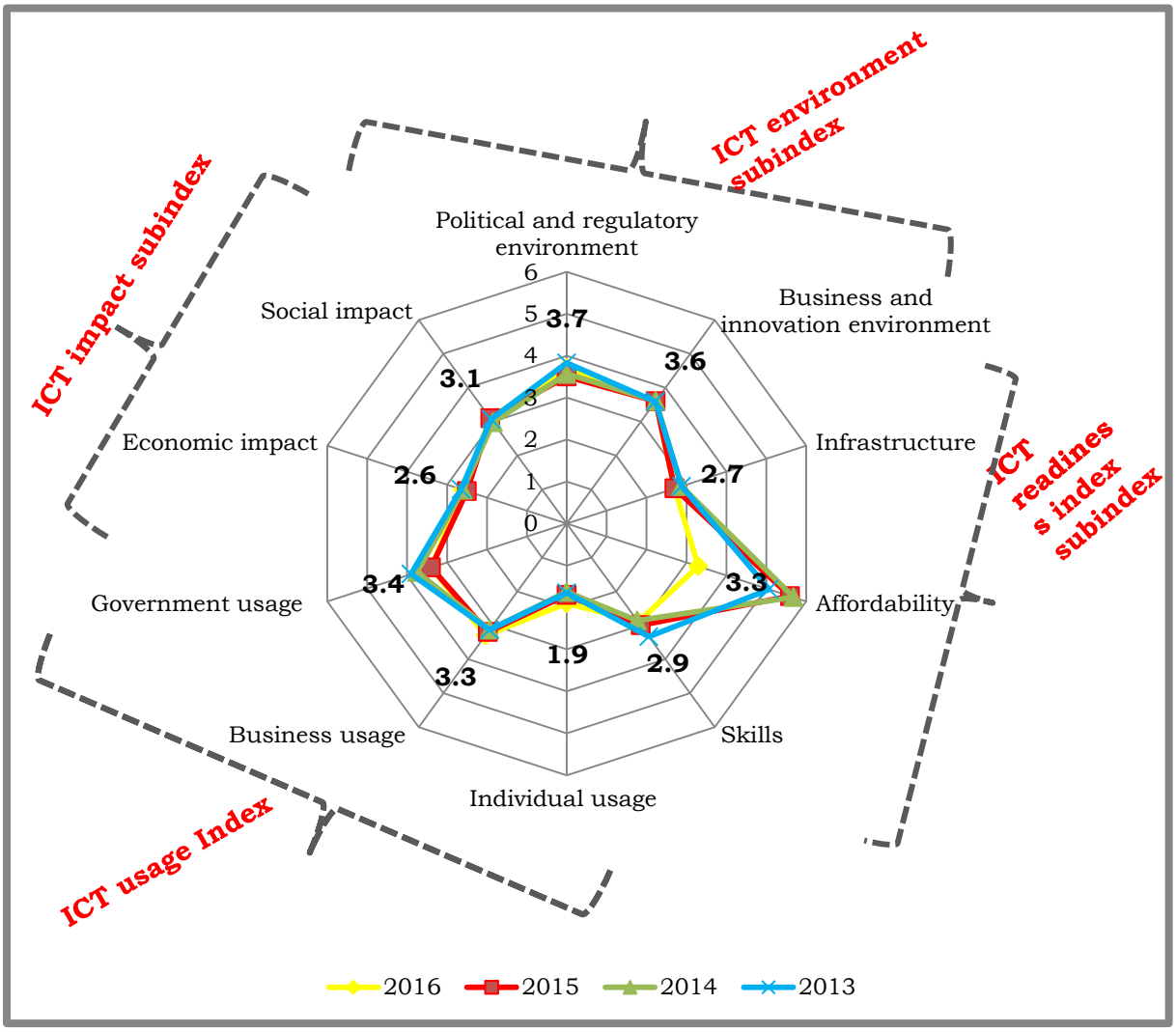
Uganda's best performance was in the political and regulatory environment (3.7) as well as the business and innovations (3.6) environment sub-indexes. Impact and usage are the least performing sub-indices at 2.9 each, with individual usage scoring the lowest at 1.9 over the years (figure 4.4.2).

Figure 4.4.1: Uganda's networked readiness Index; 2013- 2016



Source: Global Information Technology Reports by World Economic Forum

Figure 4.4.2: Uganda's rank by networked readiness sub-Indices and pillars; 2013- 2016

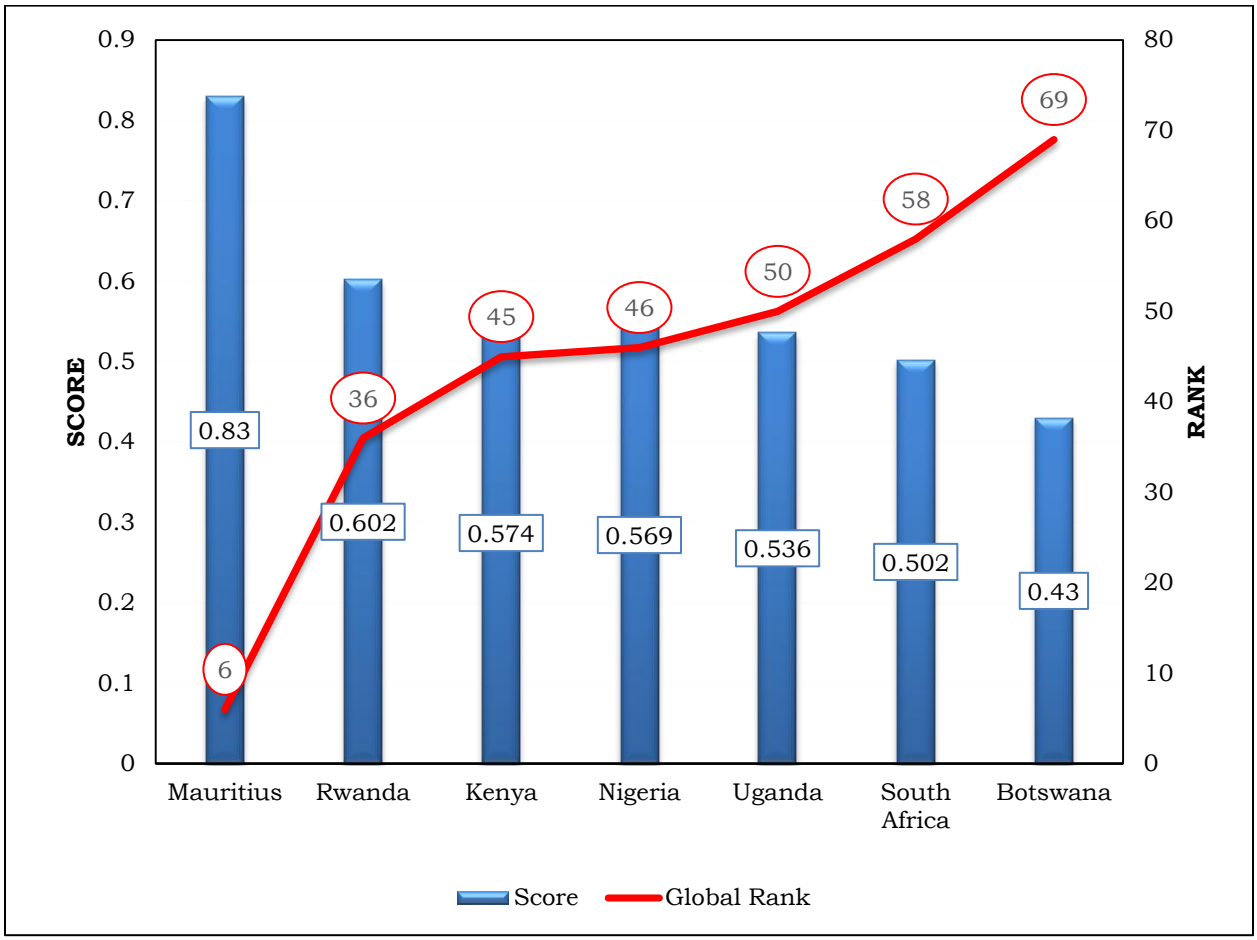


Source: Global Information Technology Reports by World Economic Forum

4.5 Global Cybersecurity Index (GCI)

Out of the 193 member states assessed globally in 2017, Uganda ranked the 50th with a score of 0.536 (Figure 4.5.1).

Figure 4.5.1: Uganda's Cybersecurity Index in the Africa Region; 2017



Source: Global Cybersecurity Index report by ITU