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Introduction

This report produced by the Economics Department of the Telecommunications Regulatory Commission (TRC) provides a comprehensive overview of the market trends and developments from 2009 to 2010 covering three public suppliers – LIME, Digicel and CCT. This report is the first of its kind which includes data on the telecommunications industry covering traffic, revenue and subscribers for fixed line, mobile and broadband services including human resources and financial data based on data reported to the TRC by the operators.

Who is the Regulator?

The Telecommunications Regulatory Commission (TRC) is a statutory body responsible for regulating the telecommunications sector of the British Virgin Islands. The Commission is also responsible for promoting the development of telecommunications throughout the Virgin Islands (UK). The Commission is governed by the Telecommunications Act adopted in 2006 and was formed in 2007. It advises the Minister of Communications and Works on telecommunications policies internationally and regionally and protects the interests of users of telecommunications services.

More specifically, the TRC regulates licensees and authorization holders as well as ensuring fair competition amongst licensees and all other operators of telecommunications networks or providers of telecommunications services. It also establishes or monitors the implementation of national telecommunications standards and ensures compliance amongst operators. The TRC investigates complaints from consumers concerning services provided by the licensed public suppliers in respect of rates, billing and services provided, and facilitates relief where necessary.

Our vision is to have the **“best telecommunications infrastructure and services in the region in terms of innovation, quality, choice and competitive pricing.”** Our mission is to **“enable and facilitate the availability of adequate telecommunications infrastructure and**

services with the view to ensure the long term benefit to the residents and businesses in the Virgin Islands.”

Telecommunications Industry

Service Providers

The licensed public suppliers in the telecommunications market are LIME, Digicel CCT and BVI Cable TV. This report covers LIME, Digicel and CCT and future annual reports will also include BVI Cable TV.



LIME (Landline, Internet, Mobile and Entertainment) who was previously rebranded as B-Mobile, was established in 2007 after the liberalization of the telecommunications market. Its parent company is Cable & Wireless. LIME provides fixed line, mobile and broadband services in a competitive VI market. The current General Manager is Sean Auguste.



The Bigger, Better Network.

Digicel entered the BVI market in 2008 after the liberalization of the telecommunications market that occurred in 2006. The operator provides mobile services and the current CEO is Declan Cassidy.



Caribbean Cellular Ltd. (CCT), a locally owned company was established in 1986 as CCT Boatphone but was later rebranded as CCT Global Communications. In 2007 after the liberalization of the telecommunications market, CCT continued to provide fixed

line, mobile and broadband services in a competitive market. The current General Manager is Jose Luis Fernandez.

Data Collection

The Telecommunications Regulatory Commission issued a Market Data Request to the three operators, LIME, Digicel and CCT excluding BVI Cable TV requesting mid-year data for both 2009 and 2010. The request asked for subscriber, revenue and traffic information for fixed services, mobile services, broadband, other services, human resources and financial indicators. Within a certain time period, operators submitted information to the TRC which has been compiled by the Economics Department into this report.

History of the Telecommunications Sector

The Government of the British Virgin Islands liberalized the telecommunications sector in 2006 and set up a regulatory body- the Telecommunications Regulatory Commission (TRC) to monitor the competitiveness of the sector. LIME provides fixed line, mobile and broadband services, CCT provides fixed line, mobile and broadband services and Digicel entered the market in 2008 to provide mobile services. LIME and CCT are the only operators providing fixed line services. LIME and CCT are the only operators providing fixed broadband services.

Economic Background

All economic data on the British Virgin Islands economy is from the Development Planning Unit¹ (DPU) of the Government of the British Virgin Islands. The BVI is a high income overseas territory of the United Kingdom with a population of 29,537 inhabitants (DPU). It was one of the fastest

¹ The Development Planning Unit (DPU) is a department under the Premier's Office of the Government of the British Virgin Islands who provides statistical data on the economic developments of the BVI economy.

growing economies in the Caribbean with an annual GDP growth rate of 7.3% in 2007 before the start of the Global Recession but experienced a negative annual GDP growth rate of -11.5% in 2010. The economy is highly dependent on the financial sector which makes up 60% of government revenues and the tourism sector making up 40% of government revenues. The Telecommunications sector makes up 7% of GDP in 2009 and 8% of GDP in 2010. Revenue for the telecommunications sector excluding BVI Cable TV increased by 17% from 62,960 million in 2008 to 73,841 million in 2009.

Telecommunications Market Overview

Overview of Growth of the Telecoms Sector

Table 1

Indicators	2009	2010	Growth (%)
GDP ²	876,811,000	894,437,000	2%
Total population ³	28,882	29,537	2%
Total communication sector revenue	\$62,960,076	\$73,841,537	17%
Total communication sector voice minutes	159,533,967	183,799,681	15%
Total Fixed Voice Minutes	59,109,120	31,920,010	-46%
Total Mobile Voice Minutes	100,424,847	151,879,671	51%
Total Mobile Data volumes (MB)	108,064,741	337,129,435	212%
Total telephone subscribers	68,853	67,289	-2%
Fixed line subscribers	14,132	12,886	-9%
Mobile subscribers	47,031	47,524	1%
Broadband subscribers	7,736	6,969	-10%

Table 1 shows that the telecommunications market grew by 17% between 2009 and 2010 despite the economic downturn. Traffic in the form of voice minutes grew by 15% from 2009 to 2010. Consumers made more mobile voice calls than fixed voice calls in 2009 and 2010. Mobile data volumes grew by 212% from 2009 to

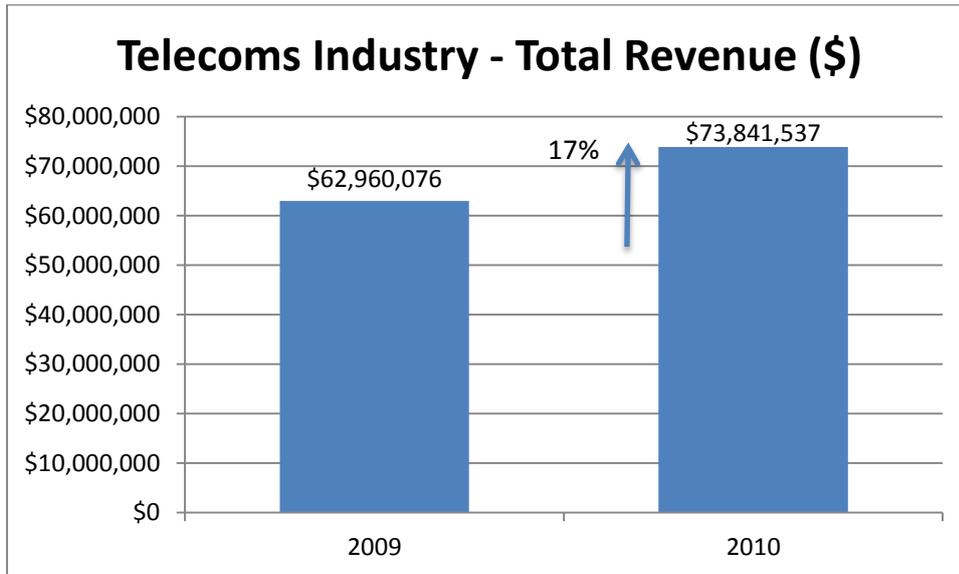
² Gross Domestic Product (GDP) data is sourced from the DPU.

³ Total population data is sourced from the DPU.

2010. The BVI has a high mobile penetration rate above 100% as shown in Table 6 below. This indicates that some people use two or more mobile phones and some visitors to the territory who are non-residents have BVI SIM cards.

Revenue

Figure 2



In Figure 2, total telecommunications revenue⁴ consisting of both wholesale and retail revenues for the three operators, excluding BVI Cable TV, increased by 17% from \$62,960,076 in 2009 to \$73,841,537 in 2010.

⁴ The telecommunications revenue consists of wholesale and retail revenue from all three operators - LIME, Digicel and CCT excluding BVI Cable TV.

Share of Revenues by Service

Figure 3

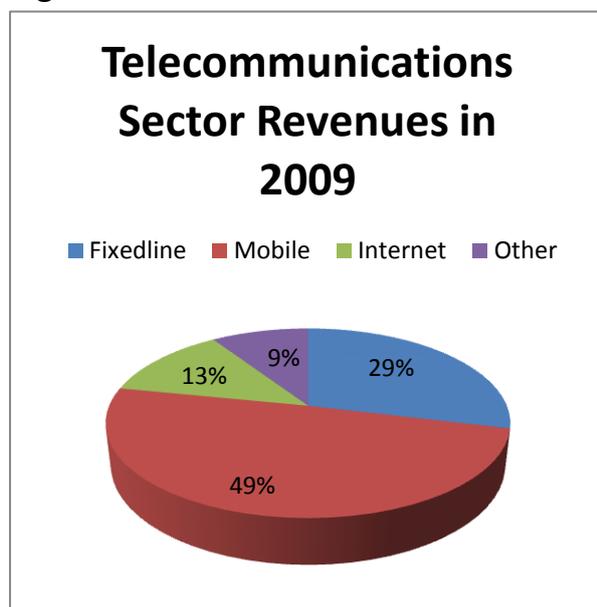
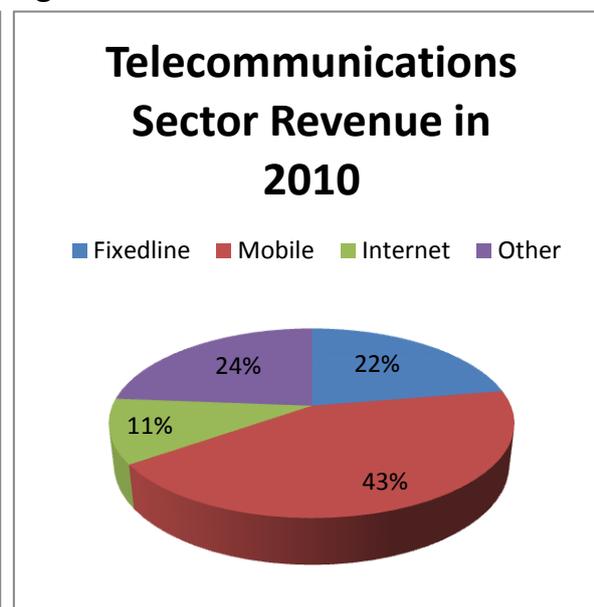


Figure 4



Figures 3 and 4 show that fixed and mobile voice calls remained the largest source of revenue for operators. Domestic revenues declined for both fixed and mobile services. At the same time, the average price of fixed line domestic calls increased and the average price of mobile domestic calls decreased. International revenues from fixed lines declined whilst increasing for mobile. At the same time, the average price of outgoing fixed line international calls increased and the average price of mobile international calls decreased. Mobile revenues accounted for 43% of all telecommunication revenues in 2010, down from 49% in the previous year shown in Figure 3. Fixed line revenues accounted for 22% of all telecommunication revenues in 2010, down from 29% in the previous year shown in Figure 3. The mobile sector is larger than the fixed, internet and other sectors in terms of the amount of revenue generated from the operators as shown in Figures 3 and 4. The prominent growth area has been in other

services⁵ which have increased from 9% of total revenues in 2009 to 24% of total revenues in 2010.

Subscribers

Figure 5

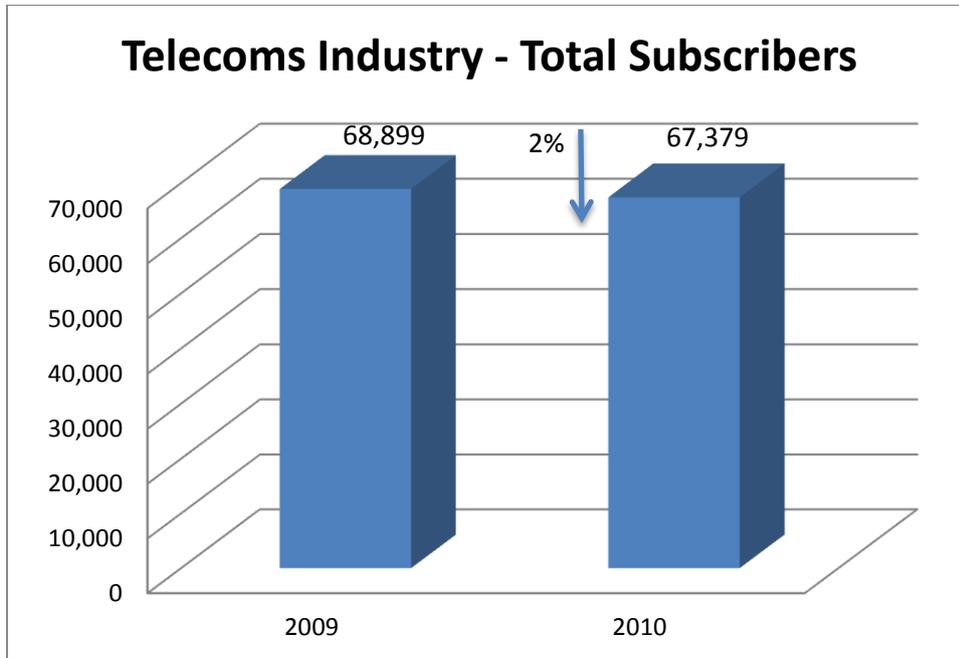


Figure 5 shows that total telecommunications subscribers (including fixed, mobile and broadband) for the three operators – LIME, Digicel and CCT excluding BVI Cable TV decreased by 2% from 68,899 in 2009 to 67,379 in 2010.

Market Penetration

Table 6

Telecoms Industry	Total Population	Total Fixed Subs.	Fixed Subs. Penetration Rate	Total Mobile Subs.	Mobile Subs. Penetration Rate	Total Broadband Subs.	Broadband Subs. Penetration Rate
2009	28,882	14,132	49%	47,031	163%	7,736	27%
2010	29,537	12,886	44%	47,524	161%	6,969	23%

⁵ Other services include Licensed Circuits, Netspeak, Voicemail, Directory, Equipment sales and rentals for LIME.

Table 6 shows a fixed penetration rate of 44% in 2010 compared to 49% in 2009. Mobile penetration is recorded at 163% for 2009 and 161% for 2010. Mobile penetration greater than 100% indicates that some individuals own and use two or more mobile phones in the Territory and it is likely that visitors to the BVI also take out BVI subscriptions. Broadband penetration fell from 27% in 2009 to 23% in 2010.

Postpaid/Prepaid shares

Table 7

MOBILE: Total subscribers	Postpaid	%	Prepaid	%	Totals
2009	8,955	19%	38,077	81%	47,031
2010	10,658	22%	36,866	78%	47,523

As Table 7 shows that prepaid subscribers formed the greatest proportion of total mobile subscribers for 2009 and 2010. In the postpaid market, the number of postpaid subscribers increased by 19%. In the prepaid market, the number of prepaid subscribers decreased by 3%. These changes translated into a small increase in the proportion of postpaid subscribers in the total market.

Subscribers Market Share by service

Figure 8

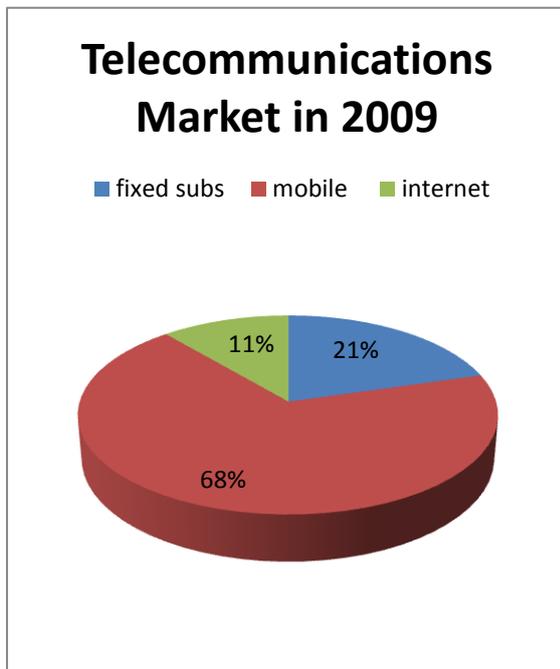
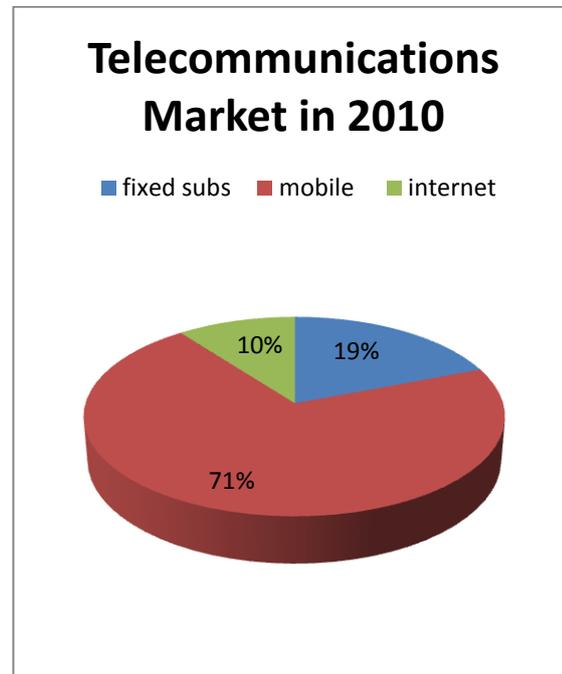


Figure 9



Figures 8 and 9 show the decline in the number of fixed subscriptions and the growth in the number of mobile subscriptions as a proportion of total subscribers from 2009 to 2010.

Traffic

Table 10

Telecoms Industry	Total Fixed Voice Minutes	Total Mobile Voice Minutes	Total Mobile Data volumes in Megabytes
2009	59,109,120	100,424,847	108,064,741
2010	31,920,010	151,879,671	337,129,435

In Table 10, mobile data usage is increasing dramatically whilst mobile voice usage continues to grow and the volume of fixed voice minutes continues to decline. Total fixed voice minutes

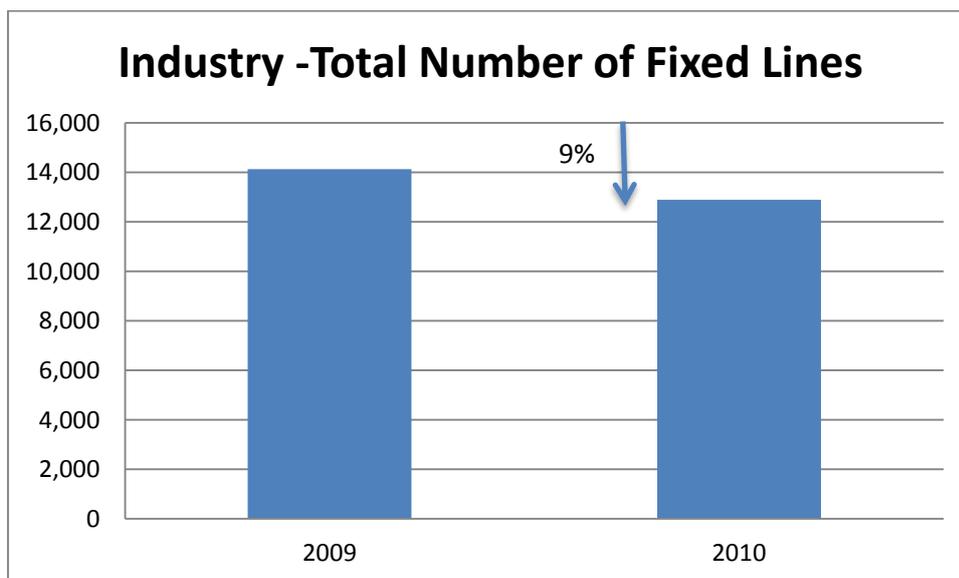
decreased by 46%, total mobile voice minutes increased by 51% and total mobile data which includes SMS, MMS and mobile data increased by 212% from 2009 to 2010. It appears that fixed usage is mainly for calling other fixed line phones and less for the purpose of calling mobile phones and making international calls. It appears that mobile customers of a particular network mainly call individuals of the same network i.e. make on-net calls.

By Telecommunication Service

Fixed Service Market

Subscribers

Figure 11



In Figure 11, the number of fixed lines declined by 9% from 14,132 in 2009 to 12,886 in 2010.

Revenue

Figure 12

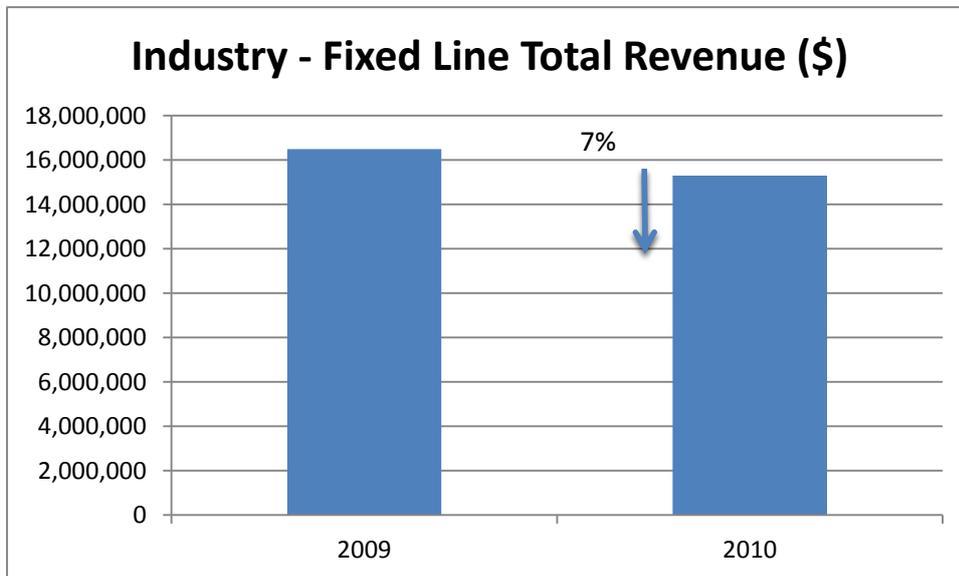
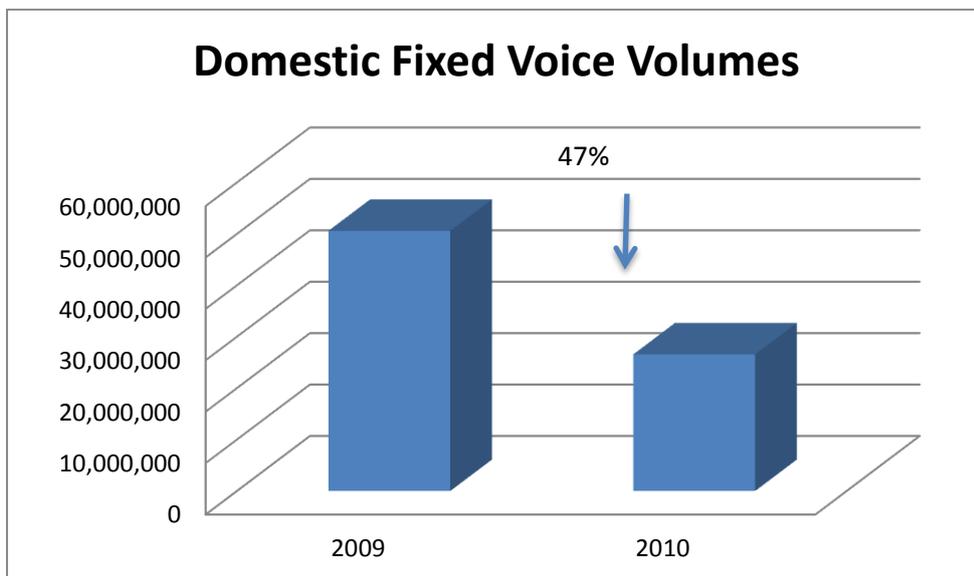


Figure 12 shows that fixed line revenues declined by 7% from \$16,495,524 in 2009 to \$15,302,482 in 2010.

Traffic

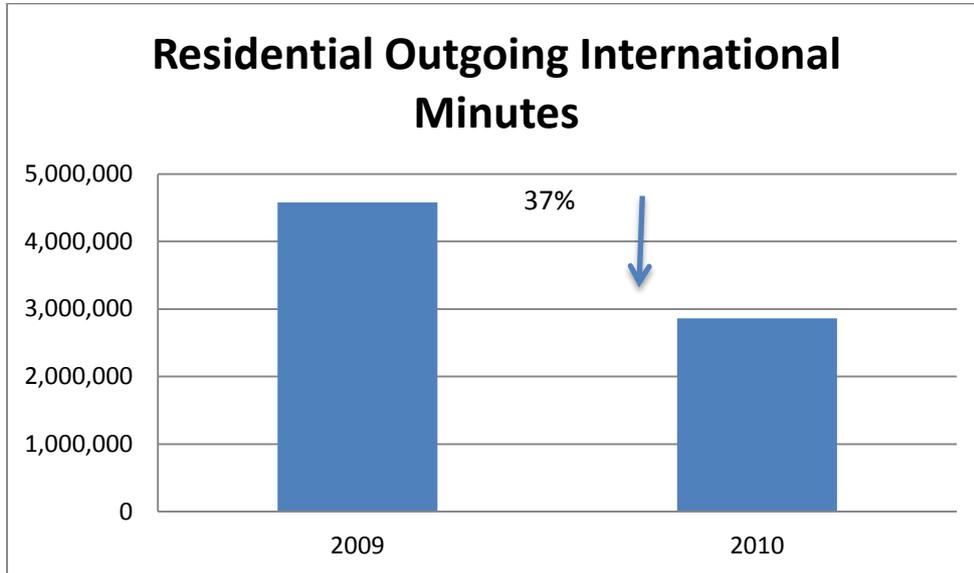
Figure 13



In Figure 13, overall domestic fixed voice volumes declined by 47% from 50,591,384 minutes in 2009 to 26,555,760 minutes in 2010.

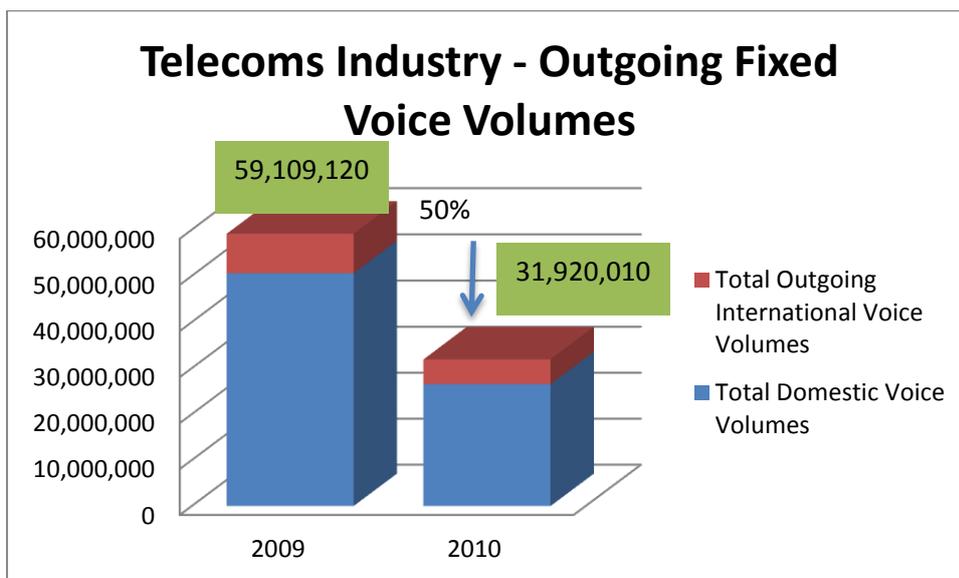
Domestic fixed voice minutes include fixed to fixed and fixed to mobile calls for both LIME and CCT fixed services.

Figure 14



In Figure 14, residential outgoing international volumes declined by 37% from 4,576,736 minutes in 2009 to 2,862,250 minutes in 2010. Residential outgoing international volumes include only outgoing calls from BVI residential customers to countries outside of the BVI.

Figure 15

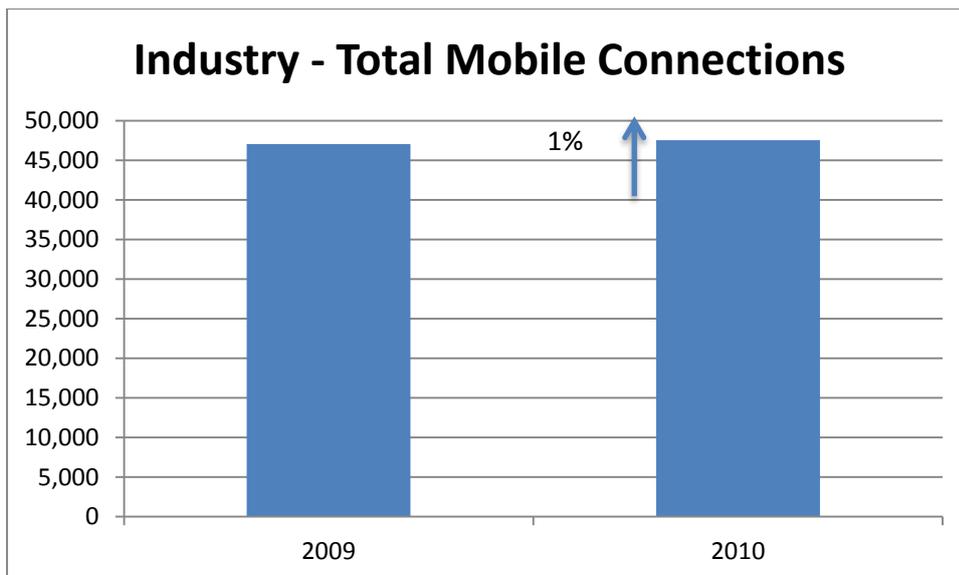


In Figure 15, overall volumes of outgoing fixed line voice traffic⁶ declined from 59,109,120 minutes in 2009 to 31,920,010 minutes in 2010. This represents a 50% decrease in outgoing fixed line volumes. Total outgoing fixed line traffic includes both domestic and international traffic. Domestic fixed to fixed call traffic decreased by 50% and domestic fixed to mobile call traffic decreased by 44%. Fixed line customers made more fixed to fixed calls than fixed to mobile calls. Outgoing international calls decreased by 37%. Fixed line customers made more domestic calls than outgoing international calls. Domestic fixed line traffic decreased by 47% from 50,591,384 minutes in 2009 to 26,555,760 minutes in 2010. Outgoing international fixed line traffic decreased by 37% from 8,517,736 minutes in 2009 to 5,364,250 minutes in 2010.

Mobile Service Market

Subscribers

Figure 16

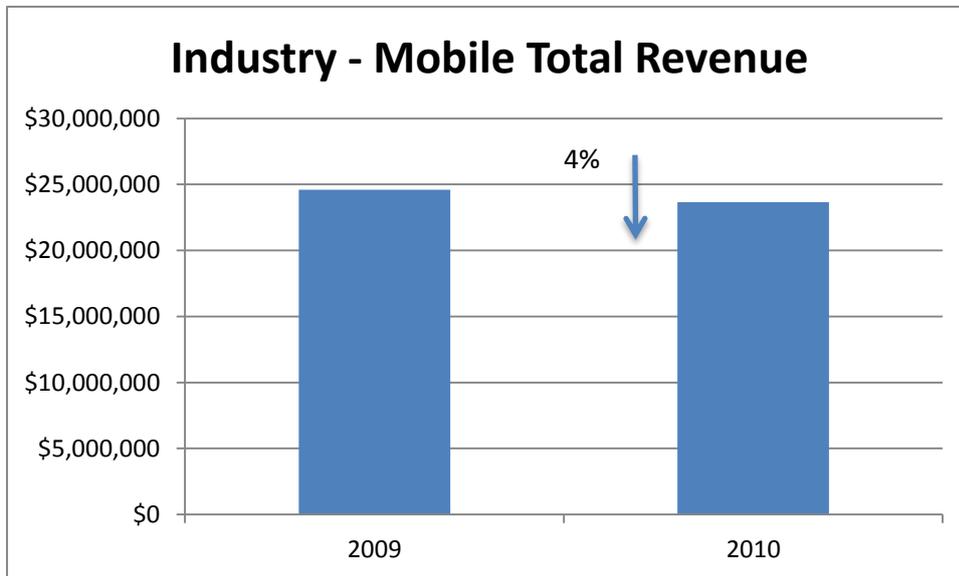


⁶ Outgoing fixed voice volumes are calls from a fixed line to either a fixed or mobile line in the BVI i.e. domestic traffic or to another fixed or mobile operator(s) outside of the BVI i.e. international traffic.

In Figure 16, the number of mobile subscriptions for all three operators increased by 1% from 47,031 in 2009 to 47,524 in 2010.

Revenue

Figure 17



In Figure 17, mobile revenues declined from \$24,605,908 in 2009 to \$23,658,180 in 2010. This represents a 4% decrease in mobile revenues.

ARPU

Table 18

MOBILE: Postpaid	Average Revenue per User (ARPU)
2009	\$87
2010	\$85

Figure 18 shows that the average revenue per user (ARPU) per month for the mobile industry as a whole. This table shows the average expenditure per postpaid mobile subscriber per month.

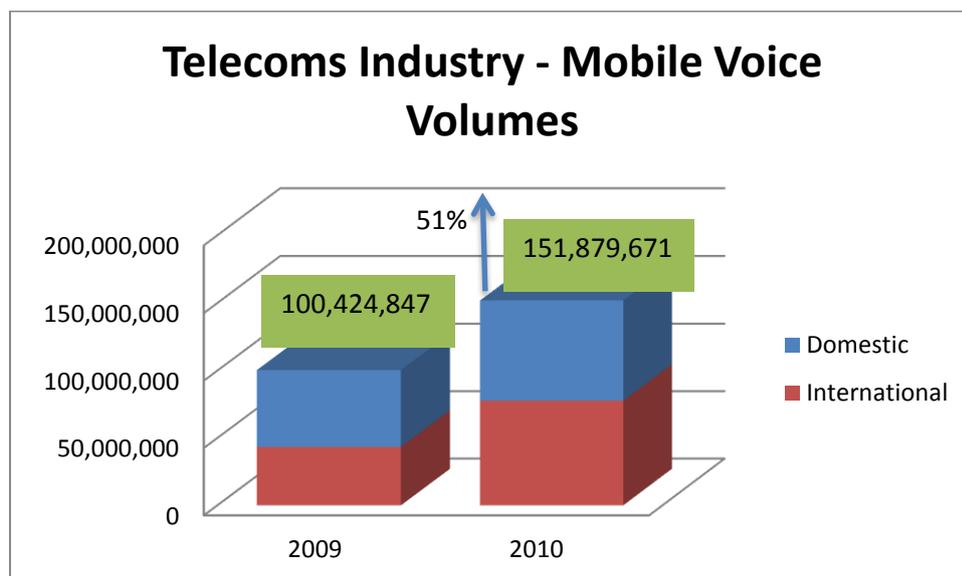
Table 19

MOBILE: Prepaid	Average Revenue per User (ARPU)
2009	\$42
2010	\$37

Figure 19 shows that the average revenue per user (ARPU) for the mobile industry as a whole. This table shows the average expenditure per prepaid mobile subscriber per month.

Traffic

Figure 20



In Figure 20, overall mobile traffic increased from 100,424,847 minutes in 2009 to 151,879,671 minutes in 2010. This represents a 51% increase in the volume of mobile traffic. Total mobile traffic

includes both domestic and international traffic volumes. Domestic mobile volumes includes mobile to fixed, on-net calls⁷ and off-net call⁸ traffic. Mobile to fixed traffic increased by 4%, on-net calls increased by 35% and off-net calls increased by 30%. On-net calls accounted for the majority of the domestic mobile traffic. Outgoing international volumes increased by 79%.

AUPU

Table 21

MOBILE: Postpaid	Average Usage per User (AUPU)
2009	1,501
2010	3,217

Figure 21 shows that the average usage per user (AUPU) per month for the industry as a whole. This table shows the average usage per postpaid mobile subscriber per month.

⁷ On-Net calls – Refers to traffic originating on a service provider’s network and terminating on the same network.

⁸ Off-Net calls – Refer to traffic originating on a service provider’s network and terminating on another service provider’s network

Figure 22

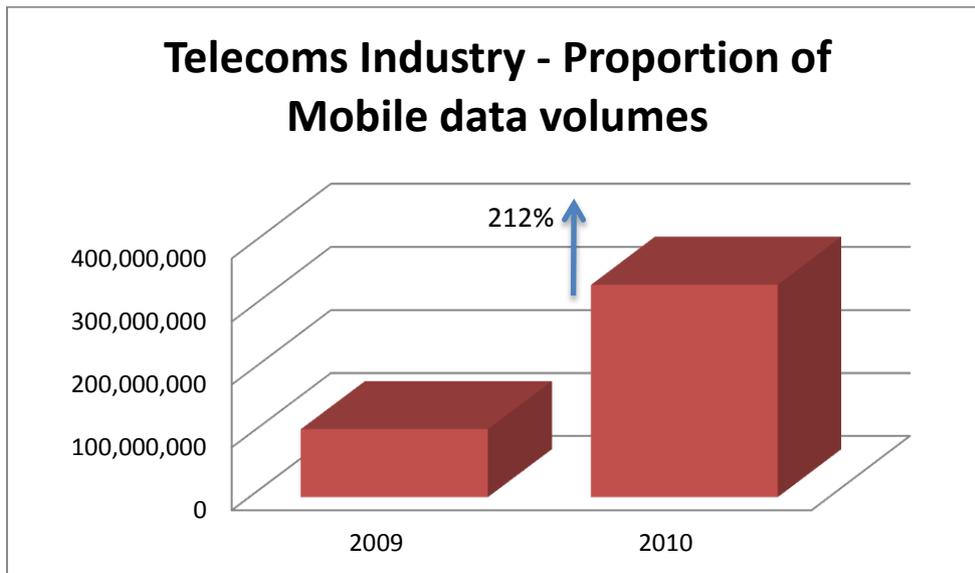


Figure 22 shows that total mobile data volumes increased by 212% from 108,064,741 MB in 2009 to 337,129,435 MB in 2010.

Figure 23

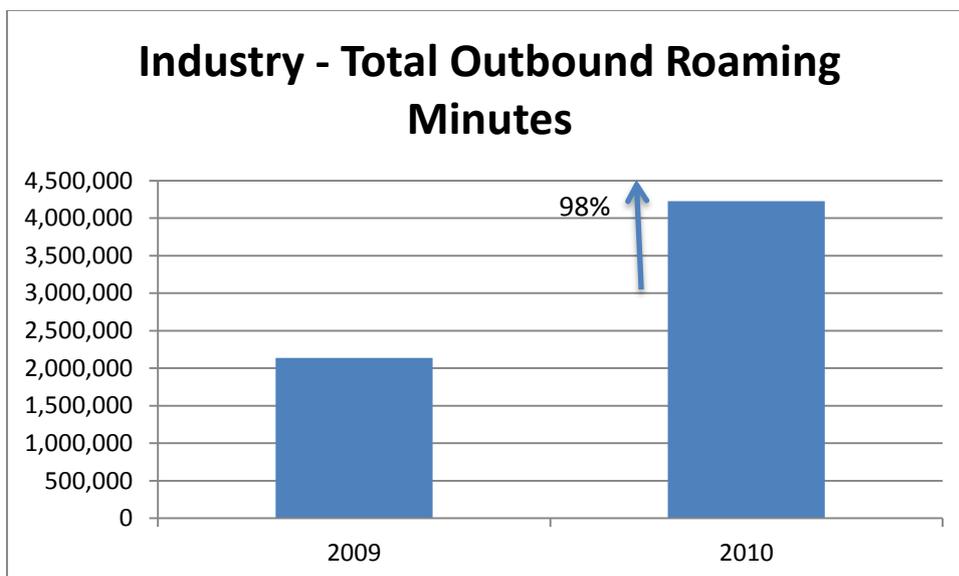


Figure 23 shows that total roaming minutes for incoming and outgoing calls for outbound roamers (BVI consumers using their phones abroad) increased by 98%.

Internet Market

Subscribers

Figure 24

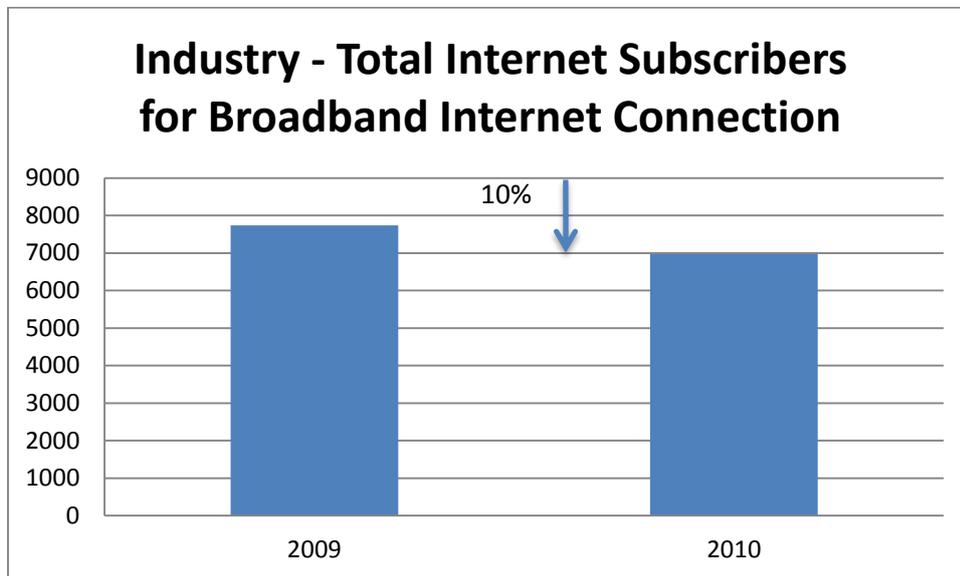
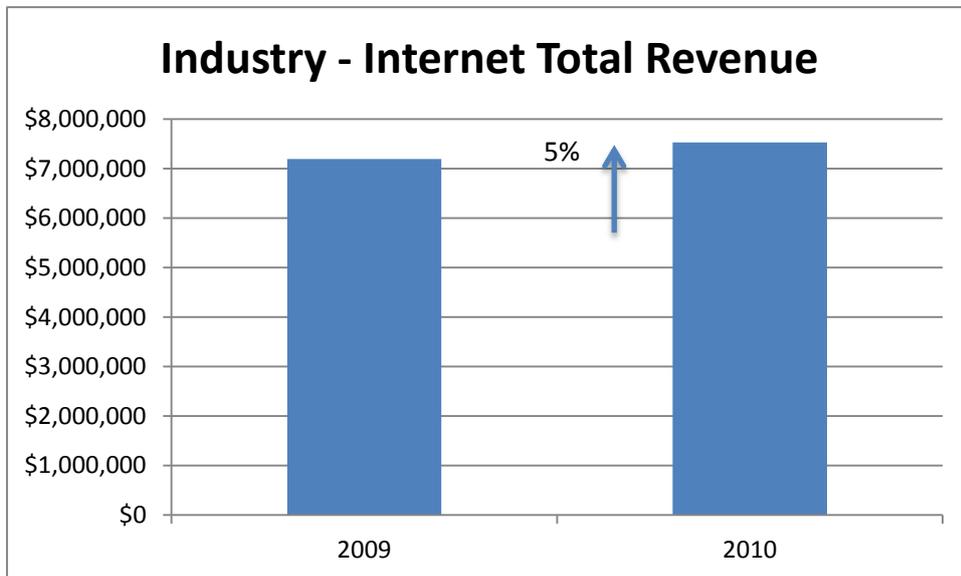


Figure 24 shows that the total number of internet subscriptions⁹ for broadband internet fell by 10% from 7,736 in 2009 to 6,969 in 2010.

⁹ Internet subscriptions include those provided by LIME and CCT. CCT's wimax internet product "FiWi" is marketed as a fixed product and is therefore treated as a fixed retail product in this report. In the TRC Market Analysis of fixed and mobile call termination available at: (http://www.trc.vg/attachments/Market%20Analysis_02_Interconnection%20Short%20Report.pdf), the TRC treated the wimax termination service as mobile as it uses a mobile technology to terminate calls and the relevant costs to determine the cost of termination are therefore mobile.

Revenues

Figure 25



In Figure 25, total internet revenues increased by 5% from \$7,190,378 in 2009 to \$7,529,746 in 2010.

Human Resources

Figure 26

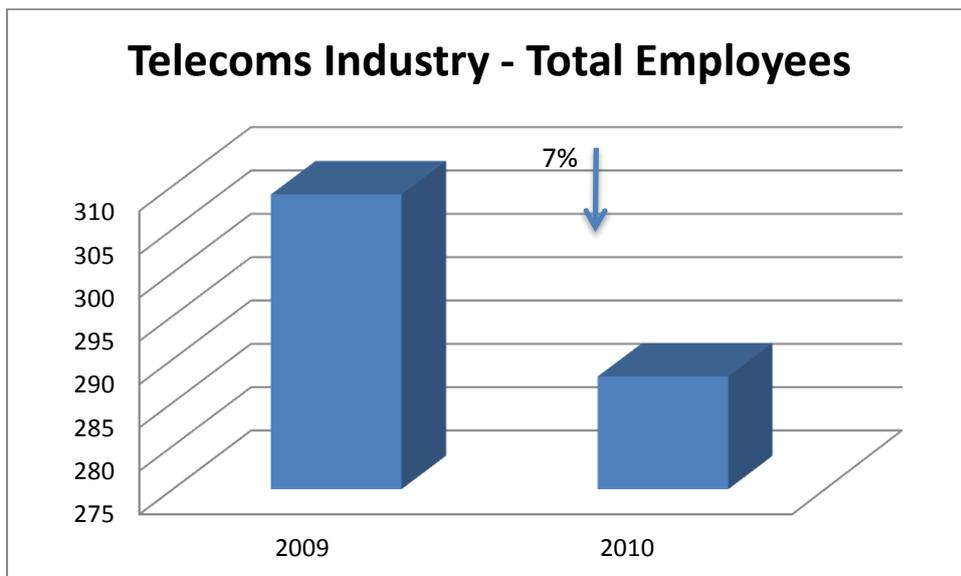


Figure 26 shows that from 2009 to 2010, the total number of employees for all operators has declined by 7% from 309 in 2009 to 288 in 2010.

Figure 27

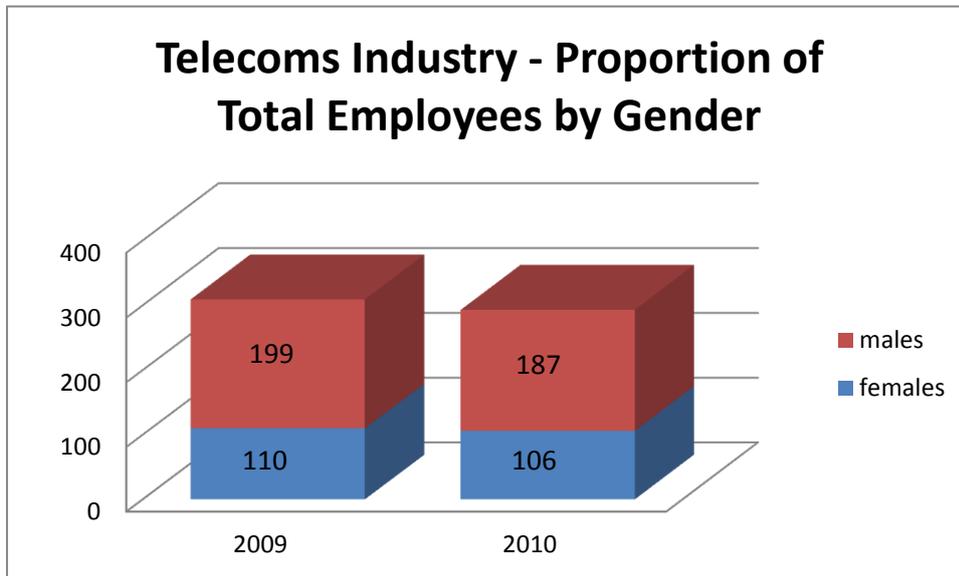
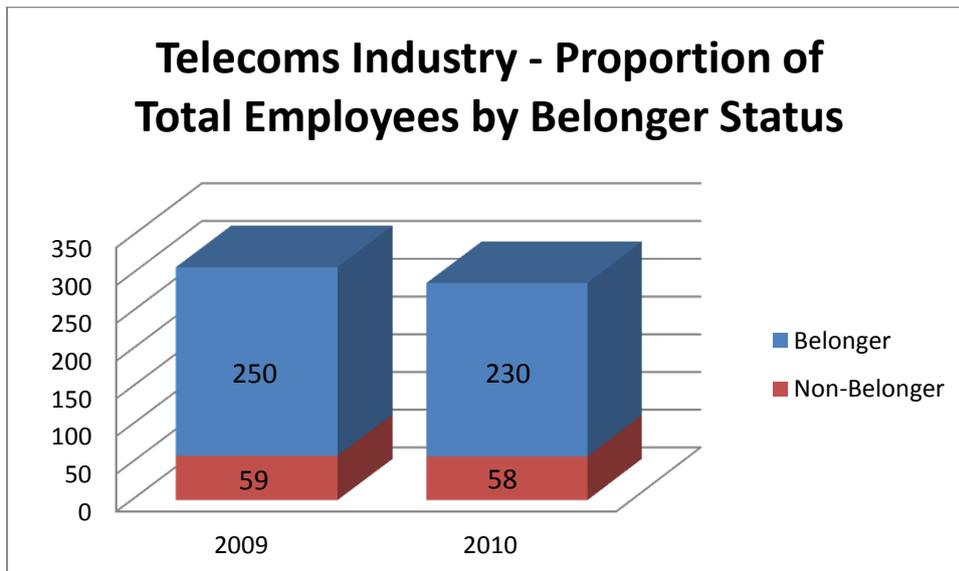


Figure 27 shows that there are more males than females working for the operators in the telecommunications industry.

Figure 28



In Figure 28, there are more belongers than non-belongers working for the operators in the telecommunications industry.

Financial Indicators

Revenue

Figure 29

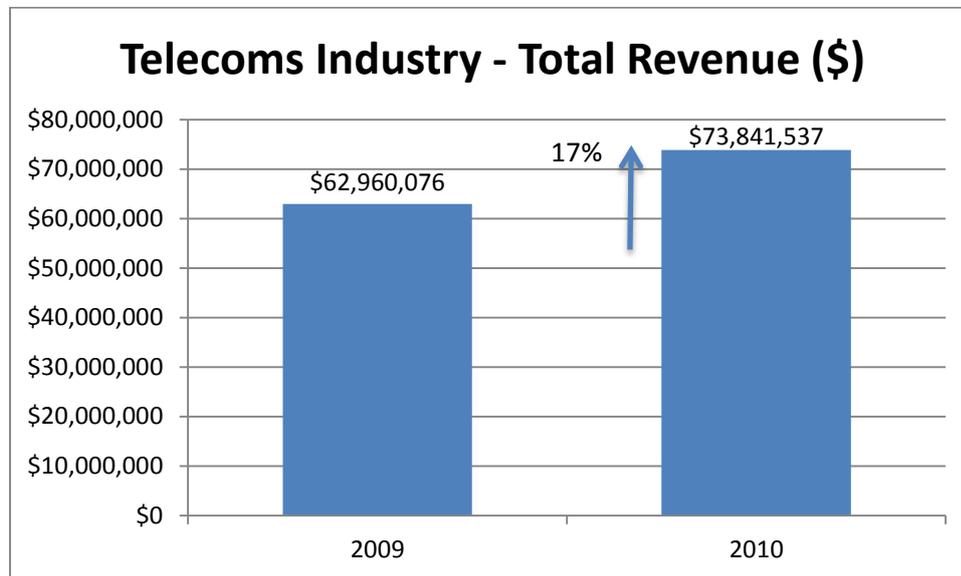


Figure 29 shows that total telecommunications industry revenue increased by 17%. Total revenue includes wholesale and retail service revenues generated by CCT, Digicel and LIME. From 2009 to 2010, wholesale revenues decreased by 5% from \$5,661,479 in 2009 to \$5,387,215 in 2010 and retail revenues increased by 19% from \$57,298,597 in 2009 to \$68,454,322 in 2010.

CAPEX

Figure 30

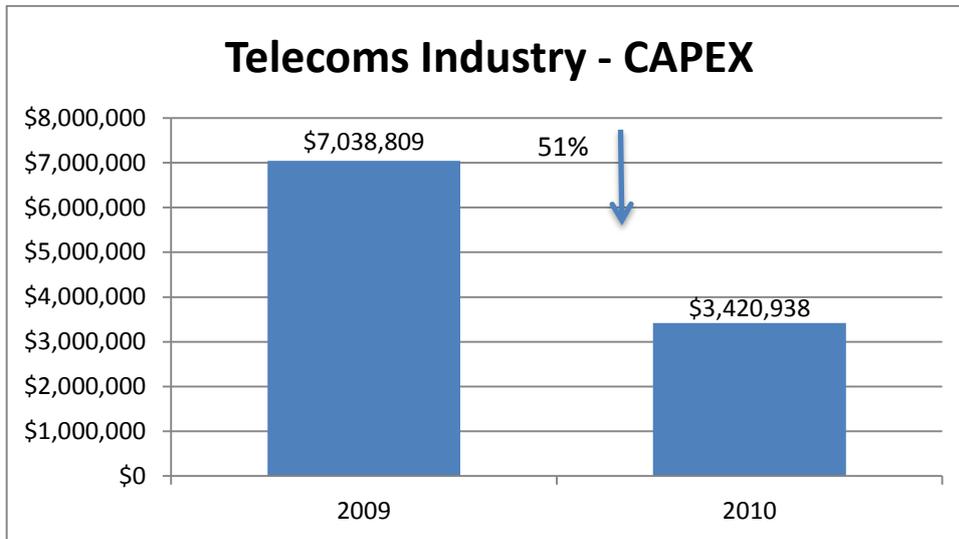


Figure 30 shows that total telecommunications industry capital expenditure was 51% lower in 2010 compared to 2009. Capital expenditure includes investment in network development, buildings and equipment.

OPEX

Figure 31

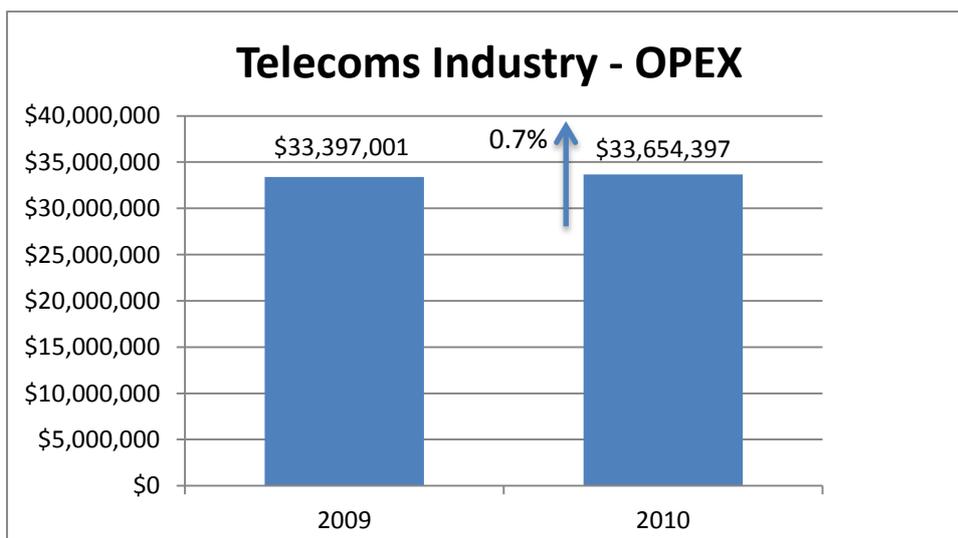


Figure 31 shows that total telecommunications industry operational expenditure remained constant from 2009 to 2010 with only a 0.7% increase. Operational expenditure is an expense

incurred by the operator that deals with the day to day functions of the business such as network operations including electricity costs and employee salaries.

Glossary

INDICATORS	DEFINITIONS
General	
Gross Domestic Product (GDP)	The official measure of a country's economic output
Total population	All persons who are resident within a country
Penetration Rate	A measure of the level of adoption of a particular product or service by the total population
Fixed Service Market	
Fixed Line service	Refers to a hardwired or cordless phone connected between two or more points that consists of a dedicated physical cable
Fixed to Fixed calls	Calls made from a landline phone to another landline phone
Fixed to Mobile calls	Calls made from a landline phone to a mobile phone
Domestic Fixed Voice Volumes	Fixed voice traffic which includes fixed to fixed and fixed to mobile calls which originate and terminate on a service provider's network located in the BVI.
Residential Outgoing International Minutes	Outgoing calls from BVI residential customers to countries outside of the BVI.
Outgoing Fixed Voice Volumes	Calls from a fixed line to either another operator(s) in the BVI i.e. domestic traffic or to another operator(s) outside of the BVI I.e. international traffic.
Mobile Service Market	
Postpaid subscriber	Customers who are billed for their use of a operator's services on a monthly basis based on either the terms of a contract or on the amount of services they have used
Prepaid subscriber	Customers who purchased their phone in advance of service use. They purchase credit at a point the service is accessed or consumed. Commonly known as pay-as-you-go.
On-net calls	Refers to traffic originating on a service provider's network and terminating on the same network.
Off-net calls	Refer to traffic originating on a service provider's network and terminating on another service provider's network
Mobile Data services (MB)	Value added services which are utilized to obtain information, content and to perform transactions via the transmission and receipt of paket data.
Total International calls	Calls made from the BVI by using a local telecommunication operator to countries outside of the BVI
Outgoing International calls	Calls made from the BVI to another country
Incoming International calls	Calls made from another country to the BVI

Total Outbound Roaming minutes	Total minutes made and received by own customers on foreign networks. Retail international roaming minutes from own network subscribers roaming on foreign networks abroad. Excludes minutes from visitors who are not subscribers to domestic mobile networks and are temporarily roaming on domestic mobile networks.
Mobile Voice Minutes/Volumes	Includes both domestic and international mobile voice and data traffic volumes
Average Revenue per User (ARPU)	Measures the average monthly revenue generated per customer
Average Usage per User (AUPU)	Measures the average monthly usage generated per customer
Internet Service Market	
Internet subscriptions	Includes connections to the internet provided by LIME and CCT. CCT's wimax internet product "FiWi" is marketed as a fixed product and is therefore treated as a fixed retail product in this report. Note that, in the TRC Market Analysis of fixed and mobile call termination (http://www.trc.vg/attachments/Market%20Analysis_02_Interconnection%20Short%20Report.pdf), the TRC treated the wimax termination service as mobile as it uses a mobile technology to terminate calls and the relevant costs to determine the cost of termination are therefore mobile.
Fixed Internet	A fixed internet service is used in a single location. A fixed broadband connection can allow a wireless network to be set up within a defined area but is fixed to that one location and cannot easily be moved.
Other Service Market	
Other Services	Include Licensed Circuits, Netspeak, Voicemail, Directory, Equipment sales and rentals.
Human Resources	
Total employees	Total number of employed staff members including part-time and full-time staff by the telecommunication network operators in the country for the provision of public telecommunication services
Belongers	A native-born island resident or a person who has been granted the status of a native-born resident
Non-belongers	A person who isn't a native-born island resident or a person who has been granted the status of a native-born resident
Financial Indicators	
Total Communications/Telecommunications revenue	Consists of wholesale and retail revenue from all three operators - LIME, Digicel and CCT excluding BVI Cable TV.
Fixed Line service revenue	Revenue received from fixed telephone connection, subscription and calls.
Mobile service revenue	Revenue from mobile communication services
Internet service revenue	Revenue from internet service based on applicable retail charges on users

Other service revenue	Any other revenues not accounted for elsewhere for the provision of public telecommunication services
Capital Expenditure revenue (CAPEX)	Any investment spent by an operator on an annual basis. Some examples include equipment, buildings and machinery
Operational Expenditure revenue (OPEX)	An expense arising in the normal course of running a business for example such as managerial salaries

Any questions on this report please contact mfarara@trc.vg

