



**Eastern Caribbean
Telecommunications Authority
(ECTEL)**



EMERGENCE OF BROADBAND

Annual Telecommunications Sector Review

Period ended March 2009

January 2010

ECTEL MEMBER STATES

*Commonwealth of Dominica
Grenada
The Federation of St Christopher (St Kitts) and Nevis
Saint Lucia
St Vincent and the Grenadines*

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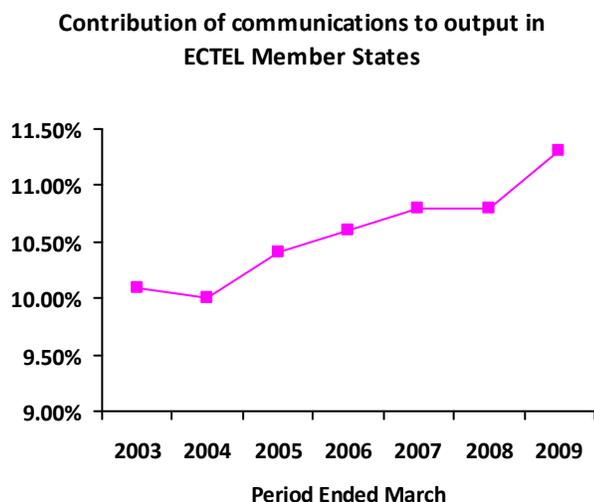
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1.0 DOMESTIC TRENDS IN TELECOMMUNICATIONS

1.1 OVERVIEW

Figure 1.1: Communications Contribution



The effects of global economic downturn, which commenced at the end of 2008, has filtered down to the economies of the ECTEL Member States and contributed to the dampened performance in the telecommunications and ICT services sectors.

For the review period there was a contraction in real GDP from 2.1 per cent growth in 2008 and a projected decline of 4.7 per cent by the end of 2009. The telecommunications sector appeared to have been a bit more resilient than the other sectors as its

contribution to overall economic activity remained at 10.8 per cent although its growth decelerated from 2.3 per cent in 2008 to less than one percent by the end of 2009. Overall there was a reduction in revenue, investment and employment driven by both external and internal factors.

The slowdown in the sector was largely reflected in a reduction in investment, revenues and to some extent traffic levels. Investment in the sector fell by 16 per cent to EC\$149.6 million, corresponding to 2 per cent of GDP. There were no significant nominal adjustments to prices, and sector revenue fell by 5 per cent to \$731.6 million or 9 per cent of GDP down 9.8 per cent previously.

The contribution of communications to GDP in the ECTEL Members States as at March 2009 is:

Dominica: 9.5%

Grenada: 11.82%

St. Kitts: 10.1%

Saint. Lucia: 11.3%

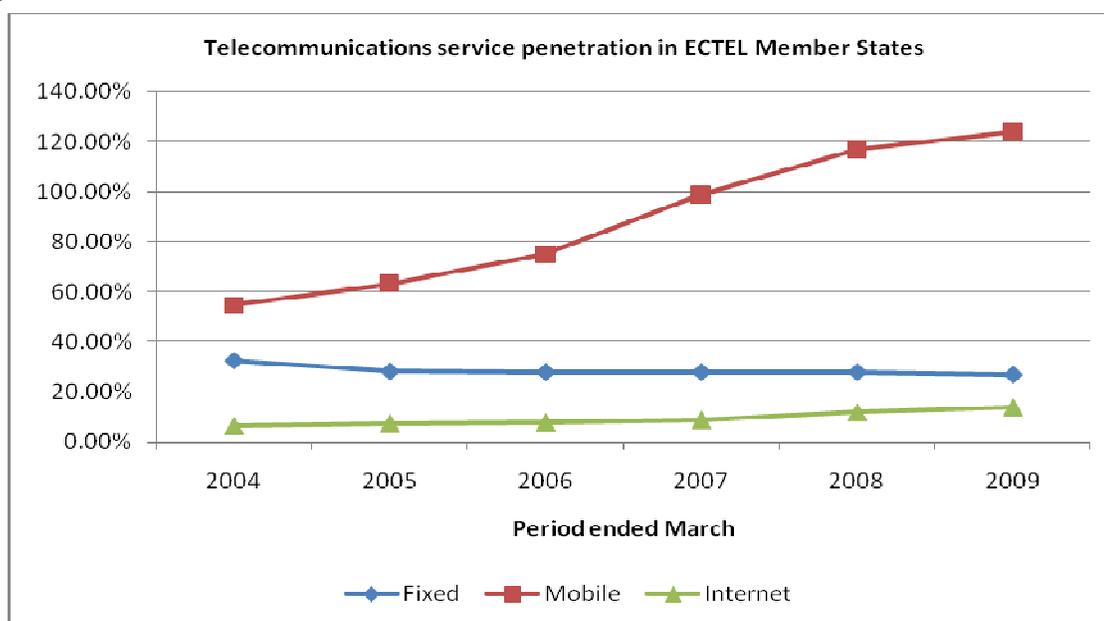
St Vincent and the Grenadines: 11.5%

Voice communications remained the largest contributor to overall revenues, accounting for 87 per cent of the total compared with 88 percent a year earlier. Overall, revenues fell by 5 per cent, with mobile voice revenues dropping by 9 per cent to 397 million and fixed voice

revenues by 5 percent to \$254 million. At the same time internet revenues surged by 23 percent to 80 million, reflecting principally the rapid growth in subscription

The number of fixed lines in service dropped slightly, while mobile voice and internet subscription continued on an upward path. The reduction in fixed lines in service resulted in a slight dipping of the penetration rate from 27.7 per cent to 27 per cent. Mobile and internet penetration grew by 7 percentage points to 123.6 per cent and 1.6 percentage points to 13.5 per cent respectively.

Figure 1.2: Telecommunications in ECTEL Member States



True mobile broadband is not yet available in the ECTEL Member States. Mobile internet access is available via Wi-Fi hotspots and through data packages offered on mobile phones with GPRS and EDGE. Mobile internet subscription has remained relatively low in the ECTEL Member States as it is still quite expensive for most of the population to access data compatible handsets. The number of mobile internet subscribers recorded to date was estimated at 116,100 roughly 20 per cent of mobile subscribers. However, this may be well below the actual number of mobile internet users as any subscriber with a data compatible handset can access the internet through their regular mobile subscription, and also it is difficult to monitor the usage levels at hotspots and public access points.

The global economic downturn has no doubt contributed to a slightly weaker performance in telecommunications though a slowdown in growth is expected as the sector reaches a more

mature phase. Consolidations and repositioning in the sector are also signs that the sector is reaching the maturity stage. In 2009, the telecommunications market in Dominica experienced some consolidation as the operations of Orange were overtaken by Digicel, reducing the number of mobile operators from three to two. In addition new investors took over the operations of Marpin Telecoms and Broadcasting and the company was rebranded as Marpin 2K4. In both cases, there was some deterioration in the performance of the companies that were acquired.

Consumer demand as determined by calling volumes produced mixed results. Domestic fixed traffic fell by 2 per cent and international fixed traffic fell by 5 per cent. Mobile traffic, however, experienced increased demand as domestic traffic originating from the mobile network rose 8 per cent, while international outgoing traffic from mobile phones grew 9 per cent during the review period. However, there was an inverse relationship between mobile traffic and revenues as providers continued with free on-net and international calls in their aggressive promotional campaigns to increase market share.

The main telecommunication indicators for the ECTEL Member States for the period ended March 2009 are presented in table 1.1.

Table 1.1: Telecommunication Indicators in the ECTEL Member States

Indicator	Dominica	Grenada	St Kitts and Nevis	Saint Lucia	St Vincent and the Grenadines	ECTEL
Fixed voice and Internet services						
Value (EC\$ in million)	47	77	52	98	62	334
Volume (million minutes)	46.4	318.1	78.8	201.1	89.6	734.2
Fixed voice Penetration (%)	23.6	25.9	39.9	22.6	22.6	26.9
Internet Penetration (%)	10.1	10.6	24.9	10.9	10.8	13.5
Mobile voice services						
Value (EC\$)	54	74	68	140	61	397
Volume (million minutes)	104.4	155.6	101.1	236.9	146.8	744.7
Penetration Rate (%)	137	105	148	111	116	124

Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

Traffic volumes includes local and international calls

1.2 REVENUE, INVESTMENT AND EMPLOYMENT

1.2.1 Revenues

Overall revenues reported by individual licenses fell by 5 per cent to EC\$732 million, reflecting the impact of the deceleration in overall economic activity and demand for some telecommunications services. The fall in disposable income as a result of the economic slowdown along with rigidity in prices and competing alternatives to fixed voice service have contributed to the continued reduced demand for these services. Total revenue from fixed line services were estimated to have fallen by 5 per cent to EC\$254 million, consistent with reductions in both fixed line subscribers and fixed calling volumes.

Figure 1.3: Growth in Revenue

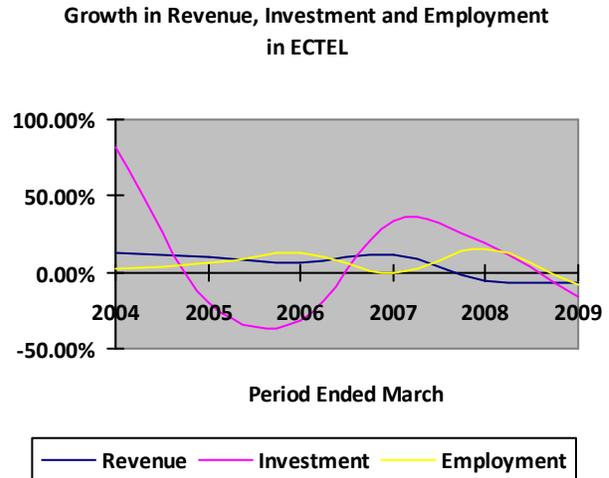
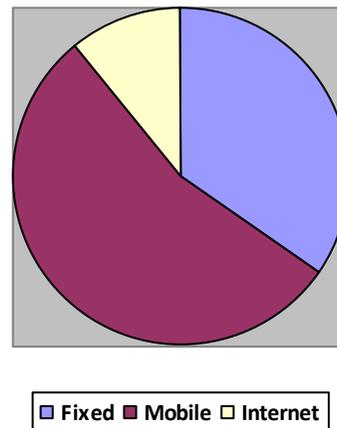


Figure 1.4: Share of Service Revenue

Share of service revenue in ECTEL Member States period ended March 2009



Revenue from mobile services experienced the greatest decline falling 9 per cent to EC\$397 or 54 per cent of total revenue down from 58 per cent previously. The economic crunch may have had the greatest impact on mobile revenues as mobile service is the most widely used communications service in the ECTEL States. In addition, the mobile market is very competitive and customers take advantage of the numerous promotions offered by providers.

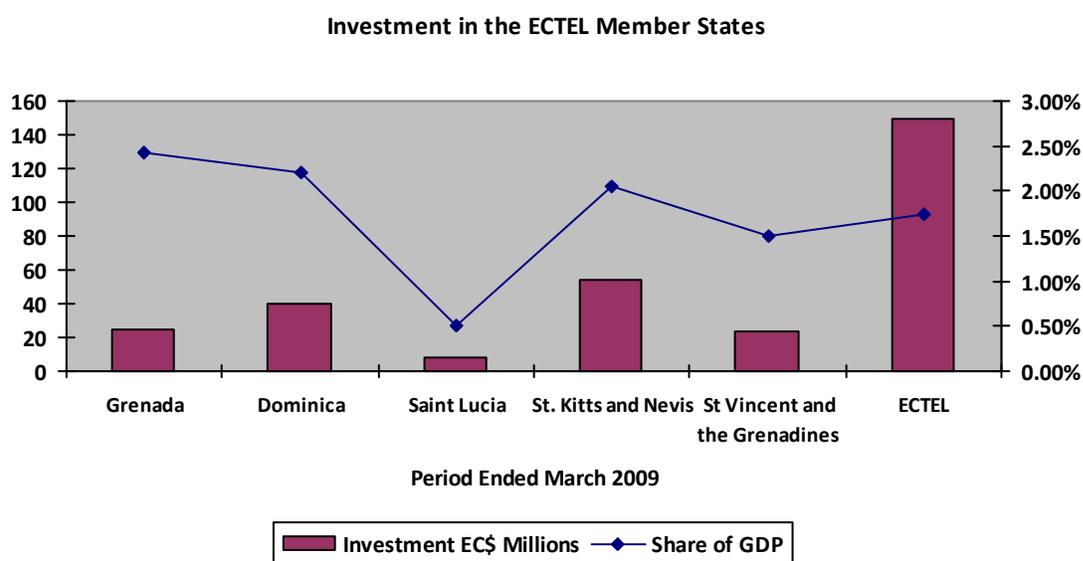
Reversing the trend of falling revenue from voice services, revenues from internet services grew 23 per cent to an estimated EC\$80 million. However this impressive growth could not offset the decline in the voice market as internet service accounts for only 11 per

cent of total revenue. The internet market is still in its growth stage and in the absence of decreases in prices in the review period, the revenues increase is in line with the growth in subscriptions.

1.2.2 Investment

Investment in the communications sector was estimated to have decreased by 16 per cent to EC\$149.6 million, on account of reduced investment by a number of established providers even as new entrants made significant investments in the sector. During the period under review, investments were mainly to expand mobile and broadband coverage. The two largest market players sought to centralize investment and implement regional investment strategies to improve efficiency in operations.

Figure 1.5: Investment in ECTEL Member States



In its 2009 Annual Report, LIME St Kitts and Nevis indicated that \$2.2 million was invested in upgrading its broadband network through the deployment of multiple access nodes that would allow for the provision of both voice and data using one single technology. This is expected to reduce costs over the long run. EC\$ 1.7 million was invested in optimizing the mobile networks to improve the quality of service and for capacity enhancement to ensure maximum utilization of the networks. In addition two Wi-MAX Base Stations were successfully commissioned to meet consumer demand for mobile and broadband services.

Significant investment were also made by new entrants Karib Cable, Columbus Communications and by Marpin 2K4. Karib Cable launched a new cable network in Saint

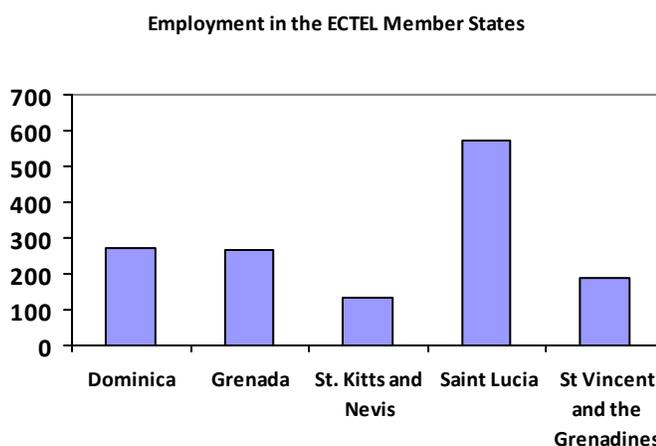
Lucia to provide cable TV, internet and fixed service. If Cable TV and internet services were already available by March 2009 and the fixed voice operations were launched in mid 2009. Both Columbus Communications (Grenada) and Marpin 2K4 (Dominica) took over the cable network of previously licensed providers and invested in network upgrades to facilitate the provision of triple play services.

1.2.3 Employment

Despite proving to be more resilient to the sudden and disruptive global economic slowdown, revenue and investment of firms in telecommunications industry in the ECTEL Member States have been affected negatively. To cope with the downturn providers have had to trim costs; in the review period, both LIME and Digicel indicated that they reduced their headcount in some cases as a result of changes in processes and organizational structure. Those small operations, which were considered efficient, were generally not affected by this reduction in headcount. Consolidation in the sector, as well as outsourcing of activities such as advertising, invoicing and cleaning services also brought down direct employment levels. As was the case with investments, hiring by new entrants was insufficient to stem the overall trend of declining direct employment. During the period under review, the level of direct employment reported by individual licensees was estimated to have fallen by 8 percent to 1,435.

It is unclear whether the economic slowdown has an impact on indirect employment in areas such as customer premise services, retail sales of mobile handsets and accessories as well as sale of mobile minutes via phone card or electronic top-up for prepaid users.

Figure 1.6: Employment Rates in Member States



1.3 MARKET PLAYERS

During the review period there were 12 new licenses issued, bringing the total number of licences issued since liberalisation to 74. Roughly half of the licences issued in the period were operational by the end of 2009. Some new entrants have focused on targeting smaller market segments, recognizing a need for some differentiation and competition in areas such as roaming and other services demanded by visitors.

Providing of a single telecommunications service is becoming increasingly less common as investors recognize that it is more viable to offer multiple telecommunications services using a single technology or platform. In the ECTEL Member States, this change is evident as most providers offer more than one telecommunications service and new applicants increasingly seek multiple licences.

The launch of fixed line service by Karib Cable in Saint Lucia and Columbus Communications (Flow) in Grenada, the latest new entrants in the fixed voice and internet services markets, means that the fixed line market is no longer a de facto monopoly in the ECTEL Member States. However at March 2009, LIME was still the main provider of fixed voice and broadband service, and had an estimated 90 per cent market share among small and medium enterprises.

The mobile market continues to be dominated by the two regional providers LIME and Digicel. There is now only one single-island operator, UTS CariGlobe in St Kitts and Nevis, as in mid 2009, Digicel acquired the operations of Orange in Dominica reducing the number of mobile operators in Dominica to two.

1.4 MARKET TRENDS

The telecommunications sector in the ECTEL Member States produced mixed results during the review period. There were increased subscriptions for mobile and internet service, but an overall reduction in fixed line subscribers. A similar trend was observed in traffic patterns with growth recorded in mobile traffic but contraction in fixed voice traffic.

The mobile voice segment of the market appears to have reached maturity evidenced by the deceleration in penetration growth from 18 per cents in 2008 to 6 per cent in 2009. At March 2009, mobile penetration was 123.6 per cent up from 116.6 per cent a year earlier. The

continued uptake of mobile service in a saturated market reflects the competitive strategies used by providers of encouraging the ownership of multiple cell phones to maintain market share.

Internet penetration, especially broadband penetration, continued to grow moderately and remains well below its full potential. Internet penetration reached 13.5 per cent up from 12 per cent in the previous year; 95 per cent of subscribers had broadband access.

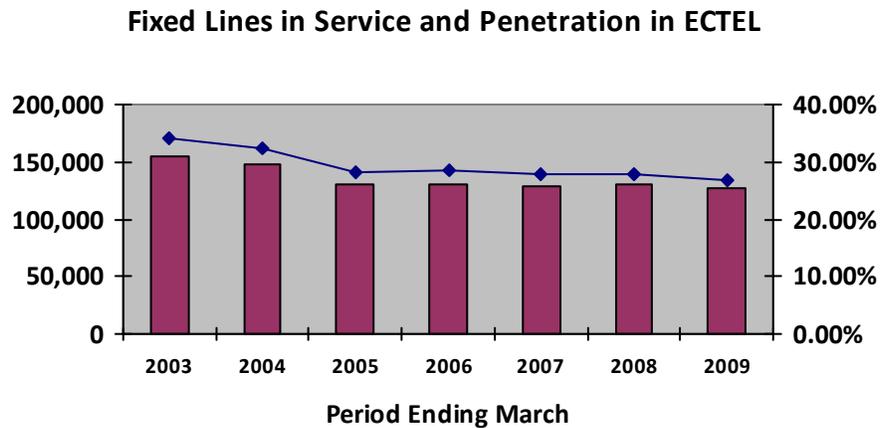
Fixed line penetration dipped by 1 percentage point to 26.9 per cent as consumers increasingly are consider mobile voice services as a more desirable substitute. In addition, business subscription decreased more than usual as small businesses continue cost cutting measures faced with the challenges of deterioration in performance in keeping with the overall reduced economic activity.

1.4.1 Domestic Fixed Voice Service

Total fixed lines in service in the ECTEL Member States decreased 3 per cent to roughly 126,900 at March 2009; this follows a 2 per cent increase in the previous period. The contraction reflected continued decline of the fixed voice market but was likely accelerated by the overall reduced economic activity and continued fixed to mobile substitution. The decline affected both residential and business subscription; residential subscription fell an average 3 per cent while business subscription fell 9 per cent on average.

Total fixed calling volumes were estimated to have fallen by 2 per cent to 676 million minutes in the review period, due to a 1 per cent drop in fixed to fixed calling and a 9 per cent reduction in fixed to mobile calling. Fixed to fixed calling remained the most popular fixed voice calls and accounted for 93 per cent of local fixed call volumes. In contrast, fixed to mobile's share of local calling fell a percentage point, totaling 50 million minutes or 7 per cent of total local traffic.

In line with decreases in both the total number of lines in service and traffic, the share of revenue generated from fixed line voice service decreased one percentage point to 32 per cent of total revenue. This was however, significantly less than the 10 percentage point decline in the previous period.

Figure 1.7: Fixed Lines in Service in ECTEL Member States

Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

The rates for fixed voice calls remain regulated under a Price Cap Plan and were unchanged in the review period. The fixed line market, being regulated and facing limited competition, have not attracted the numerous promotions usually offered to mobile customers and as such has been fairly stagnant over the past few years. The introduction of an unlimited fixed to fixed residential calling package resulted in an initial surge in calling volumes, however, this does not appear to have been sustained this period maybe due to the overall slowdown in economic activity.

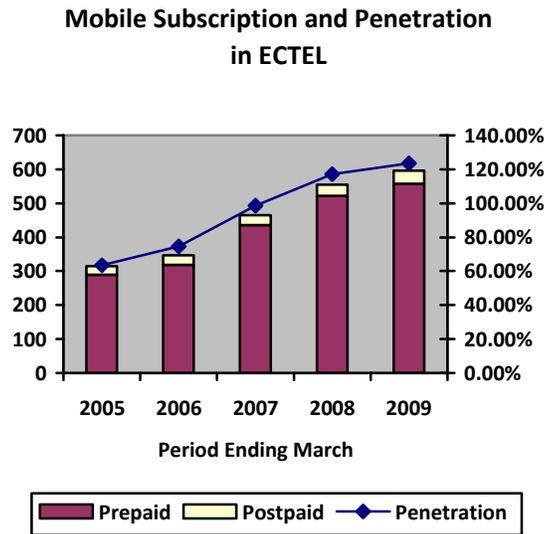
The recent entry of Karib Cable in Saint Lucia and St. Vincent and the Grenadines and Flow in Grenada, into the fixed voice market, is likely to lead to increased activity in that market. Customers are expected to benefit from increased choice including offerings of stand-alone fixed voice service or innovative packages and bundles. This could lead to increased uptake of fixed voice services, as these services become more affordable and widely available, especially if competition successfully drives down prices.

1.4.2 Domestic Mobile Service

The decelerated growth in mobile subscription is evidence that the mobile voice market is nearing the maturity stage. The growth in the number of subscribers more than halved from 19 per cent to 7 per cent. At March 2009, the number of mobile subscribers in the Member States was estimated at 595,900, corresponding to an average penetration of 123.6 per cent

up from 116.6 per cent a year earlier. All the ECTEL Member States now have mobile penetration levels that are in excess of 100 per cent; mobile penetration ranged from 105 per cent in Grenada to 148 per cent in Kitts and Nevis.

Figure 1.8: Mobile Subscribers in ECTEL Member States



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

For the period under review, more than 668 minutes of mobile calls were made, an 8 per cent increase over the previous period. Calls originating from a mobile network accounted for 49.7 per cent of local calls up from 47 per cent in the previous period. The growth in mobile traffic was due in large part to increased on-net traffic, which accounted for 80 per cent of local mobile traffic, even as mobile to fixed calls' share of mobile calls fell to 6 per cent from 9 per cent previously. The increase in on-net traffic may be in direct response to continued promotional on-net offers aimed at encouraging on-net activity.

While providers continue to offer attractive short term on-net promotions, there has been little movement in the official rates for mobile calls. Price differentials between on-net and off-net calls are still prevalent with the rates for on-net calls being at least 10 cent less than the rate for off-net calls. The introduction of cost-based wholesale rates in 2009 has resulted in reduced mobile termination rates; it is expected that this will ultimately translate to reduced retail rates to consumers.

The total number of SMS text messages sent by mobile users in the ECTEL Member States was just under 160 million. SMS messages have become a popular form of communication especially for the low budget consumer and the youth, given that it is more economical than voice. The use of SMS text messaging is more popular in St. Kitts and Nevis, which accounts for more than 50 per cent of the total messages on record in the Member States. Multi-media messaging service is also available in the Member States; however data on use is not as readily available. Based on available data it is estimated that approximately 50,000 MMS were sent in the review period.

The rates of messaging services have remained largely unchanged in the review period. The rates for SMS ranged from 10 to 25 cents per message for local messages and 20 to 40 cents for international messages, while the rate for MMS from one provider was 50 cents.

1.4.3 International Voice Service

The total number of outgoing international calling minutes from the Member States totaled 125 million an increase of 3 per cent over 2008. However this was a slowdown from the 6 per cent growth recorded in the previous period. Fixed to mobile substitution is also evident in the market for international calls as calls originating from mobile phone outpaced the fixed line calls almost 1.6 to 1 up from 1.4 to 1 in the last period.

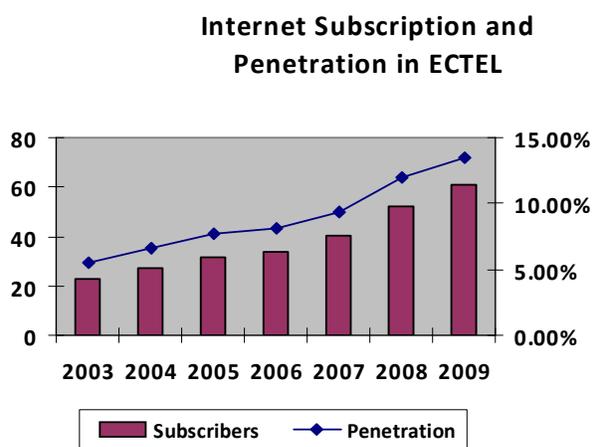
Mobile originated international calls grew 9 per cent to 77 million minutes; in contrast calls from the fixed network contracted 5 per cent to just over 48 million minutes. For the review period, the rates for outgoing international calls remained unchanged.

Table 1.2: Outgoing and Incoming International Traffic (millions of minutes)

Country	Outgoing Traffic		Incoming Traffic	
	2008	2009	2008	2009
Dominica	22	19	36	24
Grenada	20	21	75	61
St. Kitts and Nevis	21	26	34	41
St. Lucia	41	40	61	67
Saint Vincent and the Grenadines	17	18	62	52
ECTEL	121	125	268	245

Incoming international call volumes have traditionally outpaced outgoing call volumes, but the gap narrowed slightly during the period moving from a ratio of 2.1 to 1 to 1.9 to 1, as incoming call volumes contracted by 8 per cent to an estimated 245 million minutes. This contraction was due to a 23 per cent drop in calls terminating on the fixed network, which was partially offset by an 11 per cent growth calls to mobile phones. For the first time, incoming calls to mobile phones network had the greater share of incoming calls and accounted for 53 per cent of the total incoming international voice traffic.

Figure 1.9: Internet Penetration in ECTEL



1.4.4 Internet and Broadband Services

In the past few years there have been two major areas of growth in the telecommunications sector, mobile service and broadband internet access. Globally, these two markets are now converging with mobile internet access and in particular mobile broadband emerging as an area for strategic growth in the telecoms sector.

In the ECTEL Member States, fixed broadband access experienced continued growth with 95 per cent of all fixed internet subscribers having a broadband connection. Unfortunately this story has yet been repeated in the mobile internet market. While mobile internet access is readily available via GPRS and EDGE technology to anyone with an internet enabled hand set, true mobile broadband via 3G or 4G technologies was not yet available in the Member States at the time of writing this report.

1.4.4.1 Fixed Line Internet Access

For the period under review, the number of fixed line internet subscribers grew 17 per cent to more than 61,100 with broadband subscribers representing 95 per cent of all subscribers, compared to 92 per cent in the previous period. The growth in total subscribers was due in large part to the continued increase in the number of ADSL broadband subscribers and more recently the increase in cable subscription with the entry of two new competitors in Grenada and Saint. Lucia. Subscribers using a cable modem for high speed internet access were estimated to have almost doubled to 10,000 in 2009 and accounted for 16 per cent of total

internet subscribers, up from 10 per cent a year earlier. The number of dial-up subscribers declined to only 2,250 or 4 per cent of the total number of subscribers. Overall Internet penetration was recorded at 13.5 per cent with broadband penetration at 12 per cent.

Revenues generated from the provision of internet services increased an estimated 10 per cent and accounted for 11 per cent of total sector revenue. Expansion in fixed line internet access was associated with the commencement of operations by cable operators and the expansion of broadband network capacity by LIME. Rates for fixed broadband remained flat at a monthly rate of \$79 for 1Mbps after a significant price reduction in the previous period. On the other hand, the rates for dial-up packages have remained unchanged since 2003 given that this service is in the declining stage of its life cycle.

1.4.4.2 Fixed Wireless Internet Access

Fixed wireless internet access has been available in the ECTEL Member States via public Wi-Fi hotspots, however uptake as a paid service by both residential and business customers is very limited. The total number of hotspots is not readily available and cannot be easily captured. However Wi-Fi hotspots are available at most airports, in the lobby of a number of hotels and in coffee houses and restaurants. Public wireless access provides an opportunity for users without access at home as well as visitors or persons away from home or the office needing Internet access.

1.4.4.3 Mobile Broadband Access

Mobile broadband has been touted as the golden opportunity for universal access to the internet especially in the developing world, and provides new opportunities for mobile operators in the face of the looming decline in mobile voice revenues as the market faces tough competition from other substitutes.

The advent of mobile broadband makes the use of handheld devices for Internet access much more viable, as the experience will be more closely matched to fixed line access. In the ECTEL Member States, mobile broadband is currently available only via EDGE, but it is expected that true 3G or 4G internet access will come on stream in the near future. 700MHz spectrum, which has been called beachfront property by some because of its attractive physics, will soon be available to providers in the ECTEL Member States. This spectrum is ideal for mobile broadband communications. Providers in the United States have announced that this spectrum will be used to provide high speed 4G services on their Long Term Evolution (LTE) networks. It is anticipated that when this spectrum is available to providers

in the Member States it will also be used to facilitate the provision of 3G and 4G services to consumers in the Member States, thus closing the current digital divide that exists between our region and more developed countries in the area of mobile broadband.

Revenue and subscriber data on mobile internet and broadband offerings is limited at this point. However, preliminary indications are that an estimated 30 per cent of all mobile subscribers in the ECTEL Member States access the internet on their mobile phone. The anticipated investment in resources to spur growth in the mobile broadband segment of the market and the availability of internet ready handsets that are more reasonably priced will contribute to making the internet more affordable and attractive to consumers. This vision can be made a reality and can result in the same level of success experienced in the mobile voice market in less than ten years.

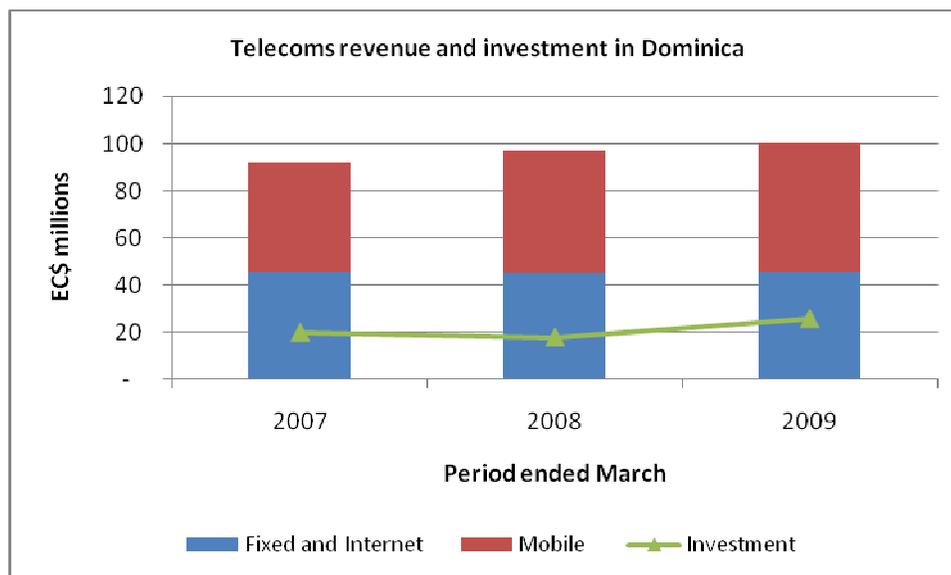
The rates for internet access via a mobile phone remained largely unchanged at 1 to 3 cents per Kbps for pre-paid customers and a flat monthly rate of \$40 for post-paid consumer.

2.0 TRENDS IN TELECOMMUNICATIONS – DOMINICA

2.1 OVERVIEW

Defying the trend of economic contraction stemming from the global financial crisis, real GDP in Dominica was estimated to have increased by 3.2 per cent in 2008 compared to 1.8 per cent in 2007. This increased economic activity was driven by a 15 per cent increase in value-added by the construction sector and increased activity in the agricultural sector. Activity in the telecommunications sector mirrored that of the overall economy with all major indicators pointing upwards. Value-added for the communications sector, which accounted for 9.46 per cent of real GDP, was estimated to have increased by 3 per cent. Total operator reported revenue rose 2.5 per cent to an estimated \$100 million. The services contribution to total revenue remained relatively unchanged with mobile service contributing the majority, 54 per cent, followed by fixed line service with 32 per cent and fixed internet service at 11 per cent. Investment in the sector rose 37 per cent to an estimated \$25 million, or 2 per cent of GDP, owing in large part to network upgrades by a cable operator. However, the number of persons directly employed in the sector was estimated at 270, 10 per cent less than in the previous period.

Figure 2.1: Telecommunications Revenues and Investment in Dominica

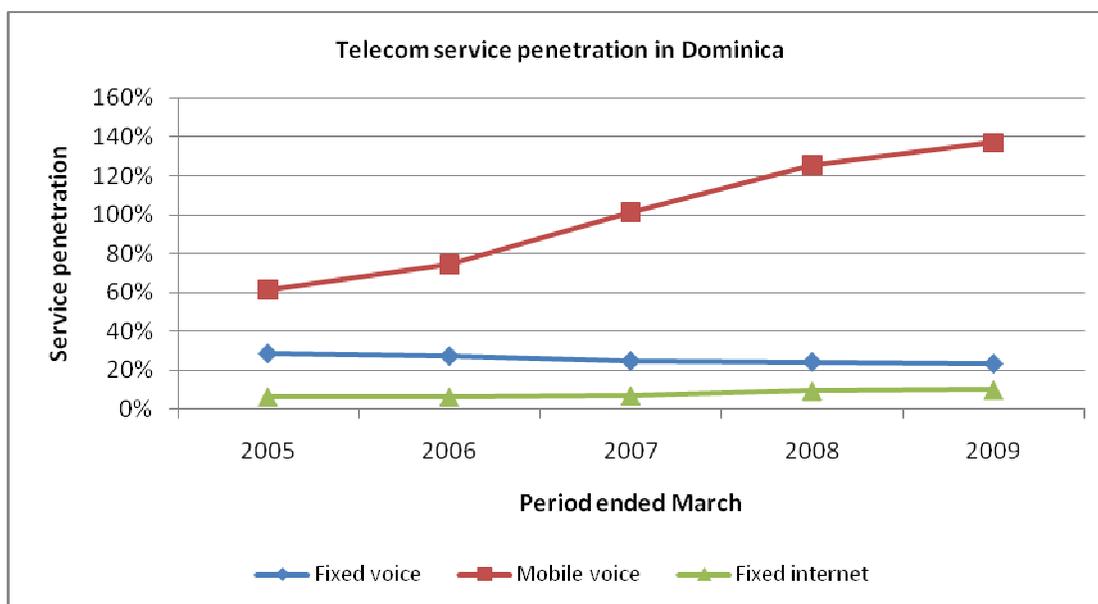


Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

Even with mobile penetration recorded at more than 100 per cent for the third consecutive year, the mobile market continued to be the most active with mobile penetration increasing 8 per cent to 137 per cent. Activity in the internet market was more subdued as internet penetration rose only 6 per cent compared to a 32 per cent increase in the previous period. For the third year running, fixed voice penetration remained relatively flat at 24 per cent.

Figure 2.2: Telecommunications Service Penetration in Dominica



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

2.2 MARKET PLAYERS

No new individual licences were issued in Dominica for the period ended March 2009. Therefore for the period under review there were two active fixed line operators, three mobile operators, and two fixed internet service providers.

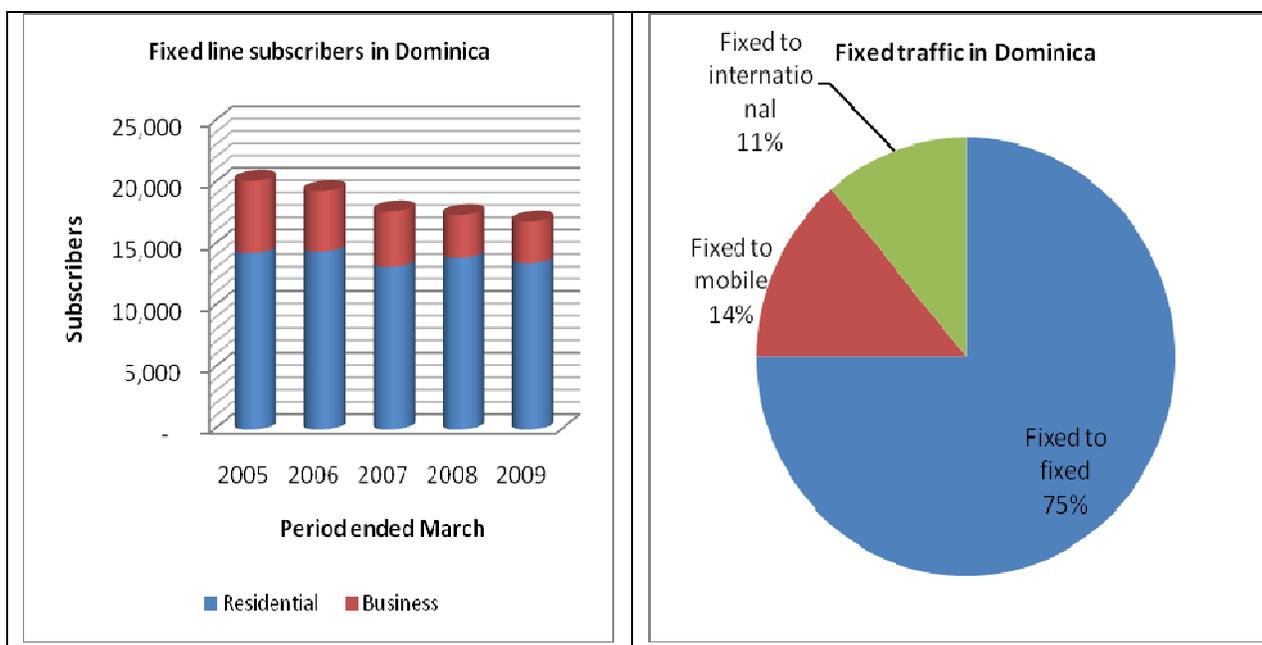
2.3 MARKET TRENDS

2.3.1 Domestic Fixed Voice Service

The total number of fixed line subscribers in Dominica fell 3 per cent to approximately 16,800 for the period under review. Fixed line subscriptions have been on the decline, falling an average 3.5 per cent per year, since 2004. The decrease in subscribers in the review period was a result of contraction in both the residential and business markets. The growth in broadband use has slowed the overall decline in fixed line subscribers. However, the

continued decline in the total number of subscribers may be due to customers switching to mobile. VoIP service is also available, however, for the review period, a switch to VoIP service would not likely have had an adverse affect on the number of fixed subscribers. Due to the unavailability of unbundled local loops and naked DSL, most VoIP customers would still have required a fixed line subscription for DSL broadband. At the time of this review, DSL still accounted for more than 95 per cent of broadband users, though the number of cable users is growing. At March 2009, fixed line penetration was 23.6 per cent; residential lines accounted for more than 70 per cent of the lines in service.

Figure 2.3: Fixed line Subscribers and Traffic in Dominica



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

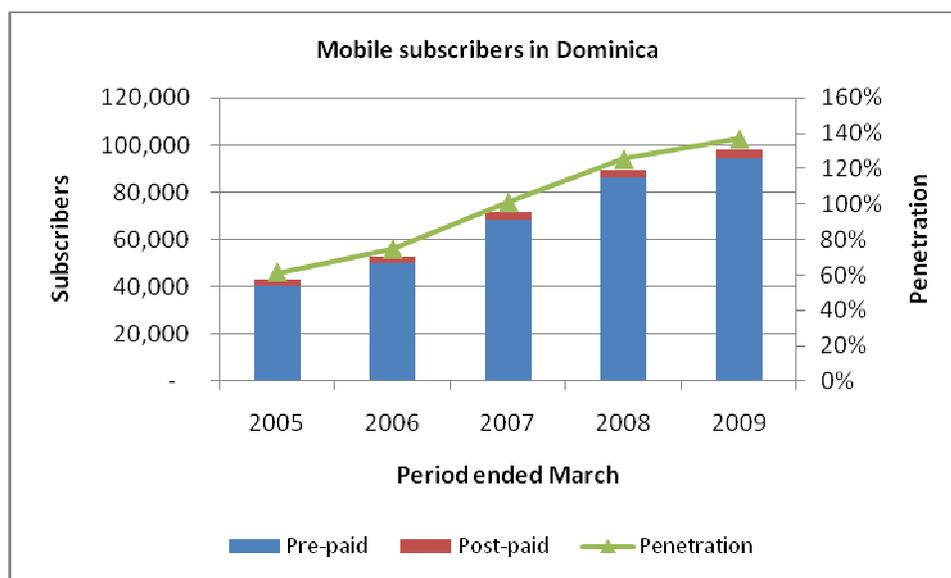
At March 2009, total local fixed calling volumes fell to 32 million minutes, 19 per cent less than in the previous period. Outgoing international call volumes also declined, falling 8 per cent to an estimated 4 million minutes. The overall decline in fixed originated call volumes was impacted by decreases in all categories of calls. Local fixed to fixed calls which accounted for more than 75 per cent of all fixed originated calls fell 23 per cent; this was accompanied by a 16 per cent decline in fixed to mobile calls despite the continued growth in mobile subscriptions. Revenue generated from fixed line service remained relatively flat and accounted for 32 per cent of operator reported revenue.

The rate for fixed line access and calls offered by the incumbent, are regulated under a Price Cap Plan and remained unchanged from the previous period. The peak rate for local fixed to fixed calling was \$0.07 and the off-peak rate was \$0.04. Peak rate for fixed to mobile calling was \$0.71 and off-peak rate was \$0.69. Flat rate calling packages continue to be available to consumers.

2.3.2 Domestic Mobile Service

The number of mobile subscribers in Dominica grew at a slower rate in 2009 than in the previous period. The total number of subscribers increased to approximately 98,000 or 10 per cent more than in the previous period. This compares to a 25 per cent growth in 2008. This slower growth rate is not unexpected as mobile penetration was recorded at 137 per cent or 11 percentage points higher than last period's. Subscribers using pre-paid cards constituted the majority (96 per cent) of mobile subscribers, though the number of post-paid subscribers grew 17 per cent in the review period. This growth in post-paid subscribers may be in response to new offering of flat rate post-paid calling packages which includes voice, SMS and mobile internet services.

Figure 2.4: Mobile Subscribers in Dominica

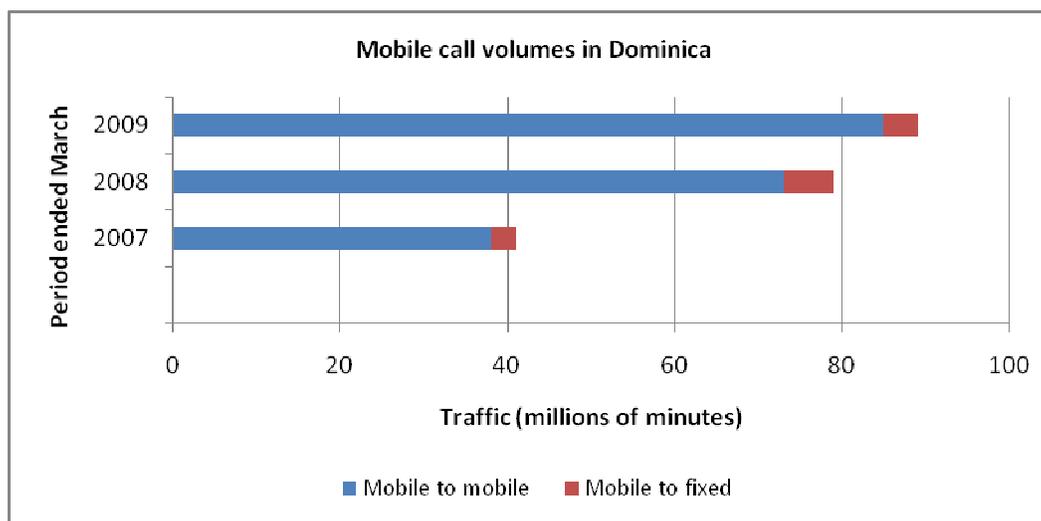


Local calling in Dominica continued to be dominated by calls originating on a mobile network, which accounted for almost 73 per cent of local calling volumes, up from 66 per cent in the previous period. Total mobile originated traffic is estimated to have increased 13 per cent to just under 90 million minutes. This growth in traffic was driven by a 19 per cent increase in on-net activity even as mobile to fixed traffic fell 24 per cent. Calls to customers

on the same mobile network accounted for 90 per cent of local mobile call volumes and has increased 30 per cent per annum in the past three years. The overall increase in mobile traffic was consistent with the continued expansion in the number of mobile subscription.

The use of messaging services grew in popularity and it was estimated that in excess of 36 million SMS text messages were sent during the review period. This represented a 12 per cent increase compared to the previous period. Less precise data is available for MMS messages, which was estimated at 10,000 for the period.

Figure 2.5: Mobile Traffic in Dominica



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

Revenue generated from mobile services in Dominica rose a modest 3 per cent and remained the main source of sector revenue accounting for 54 per cent of total revenue. For the period under review, it is estimated that the mobile market generated \$54 million as compared to \$52 million in the previous period. This rise in revenue may be a result of the growth in post-paid subscribers who are generally associated with higher and more stable revenue streams. For the review period, the rates for mobile services remained largely unchanged though mobile operators continued to offer discounted rates for on-net activity and included flat rate, high volume calling packages to their suite of services.

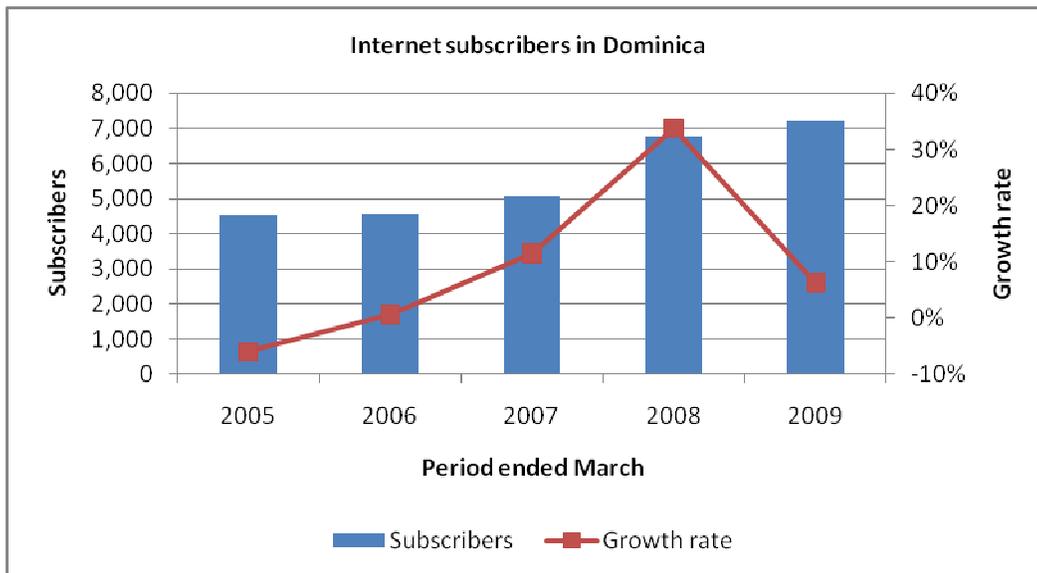
2.3.3 Internet and Broadband Services

At March 2009, there were just over 7,200 internet subscribers in Dominica. This was 6 per cent higher than in 2008. Expansion in the internet market was again fueled by an uptake of fixed broadband service, though the growth in broadband subscribers slowed significantly to 11 per cent compared to the 63 per cent increase seen in 2008. The number of dial-up subscribers declined a further 17 per cent, and at the end of March 2009, 95 per cent of internet subscribers had a broadband connection. Fixed internet penetration inched up half a percentage point to 11 per 100 inhabitants.

Fixed internet service is offered by LIME, which offers ADSL broadband access and dial-up access, and by Marpin 2K4 which offers high speed Internet access via cable modem. LIME offers a minimum speed of 1 mbps at a rate of \$79 per month to residential customers.

Mobile internet access is via ordinary mobile subscription using GPRS and EDGE rather than through a separate subscription for mobile broadband. True mobile broadband through 3G networks is not yet available to users. This makes it very difficult to determine the true number of mobile internet users in Dominica as any subscriber with a GPRS or EDGE ready mobile phone can browse the internet. Users with a prepaid mobile subscription can access internet service for \$0.01 per kbps while post paid users have access for \$40 per month.

Figure 2.6: Internet Subscribers in Dominica



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

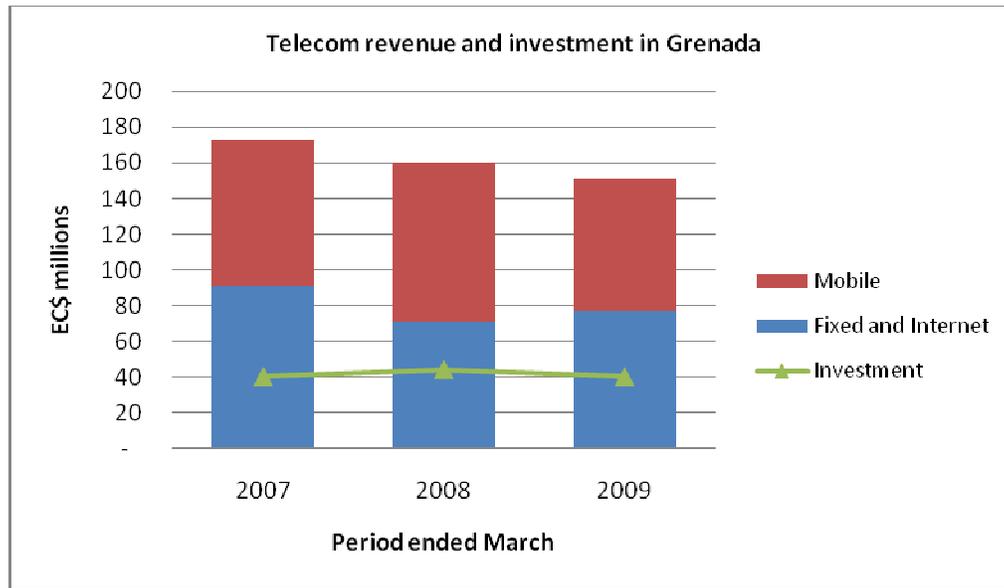
3.0 TRENDS IN TELECOMMUNICATIONS - GRENADA

3.1 OVERVIEW

There were mixed fortunes for the telecommunications sector in Grenada for the period ended March 2009. For the second year running total operator reported revenue declined while total number of subscribers to telecommunications services increased. Operator reported revenue contracted 6 per cent to an estimated \$151m. Despite the fact that internet service revenue grew an impressive 76 per cent, this was not sufficient to offset the decline in revenue from fixed and mobile voice services which fell 12 per cent. The telecommunications sector was not spared the impact of the global economic decline as for the first time since the liberalisation of the sector operator reported revenue for mobile providers declined even as subscribers grew some 16 per cent. Mobile services still contributed the most (49 per cent) to overall provider revenue, followed by fixed line service (36 per cent) and internet services (15 per cent).

Overall economic activity in Grenada was negatively impacted by the global economic crisis. The ECCB estimated real GDP growth at 2.2 per cent in 2008, well below the 5 per cent recorded for 2007. However, while major sectors like construction and tourism declined, value-added from communications increased to 11.8 per cent of GDP, from 11.6 in 2007.

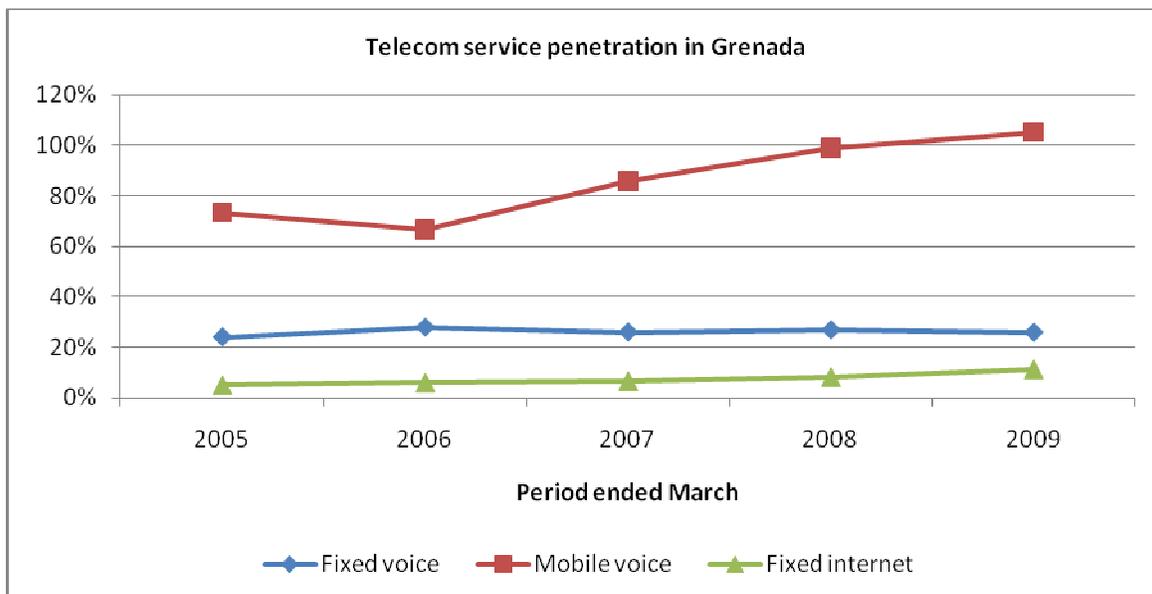
Following a 10 per cent increase in 2008, investment in the telecommunications sector was estimated to have contracted by 10 per cent to \$40 million or 2 per cent of GDP. Direct operator reported employment was estimated to have contracted a further 12 per cent during the period following a 5 per cent reduction in the previous period. Just over 250 persons were directly employed in the sector.

Figure 3.1: Telecommunications Revenue and Investment in Grenada

Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

Growth in telecommunications service penetration was led by a 33 per cent increase in fixed internet penetration which was recorded at 11.2 per cent with broadband penetration at 10.6 per cent. Mobile service penetration also increased to 105.2 per cent up from 99 per cent. Fixed service penetration however remained relatively flat and was recorded at 25.9 per cent

Figure 3.2: Telecommunications Service Penetration in Grenada

Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

3.2 MARKET PLAYERS

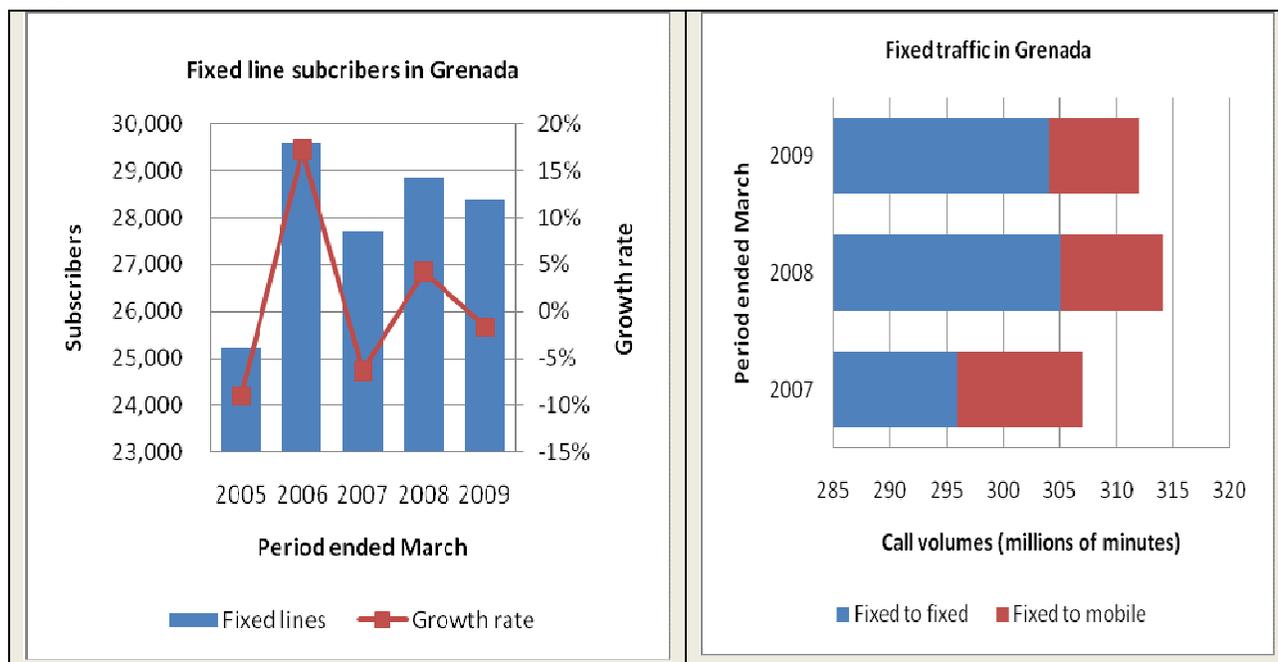
During the period under review four new licences were issued to telecommunications operators - two for Public Mobile Telecommunications and two for Internet Networks and Services. While none of the new licensees had launched operations by the end of the review period, Columbus Communications (FLOW) commenced the provision of internet service having been previously awarded a licence. Therefore, at the end of the review period, the market for fixed voice service remained a de facto monopoly market. At March 2009, a total of twenty telecommunications licences had been issued in Grenada.

3.3 MARKET TRENDS

3.3.1 Domestic Fixed Voice Service

The total number of fixed line subscribers in Grenada declined some 2 per cent following a 4.2 per cent increase in the previous period. As a result, at March 2009, there were roughly 28, 400 fixed line subscribers, and fixed line penetration fell by one percentage point to 25.9 per cent.

The total number of fixed call minutes was not available for the period. However, traditionally, fixed to fixed calls accounted for the largest share of the local fixed calling market and represented 97 per cent of calls in the last period. The limited information available indicated that there are signs of continued contraction in local fixed calling due in some part to the migration of local traffic to the mobile network. During the review period, fixed-to-mobile call volume declined 3 per cent on the heels on a 25 per cent reduction in the previous period.

Figure 3.3: Fixed Line Subscribers and Traffic in Grenada

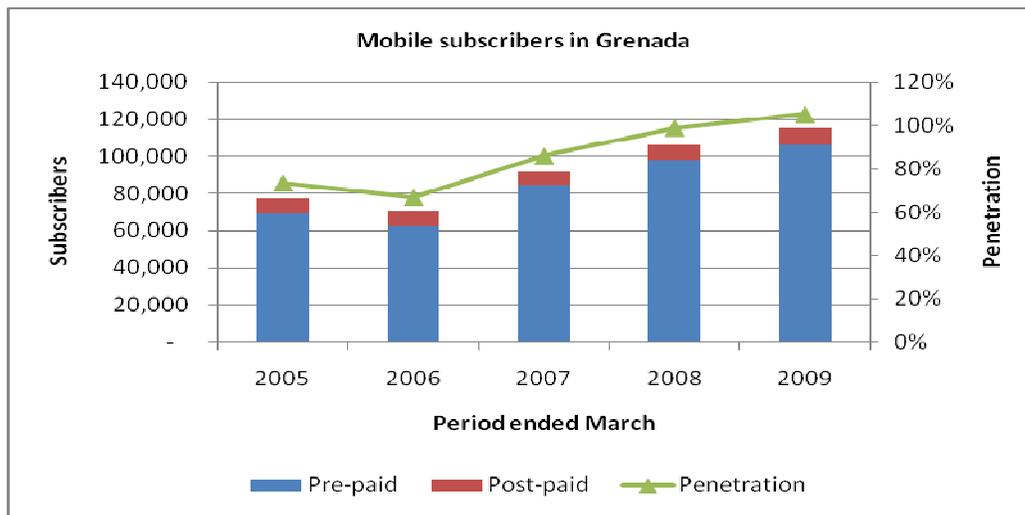
Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

Prices of domestic fixed line calls, which are currently regulated under the Price Cap Plan, remained unchanged from the previous period with the peak rate for local fixed to fixed calling at \$0.07 and off-peak rate at \$0.04. The peak rate for fixed to mobile calling was \$0.71 and off-peak rate was \$0.69. A flat rate calling package for unlimited fixed-to-fixed calling for residential customers is also offered by the sole fixed line provider, LIME.

3.3.2 Domestic Mobile Service

At March 2009, the increase in the number of mobile subscribers was recorded at 9 per cent compared to 16 per cent in the previous period. The total number of mobile subscribers was just over 115, 400 and the number of pre-paid subscribers as a share of total subscribers remained at 92 per cent. For the first time, mobile penetration in Grenada exceeded 100 per cent, being recorded at 105 per cent.

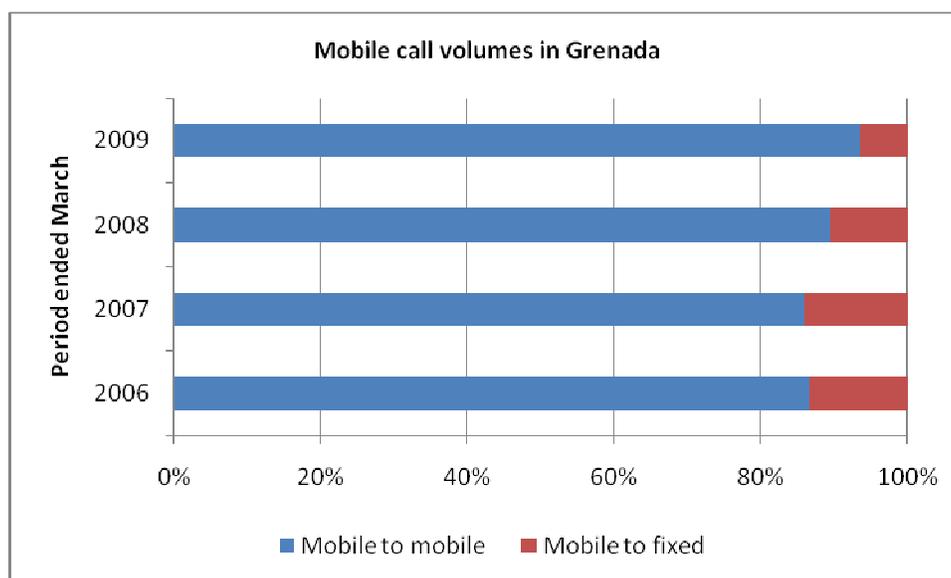
Figure 3.4: Mobile subscribers in Grenada

Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

Mobile originated local traffic increased 23 per cent, and was recorded at more than 141 million minutes. This growth in local mobile call volumes was driven by a 30 per cent increase in mobile to mobile calling even as mobile to fixed calling continued its decline falling some 30 per cent during the review period. An increased share of mobile originated traffic was on-net traffic which accounted for 82 per cent of local mobile traffic up from 73 per cent. Mobile traffic accounted for an increasing proportion of total local traffic; at March 2009, traffic originating on the mobile network accounted for 31 per cent of total local traffic up from 27 per cent previously.

Just under 18 million text messages were sent by mobile subscribers in Grenada during the review period; 20 per cent more than in the previous period. Multimedia Messaging Service (MMS) is also available to mobile customers, and an estimated 12,000 multimedia messages went sent which represented 0.1 per cent of all messages sent in Grenada.

Figure 3.5: Mobile Traffic in Grenada

Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

Non promotional rates for all mobile services - calls, SMS, MMS and internet access - remained largely unchanged over the review period. However, to stimulate demand, mobile operators included flat rate high volume calling packages to their suite of products and continued to offer discounted on-net calling rate of up to 50 per cent.

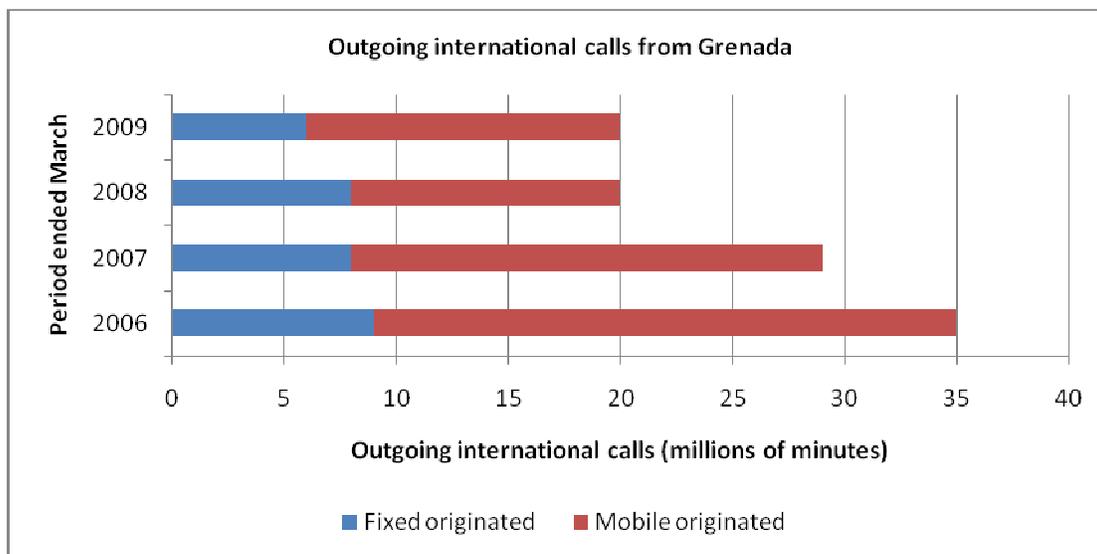
3.3.3 International Voice Service

Following three consecutive years of decline, total outgoing international call volumes rose 3 per cent to 21 million minutes. This increase was largely due to a 23 per cent increase in calls originating from mobile phones. In contrast, the total number of call minutes originating from a fixed line continued its decline, falling 24 per cent. The mobile network was the preferred network for international calling as calls originating from mobile phones accounted for 70 per cent of all outgoing international calls from Grenada. Data on international calls via VoIP was not available, so the impact of the use of VoIP on total outgoing international calling volumes could not be analysed.

Total incoming international call volumes were estimated to have decreased 18 per cent owing to a 30 per cent reduction in calls terminating on the fixed network. The reduction in incoming calls to the fixed network was offset to some extent by modest growth in incoming calls terminating on a mobile phone. For the review period, approximately 61 million minutes of incoming international calls terminated in Grenada; of this, 45 per cent terminated on mobile phones, this was up from 35 per cent in the previous period.

Therefore, while outgoing international calls shifted away from the fixed network, the fixed network was still the preferred network for incoming calls during the review period.

Figure 3.6: International Traffic from Grenada



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

3.3.4 Internet and Broadband Services

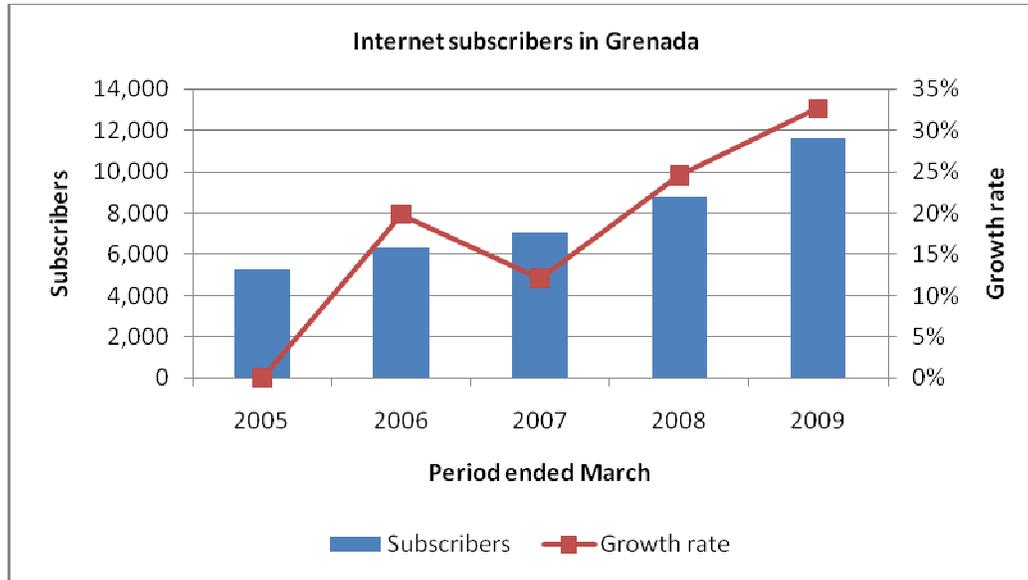
There were 33 per cent more fixed internet subscribers in Grenada at the end of March 2009. This significant increase in internet subscribers was fueled by the continued uptake in broadband service. Of the more than 11,600 fixed internet subscribers, 98 per cent are broadband subscribers, up from 87 per cent in the previous period, as the decline in the number of dial-up subscribers continued. The increase in internet subscribers resulted in a 2.4 percentage point increase in internet penetration to 10.6 per cent.

Broadband services in Grenada are provided via ADSL from LIME, and cable modem from new entrant FLOW. The minimum speed offered to customers was 2Mbps to residential customers and 3Mbps to business customers. The rates for dial-up service however remained unchanged at \$129 for unlimited access, making this option very unattractive to consumers.

There has been a lack of sufficient data on accessibility to mobile broadband service due largely to technological hurdles that exist in Grenada and in the other ECTEL Member States. Mobile internet access is available via ordinary mobile subscription using GPRS and EDGE rather than through a separate subscription for mobile broadband via a dongle, as true mobile broadband through 3G networks is not yet available to users. This makes it very

difficult to determine the true number of mobile internet users in Grenada as any subscriber with a GPRS or EDGE ready mobile phone can browse the internet. One provider estimates that roughly half of its subscribers could access the internet with the appropriate mobile handset. In addition, subscribers with Wi-Fi ready handsets can also access the internet at a hotspot. Users with a prepaid mobile subscription can access internet service for \$0.01 per kbps while post paid users have access for \$40 per month.

Figure 3.7: Internet Subscribers in Grenada



Source: ECTEL/ operators

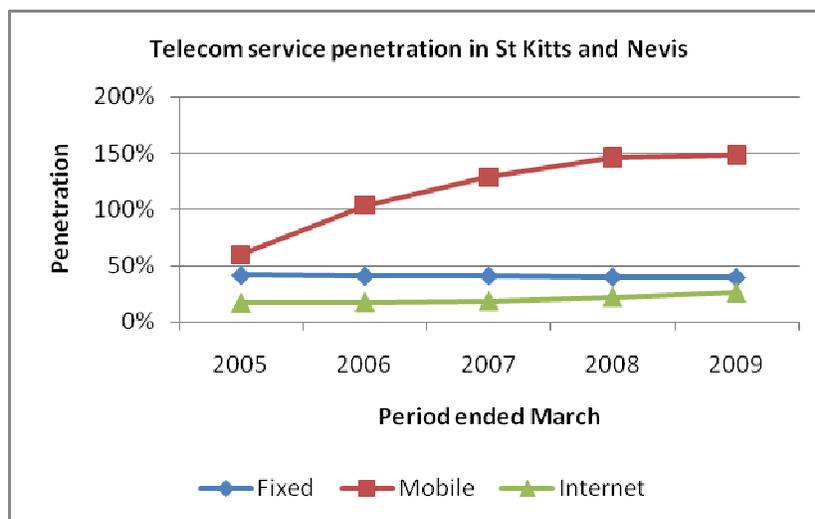
Includes estimates where ECTEL did not receive data from operators

4.0 TRENDS IN TELECOMMUNICATIONS – ST KITTS AND NEVIS

4.1 OVERVIEW

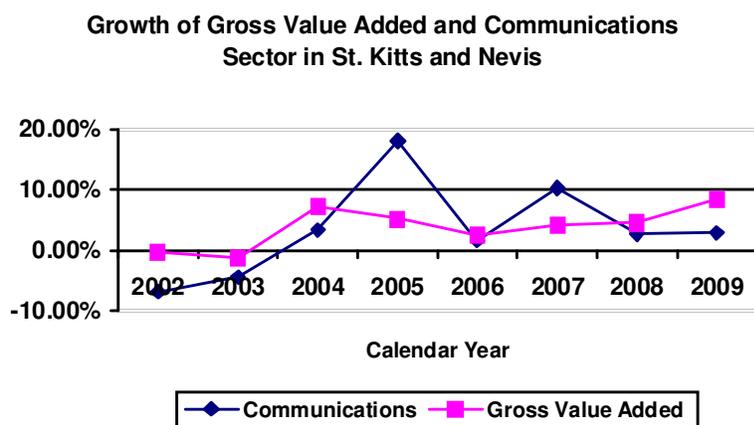
Figure 4.1: Telecommunications Penetration in St. Kitts and Nevis

Telecommunications and ICTs continued to play a pivotal role in the economy of St. Kitts and Nevis. However, the sector was affected somewhat by the global financial turmoil. In 2008, the sector's contribution to GDP fell 2.8 per cent to 10.1 per cent but was projected to improve to 10.7 by the end of 2009. In



line with reduced demand associated with the economic downturn, telecommunications revenues declined by 4 per cent to EC\$120 million, with a corresponding reduction from 9 per cent to 8 per cent of GDP. There was growth in both mobile and internet penetration with the former reaching 148.4 per cent and the latter moving upwards to 24.9 per cent. Fixed line subscription on the other hand recorded a marginal 0.1 per cent fall with penetration remaining flat at 40 per cent. There were no major nominal movements in prices, but traffic was somewhat affected by the economic slowdown. Local fixed traffic recorded a reduction of 11 per cent to 65 million minutes and local mobile traffic fell by 5.2 per cent to 89 million minutes.

Figure 4.2: Growth of Gross Value Added

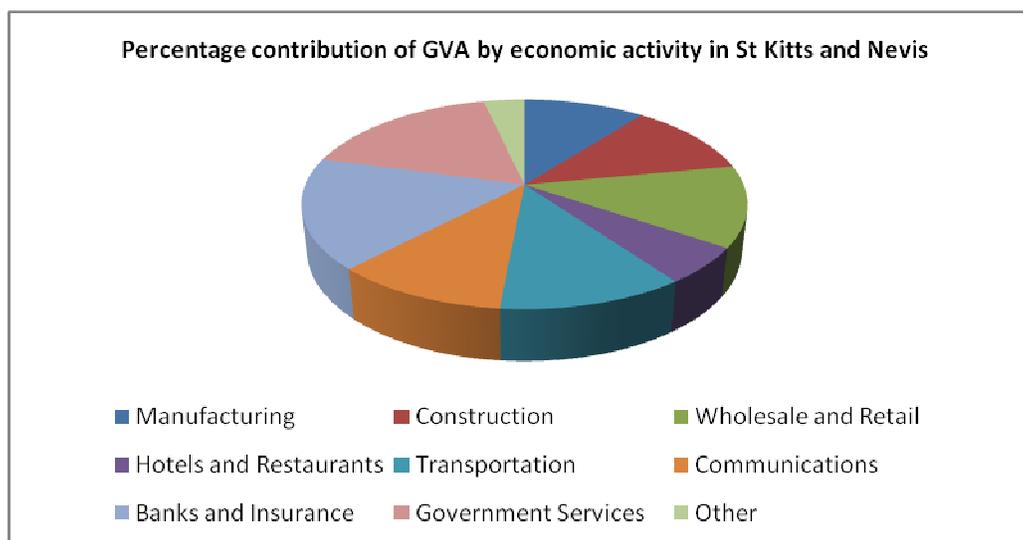


Real GDP was estimated, by the ECCB, to have declined by 8.5 per cent at the end of 2009 compared with a growth of 4.6 per cent in 2008. This is the only decline recorded over the last nine years and reflects the intensity of the lagged effect of the global economic turmoil on

the economy of St. Kitts and Nevis. There was a corresponding decline in the communications sector's growth rate, a reversal from a positive growth of 10.3 per cent in 2007, to a contraction of 2.8 per cent in 2008, and a further decline of 3 per cent in 2009.

There were mixed reviews about the true impact of the recession in the telecoms industry. According to Mobile Marketer¹, the nature of telecommunications allows for the impact of the recession on the sector to be more limited than in other sectors, as the need to communicate and the use of data remain instrumental, regardless of the economic environment. Figure 4.2, however, illustrates that while a similar growth trend was observed for the communications sector and overall GDP, there is greater volatility in the communications sector.

Figure 4.3: Percentage Contribution of Gross Value-added by Economic Activity in St Kitts and Nevis



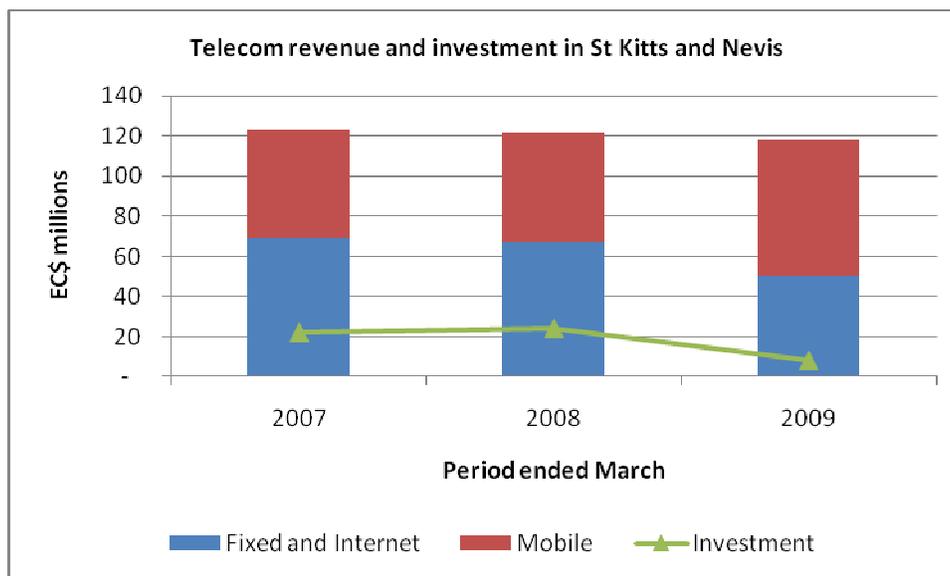
Telecommunications was a driving force in the economy of St. Kitts and Nevis, having a sector share of 10.7 per cent in 2009, compared to 10.1 per cent in 2008. The sector's importance was also indicated in the survey on the use of ICTs in St. Kitts and Nevis, which showed that a majority of businesses (96 per cent) expressed that ICTs were important to their day to day operations, and 59 per cent stated that ICTs were indispensable to their businesses².

¹ <http://www.mobilemarketer.com/cms/news/media/3413.html>

² See Page 91, Use of Information and Communication Technology (ICT) by Small and Medium enterprises in the ECTEL Member States.

Total sector revenue fell by 4 per cent to \$120 million, as declines in the fixed market was offset by a 25 per cent increase in mobile revenues. Consequently, the share of mobile revenues to total revenue increased from 44 per cent to 58 per cent, while fixed line revenues decreased from a share of 44 per cent to 30 per cent.

Figure 4.4: Telecommunications revenue and investment in St Kitts and Nevis



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

The demand for fixed internet service continued to rise but the market's full potential has not yet been realized. Revenue from internet services grew 7 per cent to \$14.4 million and its share of total revenue increased from 11 per cent at March 2008 to 12 per cent at March 2009.

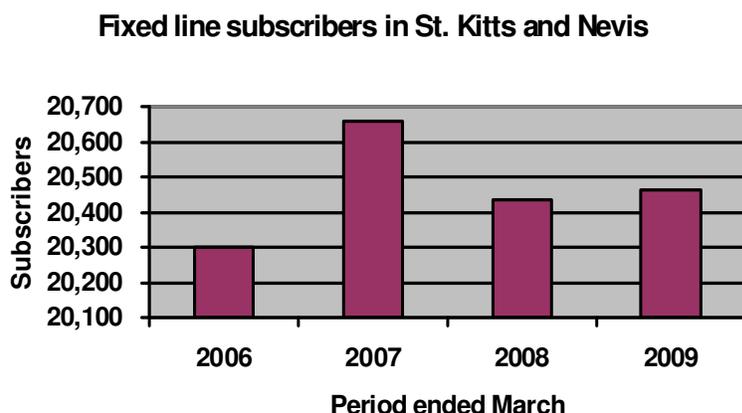
4.2 MARKET PLAYERS

For the period under review two new licences were issued for provision of Internet Networks and Services. None of the new licensees had launched operations by the end of the period; 21 Century Telecoms commenced the provision of mobile service having been previously awarded a licence. All telecommunications markets in St Kitts and Nevis are competitive with six active operators in the market. At March 2009, a total of fourteen telecommunications licences had been issued in St Kitts and Nevis.

4.3 MARKET TRENDS

4.3.1 Domestic Fixed Voice Service

Figure 4.5: Fixed Line Subscribers in St. Kitts and Nevis



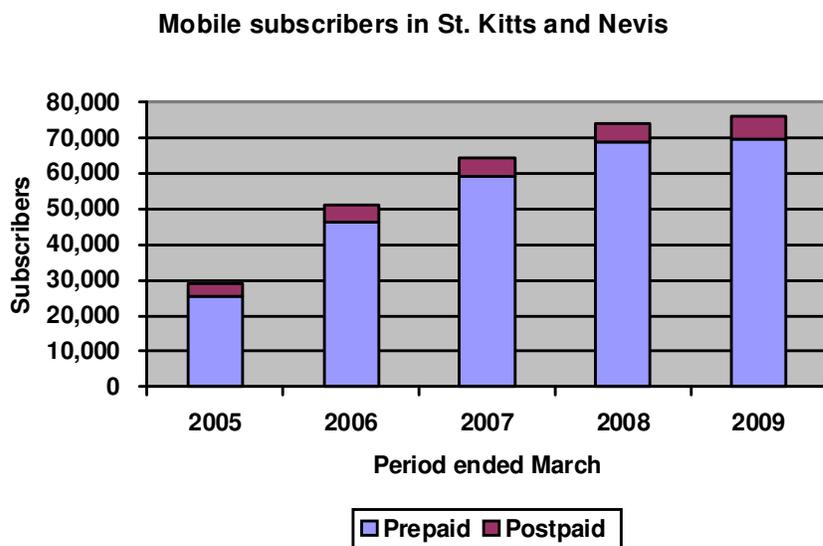
Activity in the fixed line market remained subdued during the period. The number of fixed line subscribers lines remained flat at approximately 20,400, representing a 40 per cent fixed line penetration rate. The market remains dominated by LIME followed by Caribbean Cable Communications, regarded as a small competitor in the market.

The reduced activity in the fixed line market was evidenced by a reduction in traffic by 11 per cent to 65 million minutes. This was attributed to declines in fixed to fixed and fixed to mobile traffic on the same network, which outweighed the growth in fixed to mobile traffic across networks. Even with a 12 per cent decline, fixed to fixed calling maintained the largest share (90 per cent) of local outgoing traffic. Despite the increase in mobile subscribers and mobile penetration approaching 150 per cent, fixed to mobile traffic fell 8 per cent to just over 6 million minutes. The rate for fixed to mobile calls have remained at \$0.71 since 2007, however the demand for fixed to mobile traffic is expected to rise with the implementation cost-based mobile interconnection rates and subsequent downward adjustments to the rate for fixed to mobile calls under a new Price Cap Plan to be implemented in all the ECTEL Member States in 2010.

Rates for fixed line services are set under a Price Cap Plan (PCP) and remained unchanged during the review period. The monthly rental remained at EC\$26.40; local fixed to fixed calling peak rate was 7 cents per minute; and fixed to mobile peak rate remained at 71 cents. The rate for fixed to fixed calls across networks was initially not a part of the Price Cap Plan, but once approved by the regulator, this rate would then be regulated under the current PCP.

4.3.2 Domestic Mobile Service

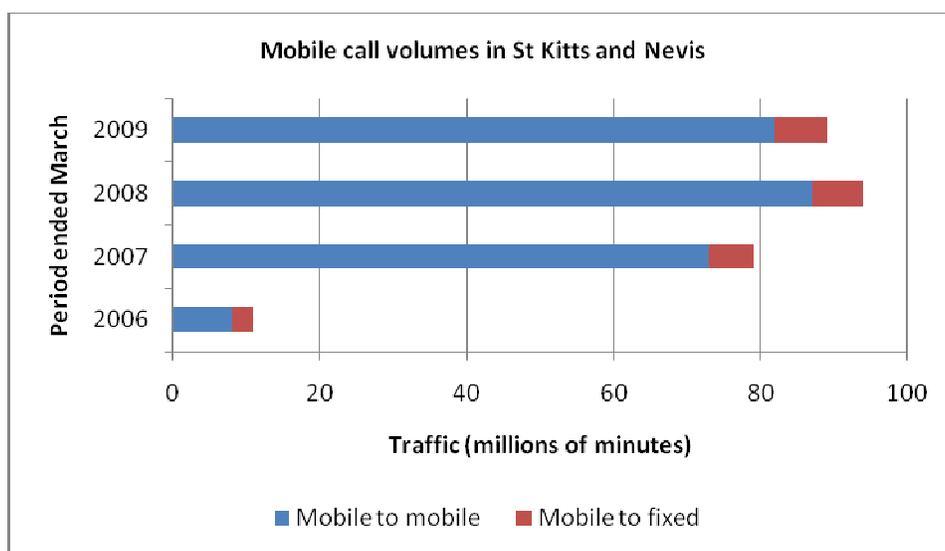
Figure 4.6: Mobile Subscribers in St. Kitts and Nevis



The mobile phone market dominated by LIME and Digicel, remained active in the review period ending March 2009. Growth in mobile subscribers abated 3 per cent to 76,100, following a 15.2 per cent increase in the previous review period. This resulted to a very modest increase in penetration to 148.4 per

cent up from 146.4 per cent in the previous period. Post-paid mobile phone subscriptions accelerated 21 per cent, compared with 6 per cent a year ago. This resulted in its share of total subscribers increasing from 7 per cent to 9 per cent. Despite a deceleration in growth from 33 per cent to only 1 per cent, pre-paid mobile subscribers remained predominant; the proportion of pre-paid subscribers was recorded at 91 per cent of total subscriptions.

There was a decline of 5.2 per cent in local mobile originated traffic. This was attributable to a 6 per cent drop in mobile to mobile traffic, which accounted for 92 per cent of total mobile traffic. Mobile to mobile traffic on the same network increased by 3 per cent and continued to dominate local demand with 85 per cent share of mobile network traffic. Mobile to mobile traffic across networks recorded the largest growth at 33 per cent, and had a 7 per cent share of mobile traffic. Mobile to fixed traffic, which accounted for 8 per cent of the traffic, edged downwards 1 per cent to 7 million minutes.

Figure 4.7: Mobile Traffic in St Kitts and Nevis

Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

The rates for all mobile services remained unchanged in the review period. However a downward revision of the rates is anticipated as mobile operators are expected to reduce their retail rates due to regulated reduction in wholesale termination rates.

The use of SMS as a form of communication is widening among mobile phone subscribers as it is economical and convenient. In an effort to promote its usage, at least one provider sought to simplify the structure to a single rate of 9 cents for messages within and across networks and also reduced international rate from 40 cents to 20 cents. The reduction in the rates may have contributed to the increased traffic from 63.6 to 72.3 million messages.

Multimedia Messaging Service (MMS) is also available in St. Kitts and Nevis. However, data on usage was not available for the review period.

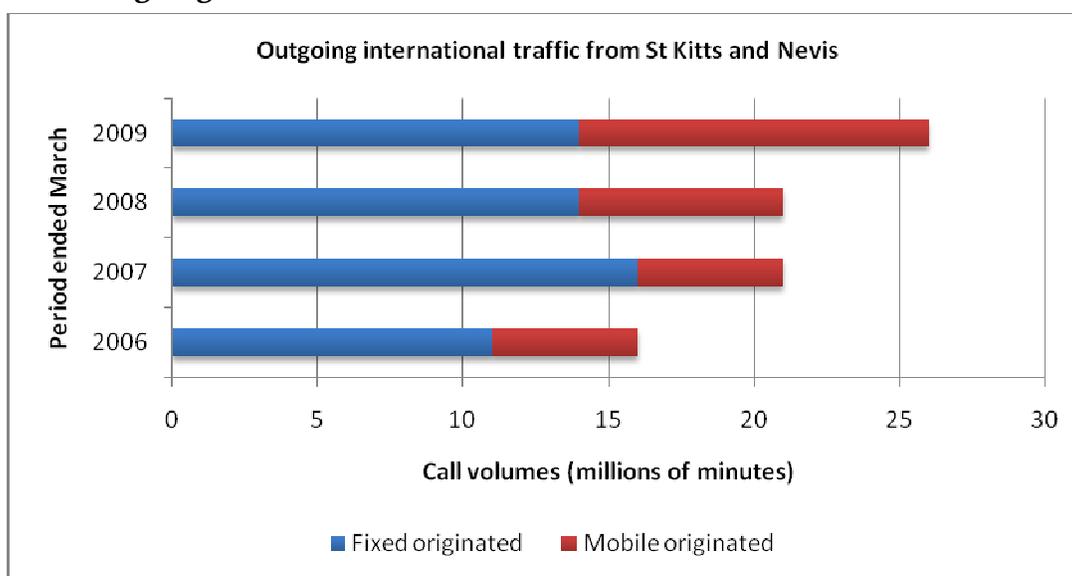
4.3.3 International Voice Service

International traffic is still dominated by mobile and fixed originated calls, but this may be challenged by the emerging voice over the internet protocol (VoIP) calling. However, data on VoIP subscription was not readily available for the review period.

Outgoing international traffic rose 26 per cent to 26 million minutes, following a 1 per cent increase a year earlier. Calls originating on the fixed network still dominated though mobile originated calls grew at a faster rate. For the review period, mobile originated calls expanded 69 per cent to 12 million minutes, while traffic from fixed lines grew only 4 per cent but

accounted for 54 per cent of international calls. International incoming traffic increased 20 per cent to 41 million minutes, led by a more than doubling of international incoming traffic terminating on the mobile network, while international incoming traffic to fixed lines fell 8 per cent to 24 million minutes. Consequently, the ratio of incoming traffic to outgoing traffic remained unchanged at 1.6 to 1.

Figure 4.8: Outgoing international traffic from St Kitts and Nevis



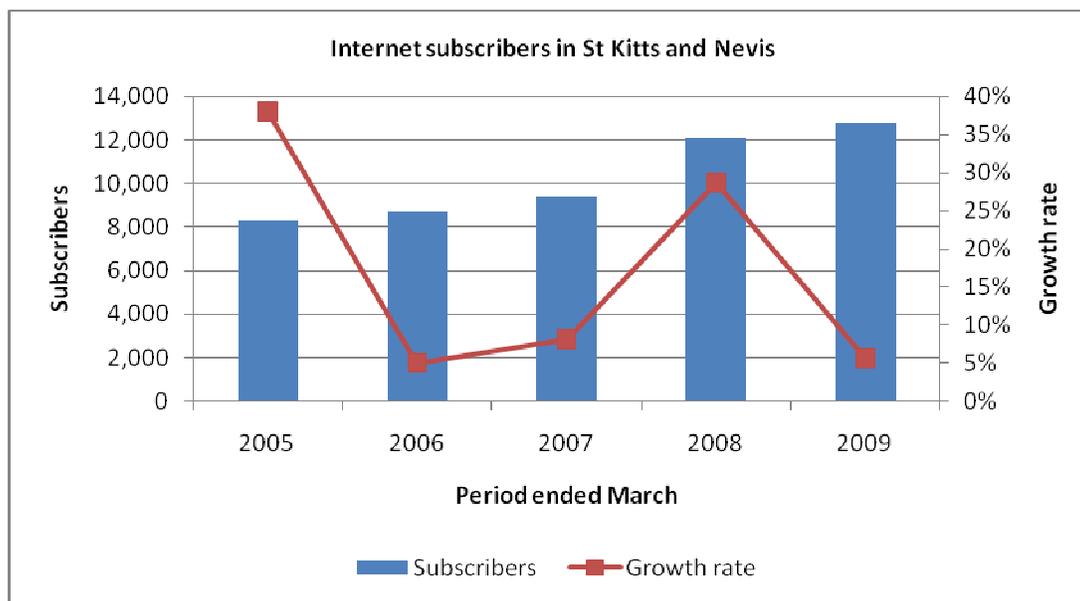
Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

4.3.4 Internet and Broadband Services

Like in other developing countries, internet penetration continued to lag that of other telecommunications services owing in part to limited access to computers and compatible handsets. There have been both public and private initiatives to increase internet usage including the establishment of public community access centres and internet cafes. Although there was been a sharp decrease in internet access rates, the lack of effective competition impeded further declines in prices.

There are currently three market players providing fixed broadband service in St Kitts and Nevis, namely LIME, Caribbean Cable Communications and The Cable. During the review period, internet subscription recorded 6 per cent growth with the number of subscribers moving up from 12,000 in March 2008 to 12,700 in March 2009. This led to an increase in penetration by approximately 1 percentage point to 24.9 per cent. The baseline rate for fixed internet service offered by LIME remained at \$99 for 2 Mbps.

Figure 4.9: Internet Subscribers in St Kitts and Nevis

Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

Mobile broadband technologies may offer the best prospects for wide spread provision of broadband in a cost-effective manner and for reducing the digital divide between those who can and those who cannot access information and communications technologies. Some of the technologies already available in St. Kitts and Nevis are GPRS and EDGE. The market for these services is highly underdeveloped but is expected to improve radically with more competitors, improved technologies and more affordable data compatible handsets.

There has been a lack of sufficient data on accessibility to mobile broadband service due largely to technological hurdles that exist in St. Kitts and Nevis and in the other ECTEL Member States. Mobile internet access is available via ordinary mobile subscription using GPRS and EDGE rather than through a separate subscription for mobile broadband via a dongle, as true mobile broadband through 3G networks is not yet available to users. This makes it very difficult to determine the true number of mobile internet users in St Kitts and Nevis, as any subscriber with a GPRS or EDGE ready mobile phone can browse the internet with the appropriate mobile handset. In addition subscribers, with Wi-Fi ready handsets can also access the internet at a hotspot. Users with a pre-paid mobile subscription can access internet service for \$0.01 per kbps while post paid users have access for \$40 per month.

5.0 TRENDS IN TELECOMMUNICATIONS – SAINT LUCIA

5.1 OVERVIEW

Telecommunications and ICTs continued to be a key enabler in Saint Lucia's development. The overall impact of the economic downturn on the telecommunications sector was minimal as the sector's contribution to GDP rose from 11.2 per cent to 11.3 per cent at the end of 2008. Even so, the

sector was not completely unscathed as telecommunications revenues remained flat at EC\$238 million or 9 per cent of GDP. There was growth in both mobile and internet penetration, with the former reaching 111 per cent and the latter moving upwards to 11 per cent. However, fixed line penetration continued its downward slide and declined 1.3 percentage points to 22.6 per cent. There were no major nominal movements in prices, and voice traffic was somewhat shielded from the effects of the slowdown in the economy. Fixed traffic recorded an increase of 6 per cent to 183 million minutes while international outgoing traffic and local mobile traffic remained relatively flat at 40 million minutes and 215 million minutes respectively.

Figure 5.1: Telecoms Penetration in Saint Lucia

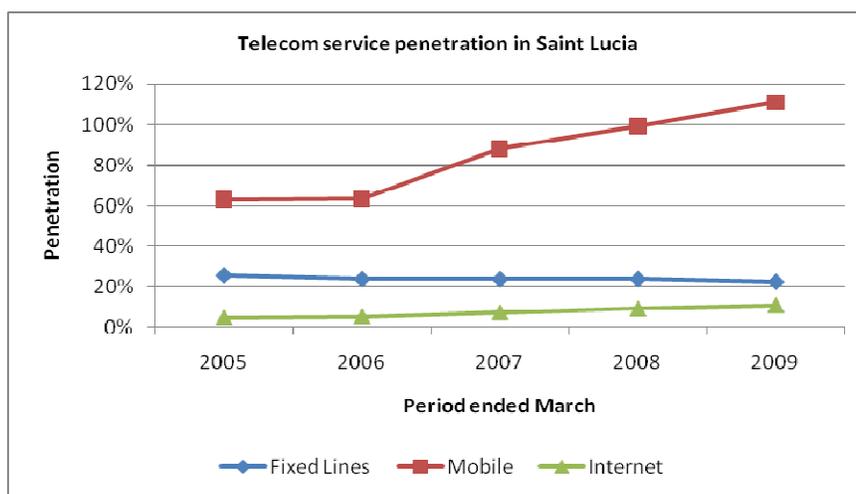
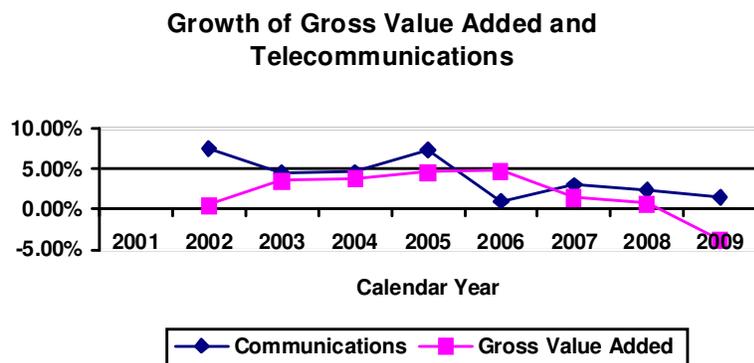


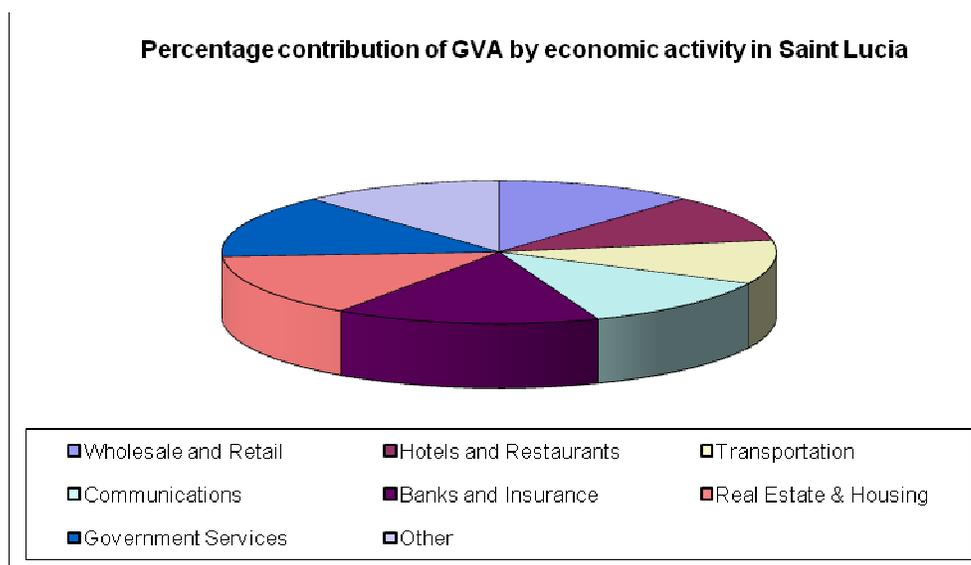
Figure 5.2: Growth of Gross Value Added



Following marginal growth of 0.7 per cent in 2008, real GDP was estimated to have fallen 3.8 per cent in 2009, the greatest decline since 2001, highlighting the vulnerability of Saint Lucia's economy to global challenges such as the recent financial

crisis. The economic recession appeared to have had limited negative impact on the telecoms sector, as sector contribution to gross value-added was estimated to increase to 11.9 per cent in 2009 up from 11.3 per cent in 2008. However, growth in gross value-added by the sector fell from 2.4 per cent in 2008 to an estimated 1.5 per cent in 2009. This limited impact is supported by Mobile Marketer³ which stated that the nature of telecoms allows for the impact of the recession on the sector to be more limited than in other sectors as the need to communicate and the use of data remain instrumental regardless of the economic environment. Figure 5.2, illustrates the relationship between the growth in communications sector and overall GDP and reveals a similar growth path albeit more depressed movements in overall GDP.

Figure 5.3: Percentage Contribution of Gross Value- added by Economic Activity in Saint Lucia



Telecommunications remained a driving force in the economy of Saint. Lucia and was projected to be the fourth highest contributing sector in 2009. This sector has become instrumental in the overall economic development as it is a major input in the production of goods and services. This was also highlighted in the survey on the use of ICTs in Saint Lucia; a majority of businesses (86 per cent) indicated that ICTs were important to their day to day operations⁴.

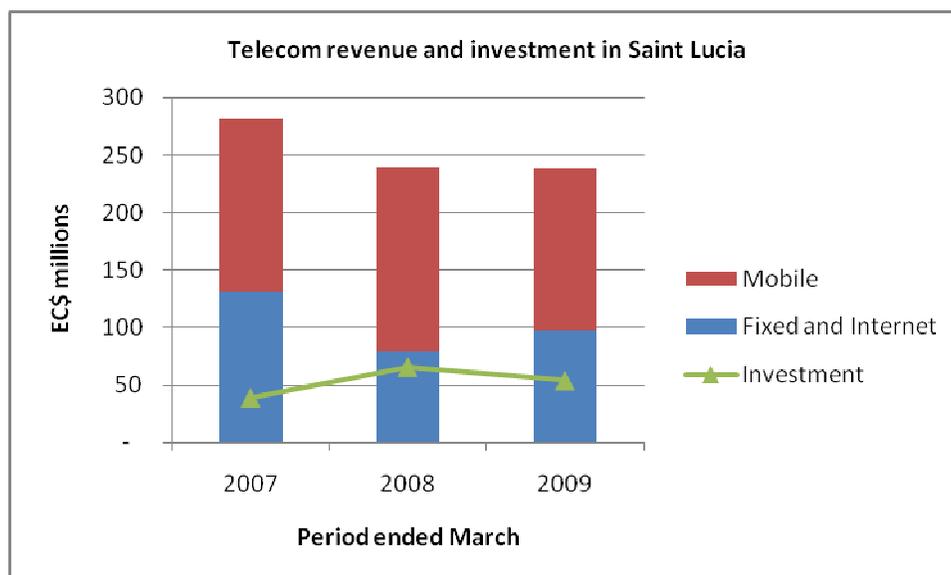
³ <http://www.mobilemarketer.com/cms/news/media/3413.html>

⁴ See Page 91, Use of Information and Communication Technology (ICT) by Small and Medium enterprises in the ECTEL Member States.

Subsequent to a 15 per cent fall in the previous period, total operator reported revenue remained relatively flat at an estimated \$237 million or 9 per cent of GDP. Following three consecutive years of decline, revenue from fixed line service jumped 40 per cent and accounted for 28 per cent of total revenue. In contrast, for the first time since liberalization, mobile service revenue declined 13 per cent, but still retained its market leadership contributing 59 per cent to total revenue. The market for internet activity increased its revenue share one percentage point to 9 per cent.

Investment in the sector was estimated to have fallen 18 per cent to \$54 million or 2 per cent of GDP. While there was significant pull back by existing market players, this was offset to some degree by network build out by new entrants, in particular, a new cable operator. As with investment in the sector, direct employment also decline 8 per cent owing to retrenchment by the existing providers, though employment by new entrants cushioned the full impact. At March 2009, an estimated 573 persons were employed in the telecommunications sector.

Figure 5.4: Telecommunications Revenue and Investment in Saint Lucia



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

5.2 MARKET PLAYERS

Six new licences - three for Fixed Public Telecommunications and three for Internet Networks and Services - were issued in Saint Lucia during the review period. Of these, two

providers launched their Internet Networks and Services operations, providing an alternative to the incumbent for the first time since the telecommunications sector was liberalized. Therefore, at March 2009, there were two active mobile operators and three internet service providers; only the market for fixed voice services remained a de facto monopoly in Saint Lucia.

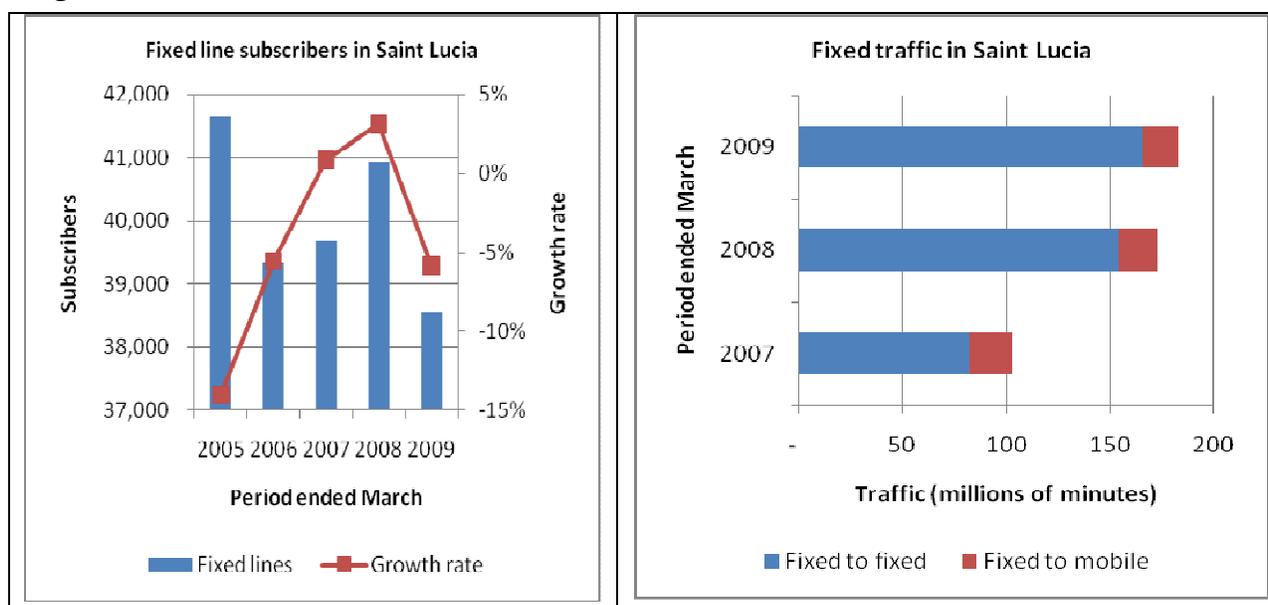
5.3 MARKET TRENDS

5.3.1 Domestic Fixed Voice Service

At March 2009, LIME was still the sole provider of fixed voice service in Saint Lucia. However, the end of its monopoly was imminent with the expected launch of fixed line service by new entrant Karib Cable. During the review period, Karib Cable which also offers telecommunications services in St. Vincent and the Grenadines, offered cable TV and broadband service in Saint Lucia.

Following two years of increases, fixed lines in service decreased 6 per cent to roughly 38,500 at March 2009, mainly due to a 12 per cent reduction in business subscriptions. Consequently, fixed line penetration dipped from 23.9 per cent to 22.6 per cent, during the review period, and the share of business lines fell 2 percentage points to 27 per cent of total subscriptions.

Figure 5.5: Fixed line Subscribers and Traffic in Saint Lucia



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

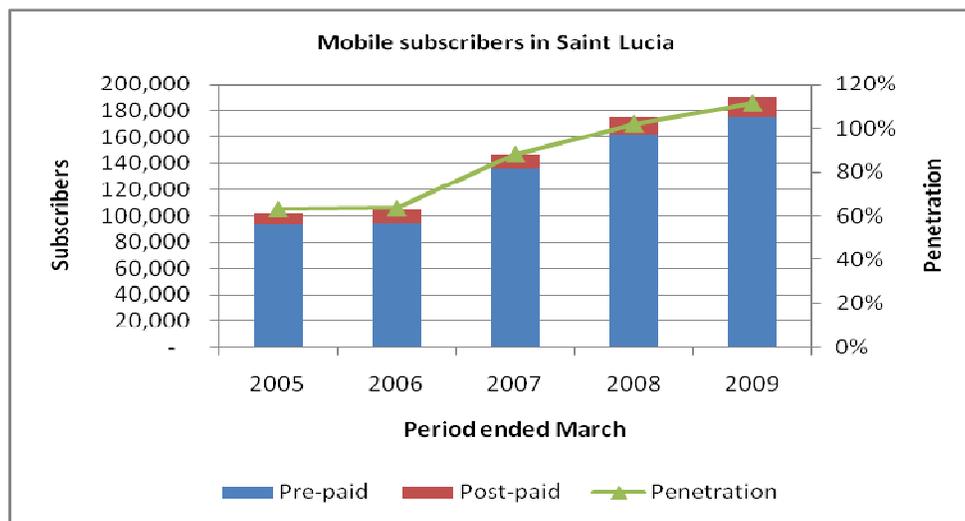
Notwithstanding this decline in fixed line subscribers, overall fixed line traffic increased 6 per cent to 183 million minutes due primarily to an increase in fixed to fixed traffic which rose 8 per cent to 166 million minutes. In contrast, fixed to mobile calls volumes decreased for a third year and fell 10 per cent, accounting for 9 per cent of total local fixed line calls. The demand for fixed to mobile calls is expected to stabilize with the anticipated reductions in the rates for fixed to mobile with the implementation of cost-based mobile interconnection rates.

The rates for fixed line calls as set under a Price Cap Plan (PCP) remained unchanged during the review period. The monthly access charge was \$26.40, the peak fixed to fixed calling rate was 7 cents per minute, and the peak fixed to mobile calling rate was 71 cents per minute.

5.3.2 Domestic Mobile Service

At the end of March 2009, there were 189,730 mobile subscribers in Saint Lucia; 8 per cent more than at March 2008. This was equivalent to a 111 per cent penetration up from 102 per cent in 2008. Overall subscriber growth was significantly less than the 19 per cent recorded in 2008 and 41 per cent in 2007, and was led by a 14 per cent increase in post-paid subscribers. Pre-paid subscriptions experienced slower growth of 8 per cent, but still accounted for more than 90 per cent of mobile subscribers.

Figure 5.6: Mobile subscribers in Saint Lucia



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

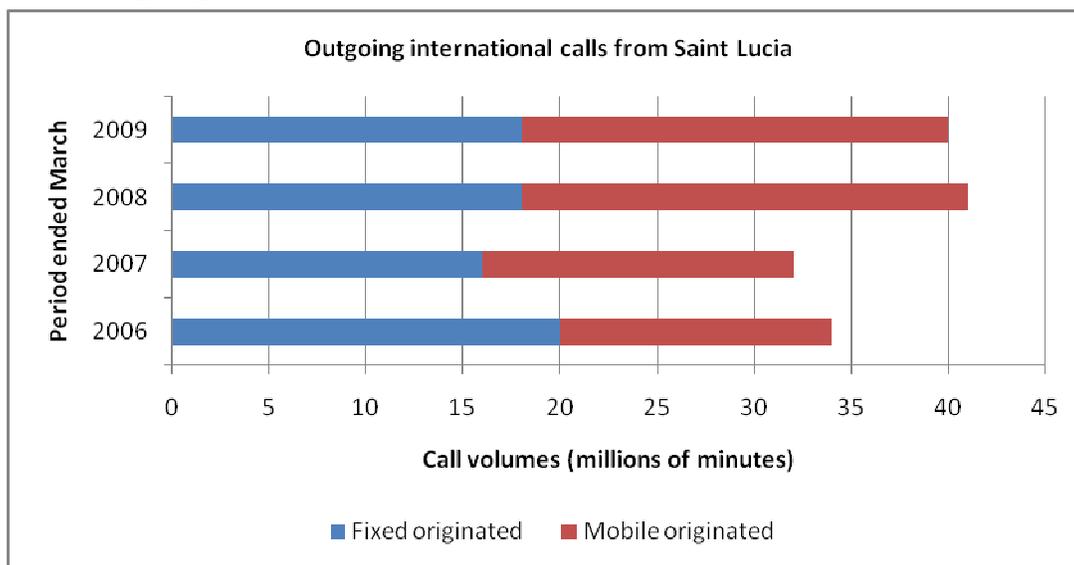
Local mobile voice traffic totalled 214.5 million minutes down by 0.3 per cent from the last review period, in contrast to the 74 per cent increase recorded at March 2008. A 44 per cent reduction in mobile to fixed traffic, which accounted for only 6 per cent of total local mobile traffic, was offset by a 1 per cent increase in on-net mobile traffic and an 18 per cent increase in mobile traffic across networks. Local mobile traffic remained dominated by on-net calling with a 70 per cent share of total local mobile traffic.

The number of SMS messages sent in Saint Lucia increased 7 per cent to 19 million at March 2009. MMS messages were significantly less popular and it was estimated that 10, 000 MMS messages were sent, representing less than 1 per cent share of messages sent in Saint Lucia.

The rates for mobile services have remained relatively flat over the past three years. However, downward revision of the rates for voice calls is anticipated with the implementation of cost-oriented interconnection rates which were introduced in 2009.

5.3.3 International Voice Service

Total international outgoing minutes dipped by 0.4 per cent to 40 million minutes in contrast to a 27 per cent increase a year earlier. Outgoing minutes from mobile phones fell by 2 per cent, while fixed call minutes increased 1.5 per cent following a 13 per cent increase in 2008. For the review period, fixed calls share of total outgoing international minutes held firm at 44 per cent following declines in previous years. Incoming international calls, which outpaced outgoing calls almost 2:1, increased 10 per cent to an estimated 67 million minutes. Reversing the trend of declining fixed voice traffic, incoming international calls terminating on the fixed network increased 18 per cent and fixed calls share of total incoming calls jumped 3 percentage points to 47 per cent. Incoming international calls to a mobile phone rose 3 per cent to 36 million minutes or 53 per cent of total calls.

Figure 5.7: Outgoing International Calls from Saint Lucia

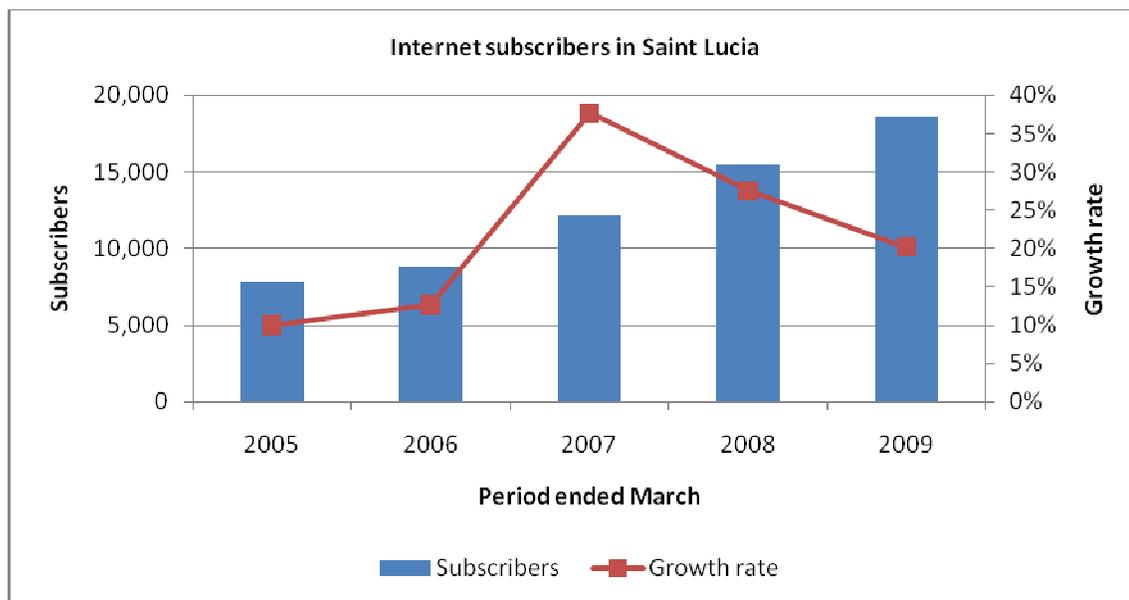
Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

5.3.4 Internet and Broadband Services

Internet penetration in Saint Lucia continued to lag that of the other telecommunications services due in part to limited access to computers and compatible mobile handsets. However, there were a number of public and private initiatives aimed at increasing internet usage, including community access centres and internet cafes. Therefore the number of persons with access to the internet in Saint Lucia may be significantly more than the number of subscribers.

At March 2009, there were 18,600 internet subscribers in Saint Lucia, 3,100 more than at March 2008. Total broadband subscribers grew 22 per cent and accounted for 97 per cent of fixed internet subscribers, while dial-up subscription fell a further 21 per cent to just over 500. Growth in overall internet subscription pushed penetration up 2 percentage points to 10.9 per cent.

Figure 5.8: Internet Subscribers in Saint Lucia

Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

The rates for fixed internet remained flat with both providers offering download speed of 1Mbps at \$79 per month. Given that a large majority of potential customers are budget constrained some more affordable packages exist. A small minority of subscriptions (3 per cent) are dial up, which is available at \$19.99 for 20 hrs. In addition, providers are creatively designing innovative and more economical choices for consumers, including a high speed package available at a monthly access charge of \$19.99 and usage charge of \$3.99 per day.

Mobile broadband technologies may offer the best prospects for the widespread provision of broadband in a cost effective manner thus reducing the digital divide between those who can and those who cannot access broadband services. Some of the technologies already available in Saint Lucia are GPRS and EDGE. The market for these services is highly underdeveloped but is expected to improve radically with more competitors, improved technologies and more affordable data compatible handsets.

There has been limited data on accessibility to mobile broadband service due largely to technological hurdles that exist in Saint Lucia and in the other ECTEL Member States. Mobile internet access is available via ordinary mobile subscription using GPRS and EDGE rather than through a separate subscription for mobile broadband via a dongle. True mobile broadband through 3G networks is not yet available to users. This makes it very difficult to

determine the true number of mobile internet users in Saint Lucia as any subscriber with a GPRS or EDGE ready mobile phone can browse the internet. One provider estimates that roughly half of its subscribers could access the internet with the appropriate mobile handset. In addition, subscribers with Wi-Fi ready handsets can also access the internet at a hotspot. Users with a prepaid mobile subscription can access internet service for \$0.01 per kbps while post paid users have unlimited access for \$40 per month.

6.0 TRENDS IN TELECOMMUNICATIONS - ST. VINCENT AND THE GRENADINES

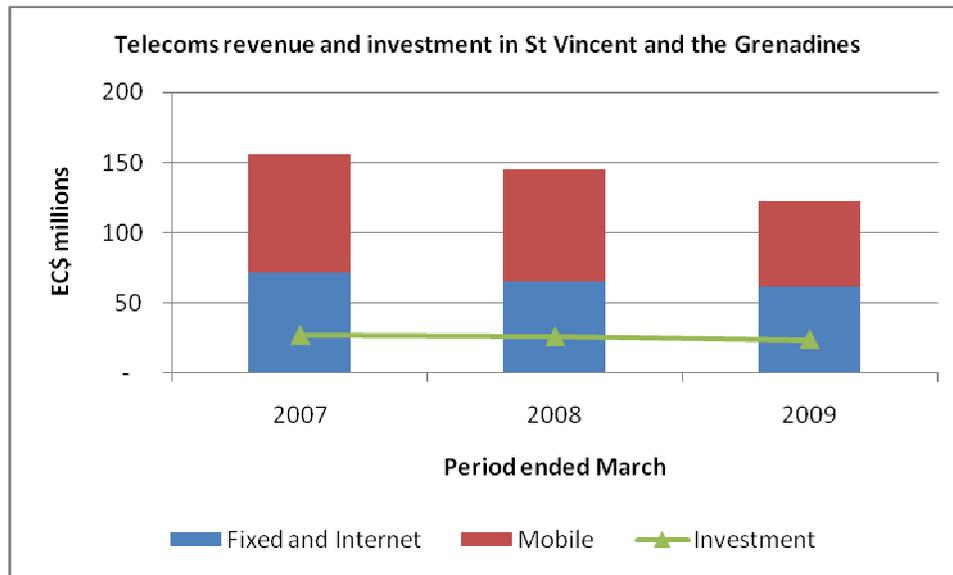
6.1 OVERVIEW

Activity in the telecommunications sector produced mixed results for the period under review. Following a 5 per cent reduction in the previous period, operator reported revenue fell a further 17 per cent to an estimated \$123 million. Revenue for fixed internet service continued on an upward trend, rising 13 per cent over the previous period; this was however insufficient to overcome the decreasing revenues from voice services (fixed and mobile) which fell by 19 per cent. Mobile revenue, which experienced a second year of decline still accounted for the largest share of telecommunications revenue, 48 per cent, down from 58 per cent previously. Internet service share of revenue increased two percentage points to 11 per cent.

The ECCB estimated that real GDP for St Vincent and Grenadines contracted 0.6 per cent following 8 per cent growth in 2007. The decline was due in large part to the negative impact of the global crisis on the agricultural, manufacturing and tourism sectors. The global crisis did not appear to have affected the ICT sector in like manner, as value-added for the communications sector accounted for 11.5 per cent of real GDP, and was estimated to have increased by 5 per cent. However, for the second year running, investment in the sector declined; total operator reported capital investment was estimated at \$24 million (2 per cent of GDP), 8 per cent lower than in the previous period.

The number of persons employed in the sector fell an estimated 13 per cent to just fewer than 190.

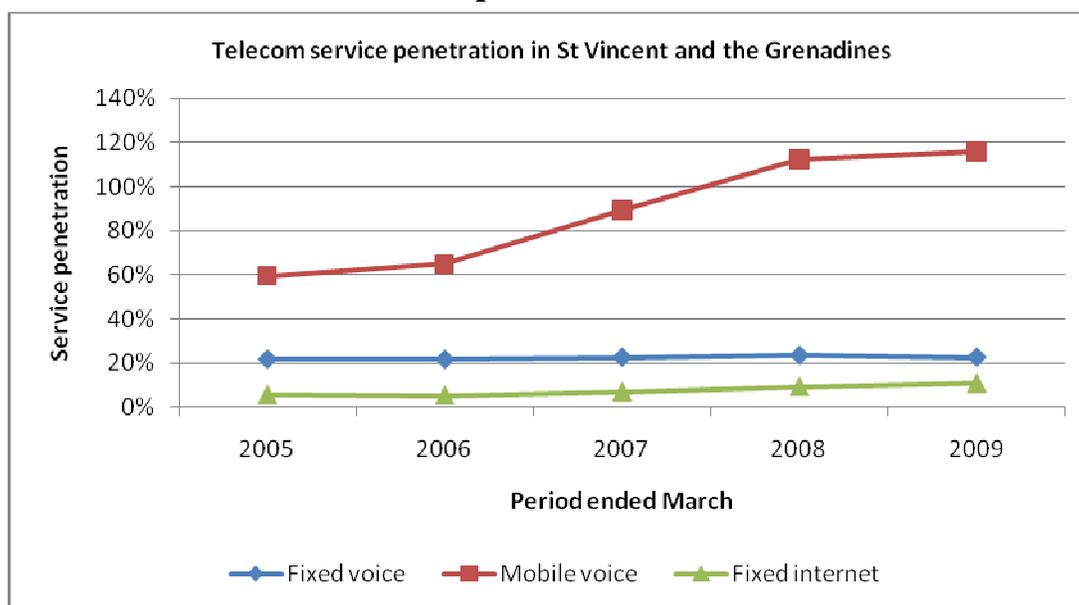
Figure 6.1: Telecommunications Revenues and Investment in St. Vincent and the Grenadines



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

For the second year running, the market for Internet access proved the most active. The total number of subscribers increased 20 per cent, down from the impressive 30 per cent expansion in 2008. Internet penetration edged up 1.5 percentage points to 10.8 per cent. The mobile market, which is the largest market, grew a modest 6 per cent with penetration recorded at 116 per cent, while the market for fixed voice remained relatively flat with a 23 per cent penetration rate

Figure 6.2: Telecommunication service penetration in St. Vincent and the Grenadines

Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

6.2 MARKET PLAYERS

No new individual licences were issued in St. Vincent and the Grenadines for the period ended March 2009. However, the cable operator Karib Cable launched its fixed line service, being previously awarded a licence for Fixed Public Telecommunications. With the addition of fixed line service, Karib Cable also offered a triple play of fixed, internet and cable TV service to its customers. Therefore at March 2009, there were at least two active operators in all the major telecommunications markets in St Vincent and the Grenadines.

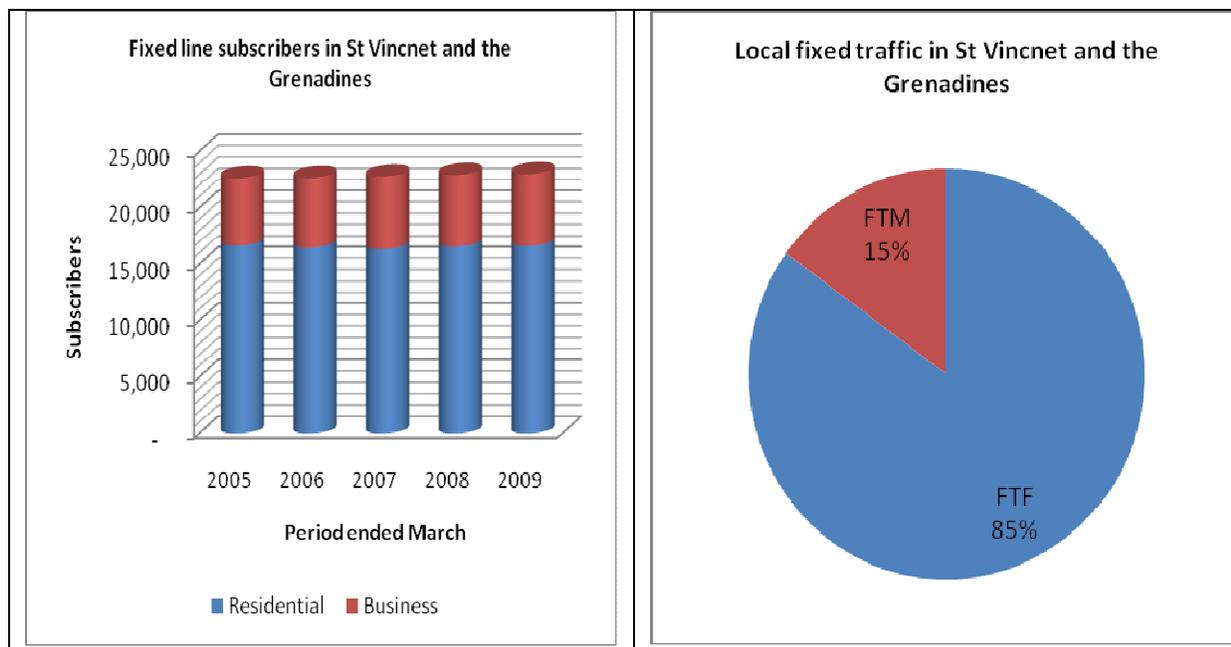
6.3 MARKET TRENDS

6.3.1 Domestic Fixed Voice Service

During the review period, Karib Cable, which previously offered internet and Cable TV services, launched its fixed voice service in St Vincent and the Grenadines. This new fixed service was launched in early 2009 toward the end of the review period. With this late launch of service the total number of fixed line subscribers in St Vincent and the Grenadines increased marginally (0.36 per cent) to 23,040. Fixed line subscription has been on the increase, albeit by less than 1 per cent per year, since 2006. This increase in subscribers was as a result of growth in both the residential and business markets. In spite of the growth in alternative forms of communications, including mobile and VoIP, the basic fixed line market

appeared to be holding firm. At March 2009, fixed line penetration was 22.6 per cent, with residential lines accounting for more than 70 per cent of the lines in service.

Figure 6.3: Fixed Line Subscribers and Traffic in St. Vincent and the Grenadines



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

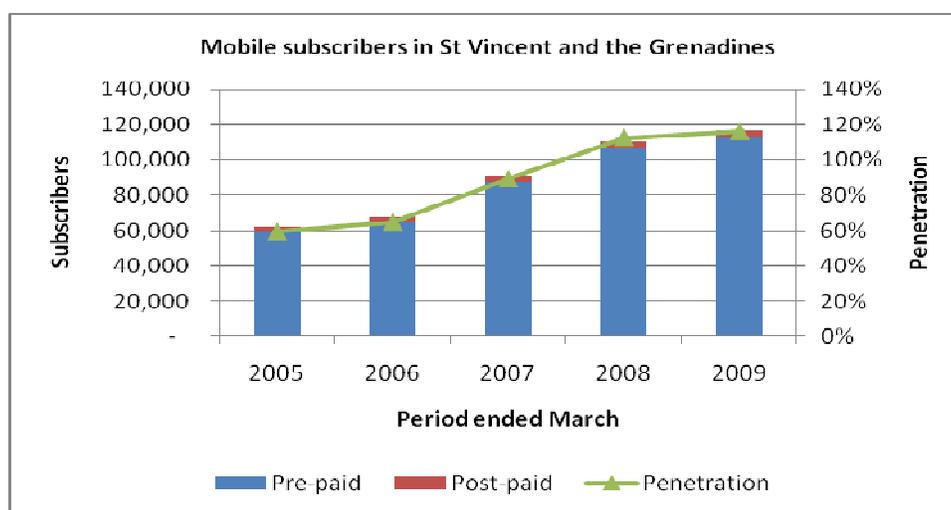
Total local fixed call volumes declined 5 per cent to 84 million minutes at March 2009 as mobile calling continued to dominate and accounted for 62 per cent of all local calls. The decline in fixed call volumes was impacted by decreases in all categories of fixed calls. Fixed to mobile call volumes experienced the greatest decline at 9 per cent, while fixed to fixed calling which accounted for 85 per cent of local fixed calls, fell approximately 4 per cent. Notwithstanding the very modest growth in subscription, revenues from fixed voice services continued to fall. For the review period, fixed line services generated just over \$47 million and accounted for 39 per cent of sector revenue.

The rate for fixed line access and calls offered by the incumbent are regulated under a Price Cap Plan, and remained unchanged from the previous period. The peak rate for local fixed to fixed calling was \$0.07 and the off-peak rate was \$0.04. Peak rate for fixed to mobile calling was \$0.71 and off-peak rate was \$0.69. Flat rate calling packages were also offered by LIME and the new entrant Karib Cable.

6.3.2 Domestic Mobile Service

The number of mobile subscribers grew nearly 6 per cent for the review period compared to a 22 per cent growth recorded at March 2008. Total number of mobile subscribers in St Vincent was recorded at 116,500 resulting in a penetration rate of 116 per cent. With the penetration rate in excess of 100 per cent, it is not surprising the mobile market is expanding at a slower rate than in previous years. Pre-paid subscribers accounted for 97 per cent of all subscribers as there was a slight decrease in the number of post-paid subscribers. Perhaps in an attempt to reverse this trend, providers are now introducing flat rate post-paid calling packages to entice pre-paid customers to switch to post paid accounts.

Figure 6.4: Mobile Subscribers in St Vincent and the Grenadines

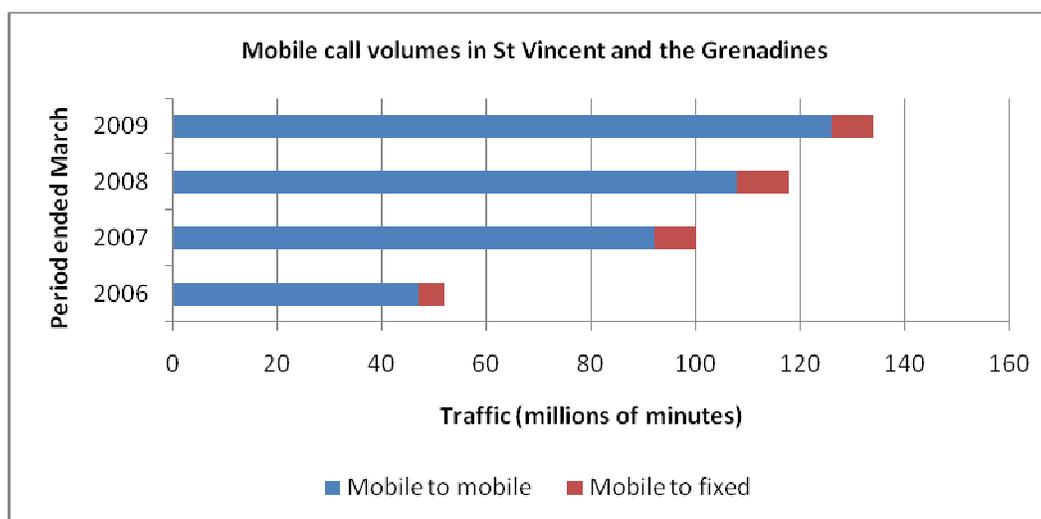


Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

Mobile traffic continues to dominate local traffic. Traffic originating on mobile phones grew 13 per cent to in excess of 133 million minutes. This increase in traffic was due to a 20 per cent increase in on-net traffic as there was reduced off-net activity for both mobile to mobile and mobile to fixed calling. With fixed call volumes falling, and increased on-net mobile activity, local traffic originating from mobile networks outpaced fixed traffic and accounted for 62 per cent of all local traffic, up from 57 per cent in the previous period. Ninety-four per cent of local mobile traffic was mobile to mobile calls. Just over 14 million SMS messages were sent during the review period. This number remained flat compared to the previous period. Less precise data is available for MMS messages, which is estimated at 18,000 for the period.

6.5: Mobile Subscribers and Traffic in St. Vincent and the Grenadines



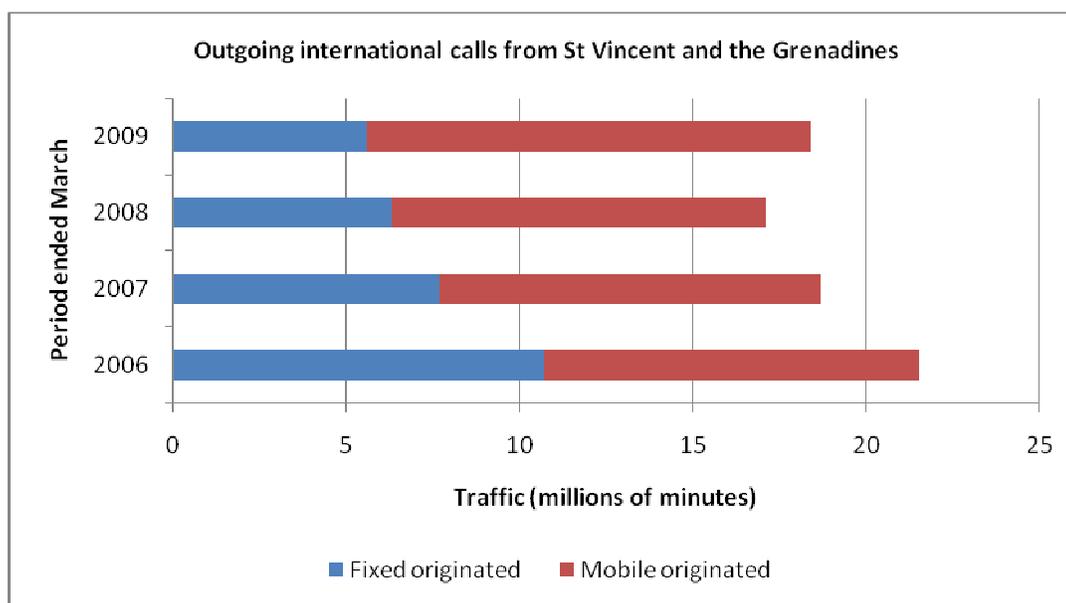
Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

For the second consecutive year, revenue generated by mobile services fell in St Vincent and the Grenadines, but remained the main source of sector revenue accounting for 49 per cent of total revenue, down from 55 per cent in the previous period. For the period under review, the mobile market generated an estimated \$60 million as compared to \$80 million in the previous period. This fall in revenue may be a direct result of the slowdown in economic activity felt in St Vincent and the Grenadines as a result of the global economic downturn which started in 2008. This slowdown in revenue is in contrast to the modest increases in both subscribers and traffic originating from mobile networks. The rates for mobile services remained largely unchanged, though mobile operators have included flat rate, high volume calling packages to their suite of services.

6.3.3 International Voice Service

For the review period, total outgoing international call volumes grew 7 per cent following three years of decline. Outgoing international call volumes was recorded at 18.4 million minutes up from 17.2 million minutes in the previous period. The growth was attributable to a 19 per cent increase in outgoing international calls from mobile phones even as outgoing calls originating from the fixed network fell 12 per cent. As with local calling, outgoing international calling was dominated by mobile calls, which accounted for 70 per cent of outgoing international call volumes.

Figure 6.6: International traffic from St. Vincent and the Grenadines

Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

For the review period incoming international traffic shifted to the mobile networks as the mobile phone is now the main tool for communications in St Vincent and the Grenadines. Total incoming international call volumes declined 16 per cent to just under 52 million minutes. This decline was led by a 50 per cent reduction in calls terminating on the fixed network, and offset by a 19 per cent increase in calls terminating on a mobile phone. At March 2009, the majority (67 per cent) of incoming international calls into St Vincent and the Grenadines terminated on a mobile phone.

For the review period, the rates for calls to the Caribbean were unchanged from the previous period and ranged from 50 to 85 cents. The rates offered by LIME for calls to the United States and the United Kingdom were also unchanged at \$0.90; however the new entrant into the fixed market, Karib Cable, offered a rate of \$0.79 for calls to the United States.

6.3.4 Internet and Broadband Services

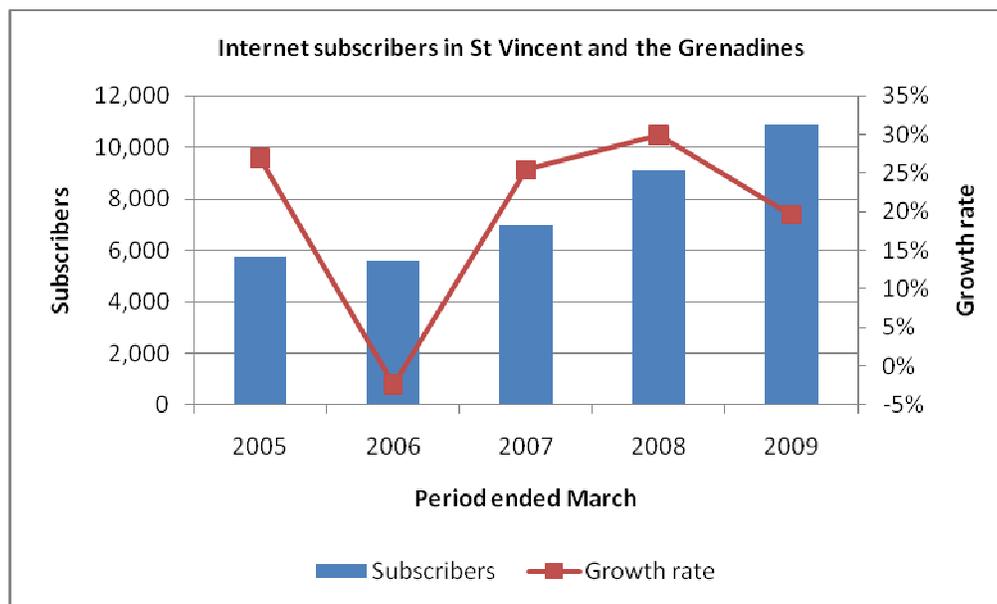
There was a slowdown in growth of internet subscribers for the review period as compared to the previous period. At March 2009, the total number of internet subscribers stood at just over 10,800 representing a 20 per cent growth as compared to a 30 per cent growth reported for 2008. Expansion in the internet market was again fueled by an uptake of fixed broadband service; the number of fixed broadband subscribers increased some 22 per cent but was offset by a 24 per cent reduction in dial-up subscribers. At the end of the review period

fixed broadband subscribers accounted for 97 per cent of all fixed internet subscribers, up from 92 per cent previously. Fixed internet penetration inched up two percentage points to 11 per cent.

In St Vincent and the Grenadines fixed internet service is offered by LIME, which offers ADSL broadband and dial-up access, and Karib Cable which offers high speed Internet access via cable modem. The minimum speed offered to residential customers is 1 mbps at a rate of \$79 per month.

Mobile internet access is via ordinary mobile subscription using GPRS and EDGE rather than through a separate subscription for mobile broadband as true mobile broadband through 3G networks is not yet available to users. This made it very difficult to determine the true number of mobile internet users in St Vincent and the Grenadines as any subscriber with a GPRS or EDGE ready mobile phone can browse the internet. Users with a pre-paid mobile subscription can access internet service for \$0.01 per kbps while post-paid users have access for \$40 per month.

Figure 6.7: Internet Subscribers in St. Vincent and the Grenadines



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

7.0 REGIONAL TRENDS IN TELECOMMUNICATIONS

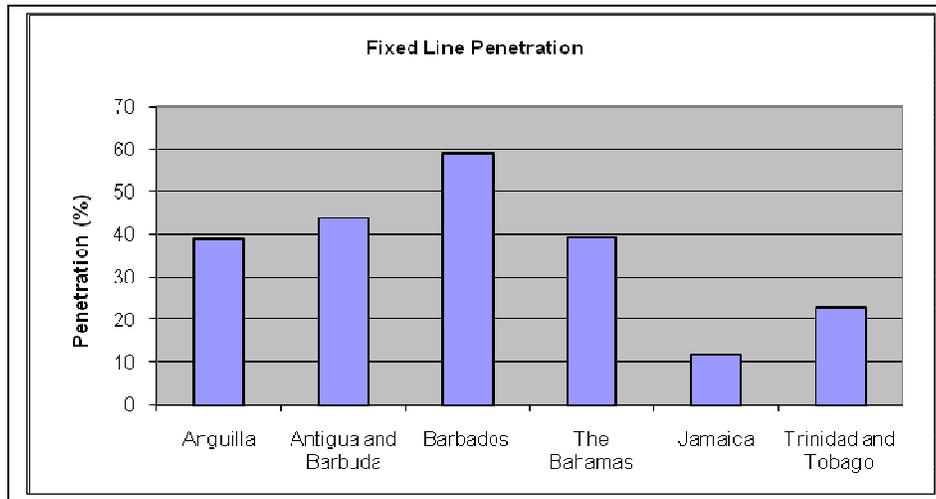
7.1 OVERVIEW

The telecommunications sector in the region continued to be a major growth industry. For the period under review, the sector did not yet appear to have been significantly affected by the initial shock waves of the global economic crisis. The sector's performance was still lead by growth in the mobile market while performance in the fixed market remains relatively flat with modest growth in the internet market.

7.2 FIXED VOICE SERVICE

The limited activity in the fixed market continued into 2008, even as the cable operator Columbus Communications Trinidad Ltd trading as Flow, launched its voice and internet services in Trinidad and Tobago. Cable & Wireless, which rebranded its operations in the Caribbean as LIME (Landline, Internet, Mobile and Entertainment) in 2008 remained the only provider of domestic fixed line service in Barbados, while in Jamaica, Trinidad and Tobago and The Bahamas other operators were offering fixed voice service either as part of a triple play or stand alone service. Columbus Communications is now a regional provider offering voice, internet and cable TV service in Jamaica, Trinidad and Tobago and the Bahamas (no voice service) as well as in Grenada.

As has been the case for the past two to three years, fixed line penetration remained relatively flat in The Bahamas (40%), Jamaica (12%) and Trinidad and Tobago (23%). Barbados again bucked this trend recording a seven percentage point increase in fixed line penetration to 58.85, the highest in the CARICOM region.

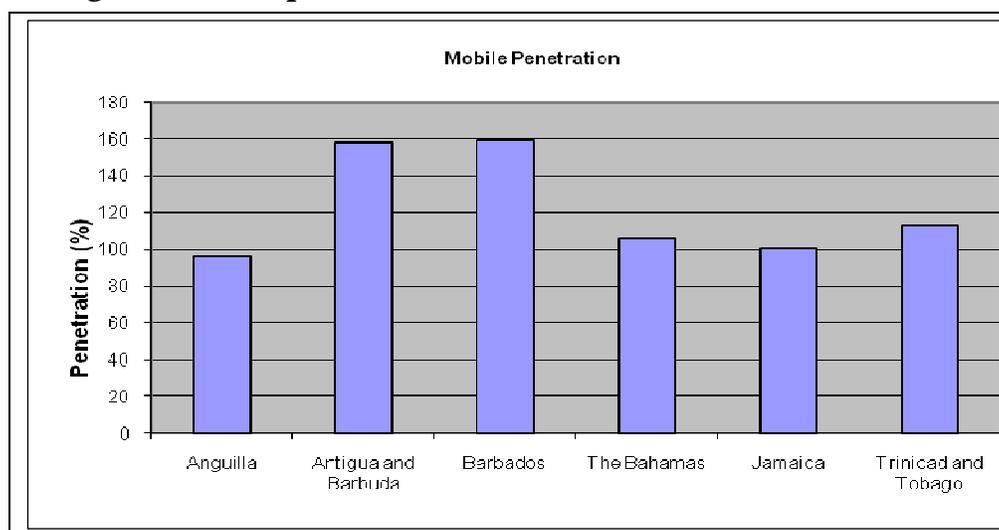
Figure 7.1: Regional fixed line penetration in some Caribbean States

Source: ITU

7.3 MOBILE VOICE SERVICE

The mobile market is still experiencing growth and is the most competitive in the Caribbean. The ITU notes that practically all the Anglophone Caribbean States recorded mobile penetration in excess of 100 per cent by the end of 2008. Mobile penetration numbers may include some degree of double counting, as prepaid subscribers often have multiple subscriptions and some inactive accounts may also be inadvertently counted. The mobile market in the Caribbean remains dominated by two strong multinational mobile companies, LIME and Digicel, though at the end of 2008 none of them operated in The Bahamas.

The Jamaican mobile market continues to lead the region in terms of innovation with two of the three mobile operators in Jamaica now offering 3G internet connections and one operator announcing plans to launch a 4G network in 2010. Despite being the leader in terms of innovation, Jamaica lags a number of Caribbean States in mobile penetration. At the end of 2008, mobile penetration in Jamaica was recorded at 100.6 per cent registering a less than 1 percentage point increase over the previous period. In contrast, mobile penetration in Barbados was recorded at 159 per cent and 112 per cent in Trinidad and Tobago. The Bahamas, one of the only Caribbean states where the mobile market was not liberalized by the end of 2008, recorded mobile penetration of 106 per cent.

Figure 7.2: Regional mobile penetration for some Caribbean States

Source: ITU

7.4 INTERNET AND BROADBAND SERVICES

The internet market has the largest potential for growth in the Caribbean owing to the current relatively low penetration across Caribbean States. The advent of cable operators like Columbus Communications, a multinational provider of cable TV, Internet and fixed voice service, has resulted in increased growth in this segment of the market, but this growth is still small compared to growth in the mobile market. Unlike the mobile market where most Caribbean States have closed the digital divide with the developed countries in North America, in terms of internet access there still exists a very significant divide between North America and the Caribbean. The ITU reports that internet penetration in North America is six times that of Latin America and the Caribbean.

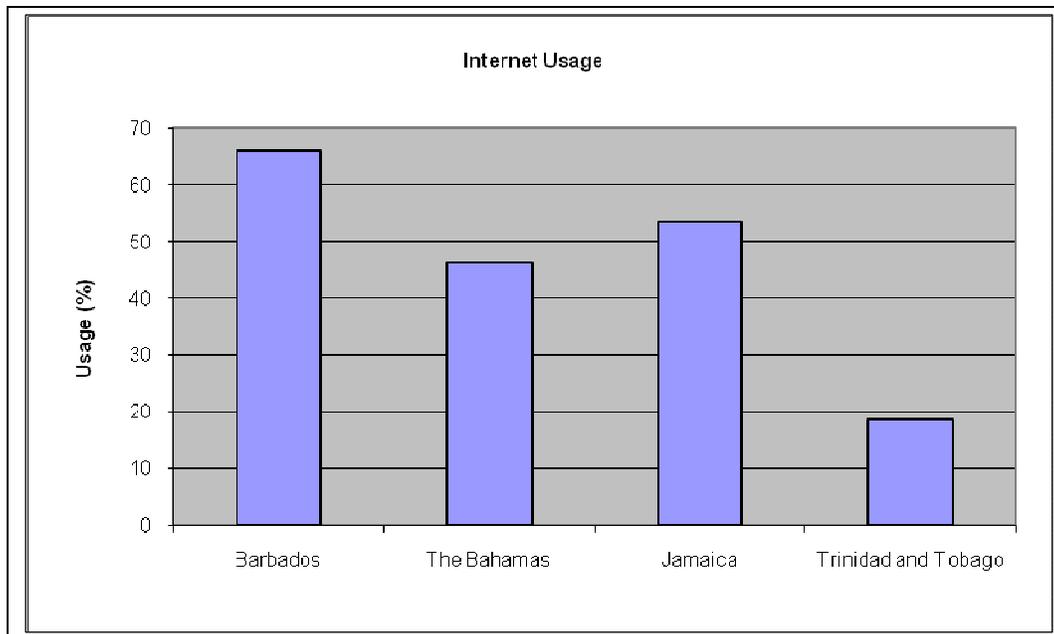
Fixed broadband provided by the incumbent fixed line providers and new entrant cable companies still dominated in the Caribbean. LIME is the main fixed line internet service provider in Jamaica and Barbados; however, Columbus Communications, the main provider in The Bahamas also launched operations in Jamaica and Trinidad and Tobago. The region also continues to see a movement away from dial-up to broadband internet access; the ITU reported that over 90 per cent of internet subscribers had broadband access. The promise of fixed wireless internet access via Wi-MAX has been slow in coming, though some providers have announced plans for the near future.

The Caribbean region has also lagged behind in terms of the deployment of 3G networks and offering of true mobile broadband service. Within CARICOM states, only operators in Jamaica (LIME and new entrant Claro) have so far launched 3G networks, though Digicel offers EDGE in most of the jurisdictions in which it operates.

Overall internet penetration still remains relatively low in the region. The ITU reports penetration ranging from 4 per cent in Jamaica to 11 per cent in the Bahamas. However, given that a number of persons also access the internet in public locations such as Internet cafes and community telecentres, internet use is much higher than the rate of subscription. Data from Internet World Stats for September 2009 puts internet usage at 46 per cent in The Bahamas, 66 per cent in Barbados, and 55 per cent in Jamaica.

Tracing mobile internet use is more challenging. Any subscriber to a mobile phone service with a GPRS enabled handset can access the internet, therefore all subscribers are viewed as potential mobile internet users, whether they access the internet via mobile phone or not. Mobile broadband is not yet readily available and so the number of subscribers at this point is negligible.

Figure 7.3: Regional Internet users in some Caribbean States



Source: www.internetworldstats.com December 2, 2009

7.5 TRENDS IN PRICING

Even with the entry of cable operators in the fixed market, the rates for fixed voice services offered by the incumbent have remained largely unchanged for the review period, though the new entrants generally offer lower access rates and free on-net calls. The rate for monthly access charges for incumbents ranged from \$13 in Trinidad and Tobago, \$24 in Jamaica and a high of \$50 in Barbados. In some states the rates for international calls to the United States fell by up to 30 per cent as the market became more competitive and the commissioning of a new submarine cable resulted in a significant increase in international capacity. For the review period calls to the United States ranged from \$0.30 in Jamaica to \$1.12 in Barbados.

There was also very little movement in the rates quoted by mobile operators for calling. However, mobile operator now offer high volume calling packages to consumers resulting in significant savings over the per minute rates. These packages offer consumers bundles of local and international minutes for calling and texting and in some cases the packages includes the capacity to surf the web. For consumers that are not attracted to the high volume packages, operators offer highly discounted on-net rates to encourage customers to remain on-net.

A 2009 World Bank report states that affordable access to high speed internet access is a key to economic development. In the region, with the entrance of cable operators into the internet market, fixed internet access is becoming more affordable and customers are being offered greater download speeds. In Barbados, LIME offers speeds of up to 2Mbps at a monthly rate of \$80 for 1Mbps. However in Trinidad and Jamaica, where Flow has launched operations, customers can access download speeds of up to 15Mbps from the new entrant. In these two states the incumbent reduced the monthly rates for its 1 Mbps offering by up to 25 per cent to \$59 in Jamaica and \$64 in Trinidad and Tobago. The new entrant however offers internet access at up to a 25 per cent discount to the incumbent.

Table 7.1: Regional rates for telecommunications services

Country	Rates to US from a fixed line (EC\$)	Rate for calls to US from Landline (EC\$)	Rates for 1Mbps Broadband Access (EC\$)
<i>BARBADOS</i>	50	1.16	81
<i>BAHAMAS</i>	40	n.a	102 (for 3Mbps)
<i>JAMAICA</i>	24	0.45	59
<i>TRINIDAD AND TOBAGO</i>	13	0.54	64

Source: Company Websites

8.0 INTERNATIONAL DEVELOPMENTS IN TELECOMMUNICATIONS

8.1 OVERVIEW

The ITU noted that the ICT sector is now significant in most countries, contributing up to 7.5 per cent to GDP worldwide. As a result the sector was not spared the impact of the global financial crisis including layoffs and restructuring. The sector has also been viewed by some as having contributed to the crisis. In his address to the St Petersburg International Economic Forum in June 2009, the President of the Russian Federation stated that modern communications and financial technologies enabled the rapid spread of the financial crisis around the world. The global economy now appears to be on the rebound, but the recovery is expected to be weak, slow and uneven. The telecommunications sector which is now seen as vital by both consumers and businesses may also be instrumental in the economic recovery.

The telecommunications sector appeared to have been more resilient than many other sectors. However the financial crisis did not have the same impact on all segments of the industry. Pyramid Research projected that the sector expanded and generated revenues of US\$1.4 trillion in 2009, the market for voice services was estimated to have contracted 3 per cent, while the data market was projected to have grown some 12 per cent, recording revenues of US\$411 billion.

The ITU also notes that telecommunications providers have responded to the economic crisis by controlling costs. In particular, mobile operators will continue to invest in upgrading 3G networks as the incremental

Telecommunications Performance during the Crisis and its Role in the Economic Recovery

In a 2009 article on ICT and economic recovery, the ITU noted that the ICT sector experienced reduced demand, operational cutbacks and lowering of investment, but appeared to be stronger than other economic sectors. Investment in next generation networks, which can deliver multiple services to mobile and fixed devices, was curtailed due to the economic crisis and uncertainty over potential revenue from NGNs have increased. At the consumer end, there has also been a rise in the number of people using VoIP to make phone calls and customers switched away from the traditional voice services to bundled services that include VoIP, to remain within their tight budgets.

The ICT sector is viewed as pivotal to the economic recovery. More than fifty countries launched economic stimulus packages that included new finance for the expansion of broadband deployment. China for example, announced in November 2008, a stimulus package of US \$585 billion, or 19 per cent of GDP, which included projects aimed at promoting technological innovation. Due to the strategic importance of ICTs to other industries, the stimulus plans which were designed to promote roll-out of NGN and advanced infrastructure were expected to benefit consumers, businesses and governments.

costs is comparably low, and they will attempt to share networks as much as possible. Fixed line operators may need to postpone some projects to upgrade networks to optical fiber and instead may engage in increased network sharing. In the case of broadband, investment is essential to meet the growing demand and it is projected that it will take USD\$137 billion to upgrade the internet to satisfy demand in the next five years. This growth in internet demand may come at the expense of a decline in other telecommunications services. Already the volume of data traffic in high-speed mobile networks is three or four times greater than that of voice traffic.

8.2 VOICE COMMUNICATIONS

The voice communications market is continuing its transformation with the fixed line service on a declining path, mobile services in the maturing stage and the coming of age of VoIP. In its Information Society Statistical Profile of the Americas (2009), the ITU notes that at the end of 2008, there were 280 million fixed lines in the Americas compared with 294 million in 2003. This decline was due to a 13 per cent reduction in lines in the United States and Canada, while subscription in Latin America and the Caribbean increased.

Industry revenue revealed a continuing decrease in the value and proportion of revenue from fixed voice communications. The OECD Communications Outlook (2009) indicates that revenue from access lines have been falling since 2008 and is being replaced by mobile voice revenues, which grew 10 per cent each year since 2005. In 2009, ten OECD countries reported mobile sectors that were larger than fixed sectors including Japan where mobile revenue accounted for 71 per cent of voice revenues. However, more recently, mobile operators have been challenged with declining mobile voice revenues and are quickly embracing the opportunities for revenue growth in mobile data services.

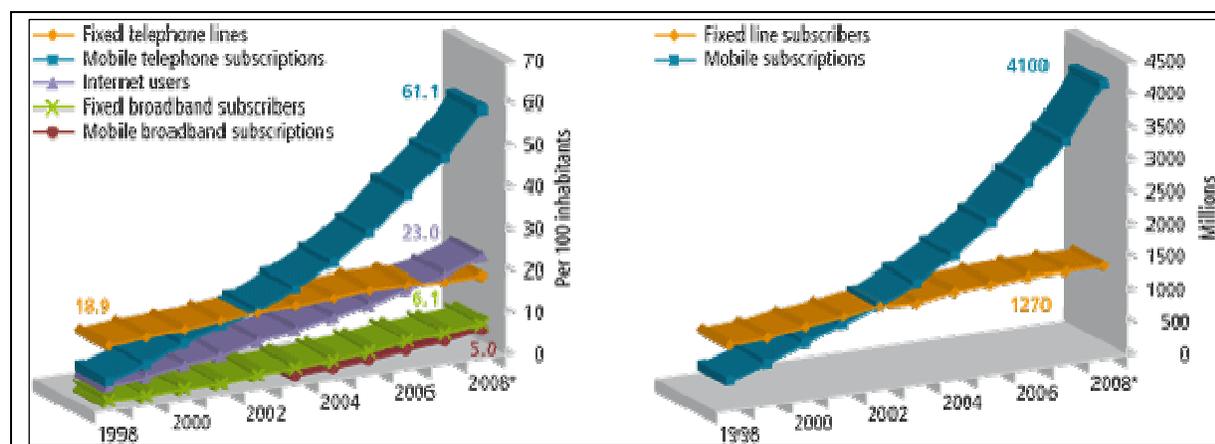
The highly competitive market for mobile services has resulted in lower average revenue per user (ARPU). Mergers and acquisitions have become very common; for example, the proposed merger between South Africa's MTN and India's Bharti Limited will result in a firm with 200 million customers.⁵ Etsalit of the United Arab Emirates purchased a major stake in Swan Telecom and Batelco of Bahrain purchased a stake with S-Tel in January 2009. Deutsche Telekom's T-mobile and France Telecom's Orange are planning to merge businesses in the United Kingdom.

⁵ ITU News October 2009

Mobile operators have shifted their marketing focus to increasing their market shares by encouraging traffic to remain within their networks. Increasingly, providers offer unlimited calling to certain numbers within networks through “friends and family” plans or sometimes to all numbers within a network. Other attempts include the carryover of unused minutes and messages.

In December 2008, demand for mobile services surpassed the global milestone of 4 billion connections, which is equivalent to more than 60 per cent of the world’s population. India and China are leading the growth in mobile demand. Fixed to mobile substitution is rising due to the fact that fixed line operators reflect their investment in the copper loop with high monthly access rates, while mobile phones are more competitive given that prepaid service and low-cost mobile contracts are more affordable. In most regions around the world there are notable increases in mobile demand, however, in Europe there are signs of slower subscription growth but traffic continues to grow there and in all other regions including North America and Latin America. In October 2008, Brazil added four million mobile subscribers, which is a doubling of the number acquired in October 2007, while in India, 10.4 million subscribers were added in the same period⁶.

Figure 8.1: Global ICT Service Penetration and Fixed Line and Mobile Subscribers



Source ITU

The mobile phone is the most adopted and widely available information and communications technology, and in developing countries, it is becoming increasingly important for services other than voice. A survey of 3,400 mobile customers in 14 countries across Africa, Asia, Eastern Europe and the United States, conducted by BuzzCity in 2008, revealed that of respondents who used their mobile phone for internet access 60 per cent used

⁶ See ITU News January/February 2009

it to communicate with friends on tools such as chat rooms and blogs, while 16 per cent sought entertainment such as music, video and game downloads.

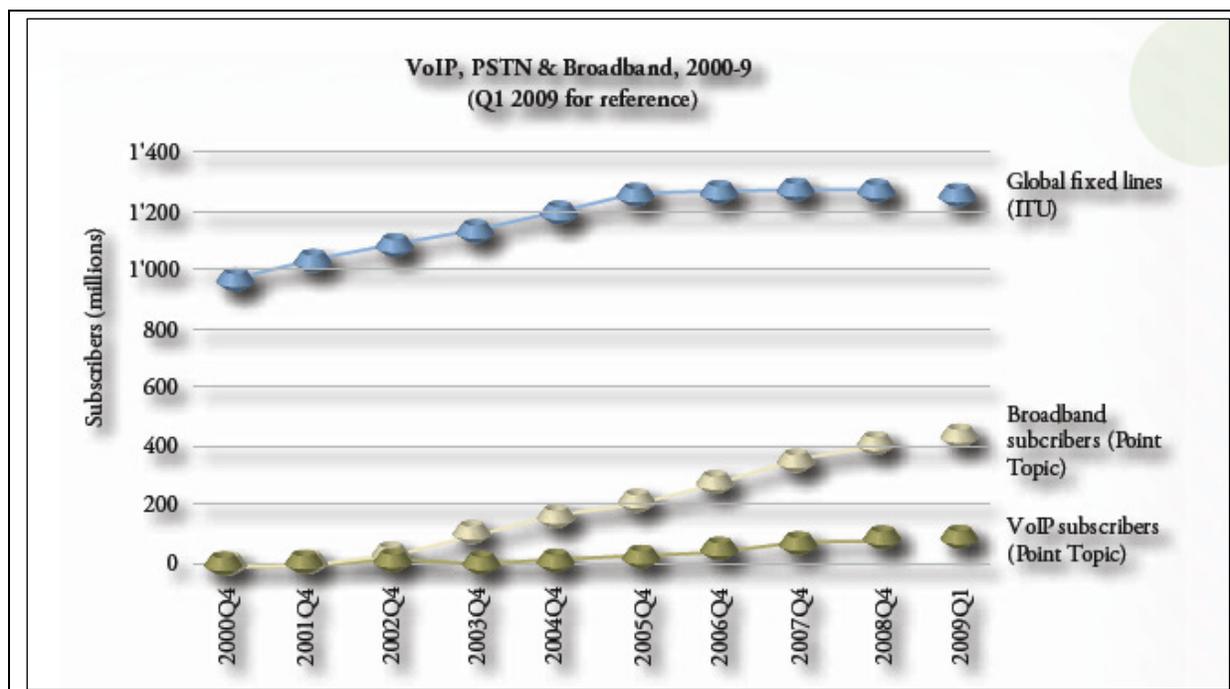
Mobile phones are also important in providing access to services in other economic sectors. In some developing countries, where traditional banking facilities are limited, mobile banking could have a significant impact. Already in a number of African countries including Kenya and Tanzania, a service called M-PESA allows mobile phone customers to deposit funds to their accounts by depositing cash with a mobile operator's agent. Cash can also be withdrawn from accounts⁷. Mobile phones can also be used to support the provision of health services by accelerating the compilation of patient data from rural areas into the city; reminding patients to take medications; the training of rural professionals; and personalizing the way patients receive medical treatment.

VoIP has been accepted by service providers, consumers and businesses as a cheaper alternative to traditional voice communications. The emergence of VoIP, which can be operated without a network, has resulted in a reduction of barriers to entry and allowing for the direct competition of facilities-based and service-based providers.

VoIP is becoming an important part of the business strategy of service providers in all countries and can contribute to the reduction in the costs of carrying telecommunications traffic. The cost of transmitting calls over IP could be as low as one quarter of sending calls through the PSTN and maintenance expenses might be reduced by 50 to 60 per cent. On the other hand, VoIP could lead to the reduction in revenues for international calls, depending on the structure of the operator's traffic.

The number of VoIP users is increasing with the growth in broadband access. The global financial crisis may also have helped to fuel this growth as customers look for cheaper alternatives to the traditional forms of communications. However, it is not very easy to estimate the size of the VoIP market due to the variety of definitions used for VoIP, difficulty in estimating the number of computer to computer users especially those who use Skype or who use VoIP embedded in online games. There are a number of estimates of the size of the VoIP market. Infonetics Research of the United States estimated that there were 80 million users worldwide by the end of 2008, Point Topic of the United Kingdom estimated global users at 92.2 million in March 2009, while IDATE of France projected 175 million users by the end of 2009; this would be equivalent to 10 per cent of global fixed line users.

⁷ See ITU News March 2009

Figure 8.2: Global Fixed, Broadband and VoIP Subscribers

Source: Point Topic

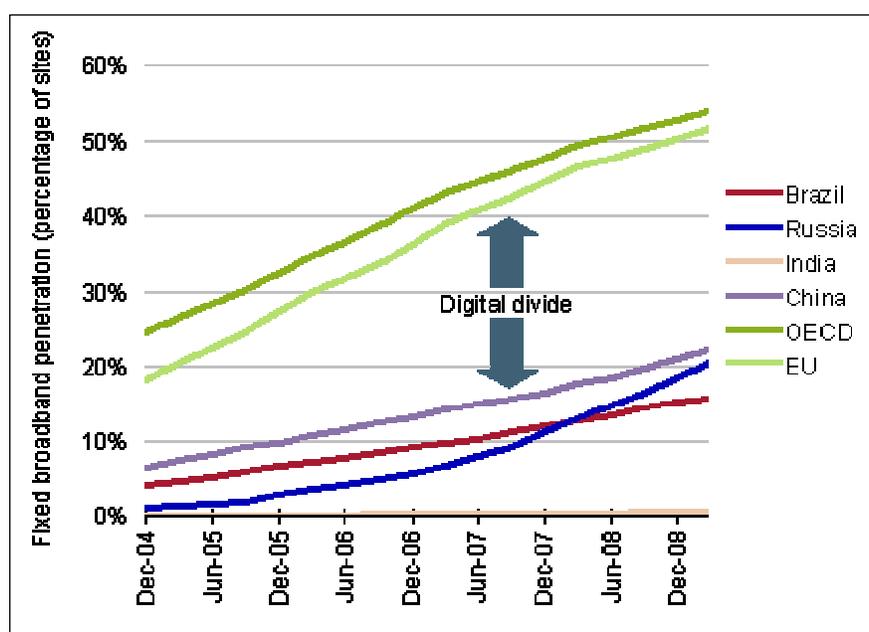
8.3 INTERNET AND BROADBAND SERVICES

Globally there has been a shift from dial-up to broadband internet access. The ITU's Information Society Statistical Profile of the Americas (2009) revealed that in that region, up to 90 per cent of internet subscribers have broadband access. According to the OECD Communications Outlook (2009), the number of broadband subscribers is growing and has surpassed the number of fixed lines in at least two OECD countries. DSL is still the main broadband technology and accounts for more than 60 per cent of internet subscribers in number of OECD countries. However DSL is losing market share where other higher speed technologies like fibre which now accounts for 9 per cent of subscriptions. Japan and Korea are the first two countries with more fibre based subscriptions than DSL or cable.

Despite the global economic slowdown, there was continued growth in two major telecommunications markets - mobile services and broadband. The ITU estimated that global fixed broadband subscribers grew 16 per cent to 405.9 million at the end of 2008. The total number of subscribers in the Americas was estimated at 115 million with 80 per cent in the

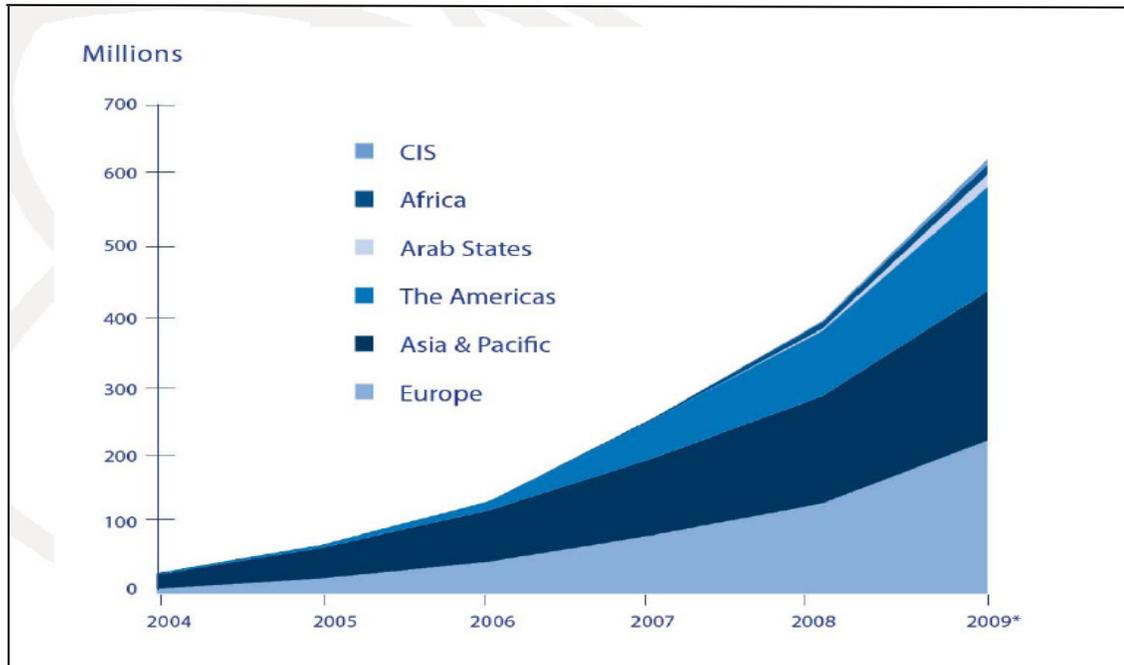
United States and Canada. However there is a significant digital divide between fixed broadband penetration in developed countries estimated at 23.2 per cent, and penetration in developing countries estimated at just 3.5 per cent with subscribers in China representing half of the subscribers in the developing world. However the total number of internet users far outweigh subscribers as subscription does not include access to the Internet in public locations such as Internet cafes, government sponsored community centres and educational establishments. Internet users were estimated at 1.7 billion or 26 per cent of the world population of which 17.5 per cent were in developing countries.

Figure 8.3: Global Fixed Broadband Penetration



Source: Analysis Mason

Fixed wired broadband is no longer the whole story as wireless options and in particular mobile broadband are proving to be viable alternatives to wireline broadband access. Mobile devices have a much higher penetration than PCs in developed and developing countries, and with the launch of 3G networks users can experience true broadband access via mobile devices. The ITU estimated that there were more mobile broadband subscribers (600 million), than fixed broadband subscribers (400 million), globally in 2008. However since many developing countries have not yet launched 3G networks, mobile broadband penetration was just 3 per cent compared to 38.7 per cent for developed countries.

Figure 8.4: Mobile Broadband Subscribers Worldwide

Source: ITU

Fixed wireless broadband access through WiMAX is also available, however, the capital requirements, interoperability issues between various network components, limited user devices, and lack of spectrum have hindered its deployment. Statistics from Maravedis, an industry research outfit, suggests that there were only 2.7 million WiMAX subscribers worldwide at the end of the third quarter of 2008, with the Americas region accounting for 47 per cent of the worldwide total.

In the OECD countries, as in a number of other countries, broadband prices have declined over the past few years even as speeds offered have increased. The OECD Communications Outlook (2009) identified a number of pricing trends for fixed broadband service. One important trend is bundling where broadband access is offered as part of a suite of services instead of on a stand alone basis⁸. Customers receive significant discounts if they acquire the bundle of services. In some cases the service can only be obtained as part of a bundle. The second trend is that of the one-offer pricing structure where customers pay the same price regardless of the broadband technology used - DLS, VDSL or fibre. This pricing structure was offered in Korea, the leading broadband market, and France. A third trend is that of

⁸ The broadband pricing trends is taken from the OECD Communications Outlook, 2009.

charging customers an additional fee for higher upload speeds which are essential for uploading pictures and videos to social networking sites. Across the OECD the average advertised upload speed is 5Mbps. Operators also continued offering lower prices for longer term contracts, with the longest contract of four years offered by Korean operators.

In the three-year period ended September 2008, the price of DSL connection fell on average by 14 per-cent each year, while advertised speeds increased by an average of 22 per cent per year; cable operators were even more aggressive as the average price for monthly access fell 15 per cent while speed increased 30 per cent.

Broadband providers segment the market with the different speed offers as shown below.

Table 8.1: Average broadband speed offerings in the OECD

Speed Category	Uses	Price at September 2008
Low Speed (up to 2Mbps)	Web surfing and Email	US\$32 PPP per month
Medium Speed (2.5 to 10 Mbps)	Standard definition IPTV	US\$43 PPP per month
High Speed (12-32 Mbps)	One high definition video channel	US\$53 PPP per month
Very high speed (<35 Mbps)	Multiple HDTV connections and high bandwidth applications	US\$45PPP

Source OECD Communications Outlook 2009

Mobile broadband prices have also been reduced to encourage usage on 3G networks and as an incentive for customers to migrate from 2G networks. However the prices of mobile broadband access remain relatively more expensive than fixed line broadband. Mobile broadband access is usually sold by data allowance or megabytes rather than speed. Most plans include a limited amount of traffic per month with the subscription, and customers are charged for additional traffic transmitted. As at September 2008, the monthly data cap in the OECD was 4.5 gigabytes per month compared to 27 gigabytes for fixed broadband service. For low use subscribers (2 to 1,000 megabytes per month) the price was US\$25 PPP, for

medium use subscribers (2,000 to 6,000 megabytes per month) the price was US\$33 PPP and for high use subscribers (8 to 20 gigabytes per month) the rate was US\$44 PPP.

The OECD Communications Outlook reports that sometimes the actual speeds received are lower than the advertised speeds. This problem is being addressed in some countries, for instance, in the UK, there is a Code of Practice on Broadband speeds, which came into effect in December 2008. In other countries operators address this problem by having a range of possible speeds.

8.4 OUTLOOK

8.4.1 Mobile Service

Against the backdrop of a decline in the global mobile phone market the mobile market fared better than other markets, in particular the market for smart phones remained buoyant and was projected to increase 23 per cent in 2009. The smart phones segment is expected to be a new source of revenue for the mobile market. The popularity of smart phones encouraged the growth in mobile applications (apps), and in a study by the consulting firm Gravitytank 69 per cent of the smart phone owners surveyed had installed an application in the preceding month and users had an average of 21 installed applications. It therefore appears that the future for mobile depends to some extent on the growth in the demand in the market for add-on software or apps. Apps are useful applications such as programmes for tracking expenses, foreign language phrase books, currency converters and audio walking tours of tourist sites. Apps use communication interfaces such as Wi-Fi, WiBro/mobile WiMAX, GSM/EDGE, W-CDMA/UMTS/HSPA or Bluetooth. It is to be noted that the growth in supply of varieties of add-on software and mobile applications is constrained by the differentiation between platforms available in the market.

While a number of these applications are free some attract a fee. Therefore mobile applications provide revenue generating opportunities for developers, store owners and hardware manufacturers, and also provide opportunities for revenue generation through mobile marketing. However, according to the ITU's TechWatch Alert on Mobile applications, the growth in the demand for a variety of apps may pose a threat to mobile network operators who fear substitution away from traditional revenue generating services. The threats are the replacement by perfect substitutes such as apps that provide VoIP as against the traditional mobile phone calls, instant messaging apps may stall the growth in the demand for SMS, and apps that speed up surfing so that on line traffic may diminish.

8.4.2 Internet and Broadband access

The available data point to huge scope for expansion of both wireless and wire line broadband services as the new trends in internet access appear to be the move to very high speed access with next-generation access networks using fibre or very high bit-rate DSL (VDSL) and the shift to mobile broadband. Consulting firm Parks Associates projects that worldwide, by 2013, more than 640 million households will have broadband access, while research firm Heavy Reading projects that globally fibre-to-the-home will grow 30 per cent per year to reach 90 million by 2012. Mobile broadband is also expected to experience phenomenal growth with the GSM Association estimating that by 2013, worldwide, 2.4 billion people will access the internet using a mobile device.

Viviane Reding, European Commission for Information Society and Media identified three key areas that she believed will drive the growth in internet use: social networks; the internet of things; and the mobile internet. Social networking is one of the fastest developments on the internet and has the ability to connect people for both business and pleasure on a scale never before imagined. Social networking presents a golden opportunity for businesses, in particular small and medium enterprises, to access unprecedented information on a large group of persons allowing for the delivery of more sophisticated and high value-added services and products to potential customers.

The Internet of things will expand the internet from the existing connection of computers, servers and web pages to the connection of objects and devices of all kinds. This will enable the combining of information from the virtual world with the perception of the physical world. The benefits of these connections will include improved energy distribution and consumption, urban transport and health care services. To take advantage of the potential of this internet of things requires powerful open service infrastructure such as the deployment of server farms with distributed cloud computing capability. This will lower barriers to entry and allow even the smallest companies to develop their own on line commercial offers with zero infrastructure investment. The challenges ahead however are how to mitigate against the risks associated with data storage exposures given that businesses may be hesitant to move their mission- critical applications outside their firewalls and take full advantage of the Internet of things.

The growth of the mobile internet has been driven by the increased availability of smart phones, and the launch of third-generation high speed mobile networks. As more operators launch 3G networks, especially in the developing world, it is expected that increased

competition will result in more affordable mobile broadband service which will in turn result in greater uptake of the service.

The internet, which was designed in the 1970s to create simplified network and implementation protocols, has grown into a collaborative network with more than 1.6 billion users. There is currently a debate over the approach that should be taken to enhance the existing architecture to deal with the unforeseen spread of the internet and new application. One approach, evolutionary change, is to create temporary patches to address problems as they emerge. A second alternative is the clean slate approach, allowing a fresh start with a new architecture, which is expected to reduce costs, encourage innovation and improve national security. So far the evolutionary change approach have been able to meet the new challenges faced, but the jury is still out as to whether this approach will have to be abandoned for the clean slate approach as were are faced with more challenges including cybercrime and threats to national security.

9.0 NOTES AND STATISTICAL TABLES

9.1 NOTES ON STATISTICAL TABLES AND DATA

1. All figures have been rounded to the nearest million, thousand, and whole number or to the second decimal place.
 - -- denotes 'nil'
 - 0.0 denotes 'negligible'
 - n.a. denotes 'not available'
 - ** denotes 'not applicable'

All dollar amounts are in Eastern Caribbean dollars (EC\$). Where it was necessary to convert from another currency to Eastern Caribbean dollars the following exchange rates were used:

JA\$1 = EC\$0.0326

TT\$1 = EC\$0.4282

BD\$1 = EC\$1.335

US\$1 = EC\$2.70

The telecommunications statistics in this report are subject to revision from time to time to ensure accuracy. Some data in this report has been restated from previous Telecom Sector Reviews to reflect updated information.

2. Telecommunications revenues are the revenues received from providing telecommunications services.
3. Fixed line penetration is obtained by dividing the number of fixed line subscribers by the population and multiplying by 100.
4. Mobile penetration is obtained by dividing the number of cellular subscribers by the population and multiplying by 100.
5. Internet penetration is obtained by dividing the number of Internet subscribers by the population and multiplying by 100.
6. Outgoing international traffic is the total telephone traffic measured in minutes that originated from a fixed or mobile phone in the specified state with a destination outside the state. Local and international traffic does not include traffic for Cingular Wireless, this was not available at the time of publication.)
7. Residential fixed line access charge is the recurring fixed charge for subscribing to the Public Switched Telephone Network (PSTN).

8. Telecommunications investment is the expenditure associated with acquiring ownership of plant and property used for telecommunications service and includes land and buildings.
9. Employment refers to the total number of staff employed by a telecommunications provider. This does not include sub-contract staff.
10. The data for populations are the mid-year estimates from the Eastern Caribbean Central Bank.
11. Gross Domestic Product (GDP) data is based on the Eastern Caribbean Central Bank's estimates.
12. Rates for services were obtained from company websites and are peak rates except where stated otherwise. There is a 50 cent surcharge on international calls to mobile phones in the Caribbean region.

9.2 STATISTICAL TABLES

Table 9.1: Telecommunication Revenues (EC\$ Million)

	Mar-05	Mar-06	Mar-07	Mar-08	Mar-09
Dominica	\$82	\$89	\$92	\$97	\$100
Grenada	\$142	\$157	\$173	\$161	\$151
St Kitts and Nevis	\$98	\$91	\$123	\$125	\$120
Saint Lucia	\$218	\$233	\$282	\$239	\$238
St Vincent and the Grenadines	\$135	\$143	\$155	\$148	\$123
	\$676	\$712	\$825	\$770	\$732

Source: ECTEL/operators

Note: Includes estimates where ECTEL did not receive data from the operators

Table 9.2: Fixed Line Penetration

	Mar-05	Mar-06	Mar-07	Mar-08	Mar-09
Dominica	29%	27%	25%	25%	24%
Grenada	24%	28%	26%	27%	26%
St Kitts and Nevis	42%	41%	41%	40%	40%
Saint Lucia	26%	24%	24%	24%	23%
St Vincent and the Grenadines	22%	22%	22%	23%	23%

Source: ECTEL/operators

Table 9.3: Mobile Penetration

	Mar-05	Mar-06	Mar-07	Mar-08	Mar-09
Dominica	61%	75%	101%	126%	137%
Grenada	73%	67%	86%	90%	105%
St Kitts and Nevis	60%	104%	129%	146%	148%
Saint Lucia	63%	64%	88%	99%	111%
St Vincent and the Grenadines	60%	65%	89%	110%	116%

Source: ECTEL/operators

Note: Includes estimates where ECTEL did not receive data from the operators

Table 9.4: Internet Penetration

	Mar-05	Mar-06	Mar-07	Mar-08	Mar-09
Dominica	6%	6%	7%	10%	10%
Grenada	5%	6%	7%	8%	11%
St Kitts and Nevis	17%	18%	19%	21%	25%
Saint Lucia	5%	5%	7%	9%	11%
St Vincent and the Grenadines	5%	5%	7%	9%	11%

Source: ECTEL/operators

Note: Includes estimates where ECTEL did not receive data from the operators

Table 9.5: Local Traffic Originating from a Fixed Line
(Millions of minutes)

	Mar-05	Mar-06	Mar-07	Mar-08	Mar-09
Dominica	60	70	41	40	32
Grenada	248	271	308	313	312
St Kitts and Nevis	110	118	67	73	65
Saint Lucia	n.a.	196	103	173	183
St Vincent and the Grenadines	100	90	85	88	84
	518	745	604	687	676

Source: ECTEL/operators

Note: Includes estimates where ECTEL did not receive data from the operators

Table 9.6: Local Traffic Originating from a Mobile Phone
(Millions of minutes)

	Mar-05	Mar-06	Mar-07	Mar-08	Mar-09
Dominica	n.a.	n.a.	41	79	89
Grenada	42	74	79	115	141
St Kitts and Nevis	15	n.a.	79	94	89
Saint Lucia	60	82	124	215	215
St Vincent and the Grenadines	42	52	100	118	134
	159	208	423	621	668

Source: ECTEL/operators

Note: Includes estimates where ECTEL did not receive data from the operators

Table 9.7: International Outgoing Traffic
(Millions of minutes)

	Mar-05	Mar-06	Mar-07	Mar-08	Mar-09
Dominica	10	13	13	22	19
Grenada	19	34	29	20	21
St Kitts and Nevis	15	16	21	21	26
Saint Lucia	25	34	32	41	40
St Vincent and the Grenadines	7	22	19	17	18
	76	118	114	121	125

Source: ECTEL/operators

Note: Includes estimates where ECTEL did not receive data from the operators

Table 9.8: International Incoming Traffic
(Millions of minutes)

	Mar-05	Mar-06	Mar-07	Mar-08	Mar-09
Dominica	30	31	30	35	24
Grenada	61	35	74	75	61
St Kitts and Nevis	n.a.	34	35	34	41
Saint Lucia	62	59	121	61	67
St Vincent and the Grenadines	54	56	58	61	52
	207	215	318	267	245

Source: ECTEL/operators

Note: Includes estimates where ECTEL did not receive data from the operators

Table 9.9: Residential Fixed Line Access Charge
(EC\$)

	Mar-05	Mar-06	Mar-07	Mar-08	Mar-09
Dominica	24.00	24.00	24.00	24.00	24.00
Grenada	54.00	26.40	26.40	26.40	26.40
St Kitts and Nevis	24.00	24.00	24.00	24.00	24.00
Saint Lucia	26.40	26.40	26.40	26.40	26.40
St Vincent and the Grenadines	20.40	20.40	20.40	20.40	20.40

Source: ECTEL/operators

Table 9.10: Local Fixed to Fixed Calling Rate
(EC\$ per minute)

	Mar-05	Mar-06	Mar-07	Mar-08	Mar-09
Day	0.07	0.07	0.07	0.07	0.07
Evening	0.05	0.05	0.04	0.04	0.04
Weekend	0.05	0.04	0.04	0.04	0.04

Source: ECTEL/operators

Table 9.11: Local Fixed to Mobile Calling Rate
(EC\$ per minute)

	Mar-05	Mar-06	Mar-07	Mar-08	Mar-09
Day	0.76	0.76	0.71	0.71	0.71
Evening	0.75	0.75	0.69	0.69	0.69
Weekend	0.75	0.75	0.69	0.69	0.69

Source: ECTEL/operators

Table 9.12: Outgoing International Rate from a Fixed Line
(EC\$ per minute)

	Mar-05	Mar-06	Mar-07	Mar-08	Mar-09
ECTEL States	0.50	0.50	0.50	0.50	0.50
C&W Caribbean	0.66	0.66	0.66	0.66	0.66
Non C&W				0.84 -	
Caribbean	0.99	0.99	0.99	0.99	0.84 - 0.99
US and Europe	1.65	1.65	1.65	0.90 - 1.65	0.90 - 1.25

Source: ECTEL/operators

Note: Includes estimates where ECTEL did not receive data from the operators

Table 9.13: Telecommunications Investment
(EC\$ million)

	Mar-05	Mar-06	Mar-07	Mar-08	Mar-09
Dominica	46	16	21	18	25
Grenada	26	30	40	44	40
St Kitts and Nevis	38	23	22	23	8
Saint Lucia	35	22	39	66	54
St Vincent and the Grenadines	20	20	27	26	24
	164	111	148	177	150

Source: ECTEL/operators

Note: Includes estimates where ECTEL did not receive data from the operators

Table 9.14: Employment in Telecommunications

	Mar-05	Mar-06	Mar-07	Mar-08	Mar-09
Dominica	288	294	273	301	271
Grenada	183	207	216	204	267
St Kitts and Nevis	140	159	157	178	136
Saint Lucia	428	541	557	621	573
St Vincent and the Grenadines	169	159	158	206	188
	1208	1360	1361	1512	1435

Source: ECTEL/operators

Note: Includes estimates where ECTEL did not receive data from the operators

Table 9.15: Mid-year Population
(Thousands)

	2004	2005	2006	2007	2008
Dominica	70	71	71	71	72
Grenada	105	106	107	107	110
St Kitts and Nevis	49	49	50	51	51
Saint Lucia	162	165	167	171	170
St Vincent and the Grenadines	105	105	101	100	101

Source: ECCB National Accounts Statistics 2009

10.0 INDIVIDUAL LICENSEES IN THE ECTEL MEMBER STATES

Table 18: Individual Licensees in the ECTEL Member States as at March 2008

Licence	Fixed Public network	Public Mobile telecoms	Internet Network and services	SUBMARINE Cable
Dominica	Cable & Wireless Marpin Telecoms and Broadcasting Sat Telecommunications†	Cable & Wireless Orange Dominica Digicel 21 st Century Telecom Network	Cable & Wireless Marpin Telecoms and Broadcasting Sat Telecommunications† 21 st Century Telecom Network	Middle Caribbean Network
Grenada	Cable & Wireless Global Network Partners† Trans-World Telecoms Caribbean† Grenada Cable Vision† Digicel†	Cable & Wireless Digicel 21 st Century Telecom Network† Affordable Island Communications† Global Network Partners† Trans-World Telecoms Caribbean†	Cable & Wireless Global Network Partners† Grenada Cable Vision† Digicel Grencomm† SES Americom† 21 st Century Telecom Network†	Southern Caribbean Fiber
St Kitts and Nevis	Cable & Wireless The Cable† Caribbean Cable Communications†	Cable & Wireless UTS-CariGlobe Wireless Ventures 21 st Century† Telecoms	Cable & Wireless The Cable Nevis Communication Corporation† Caribbean Cable Communications SES Americom† 21 st Century Telecom Network†	Southern Caribbean Fiber
Saint Lucia	Cable & Wireless Antilles Crossing† Digicel† Karib Cable† Tele (St Lucia) Inc†	Cable & Wireless Digicel 21 st Century Telecoms†	Cable & Wireless Antilles Crossing† Link Technologies† 21 st Century Telecoms† Digicel Karib Cable Tele (St Lucia) Inc	Antilles Crossing Southern Caribbean Fiber
St Vincent and the Grenadines	Cable & Wireless Digicel† Karib Cable†	Cable & Wireless Digicel 21 st Century Telecoms†	Cable & Wireless Digicel Karib Cable 21 st Century Telecoms†	Southern Caribbean Fiber

Source: ECTEL/NTRCs

† Were not operational at March 2009

EASTERN CARIBBEAN TELECOMMUNICATIONS AUTHORITY

ECTEL Mission Statement

“To create a fully liberalized telecommunications environment by promoting competition amongst service providers for the delivery of efficient and affordable telecommunications services to the people of the ECTEL Member States, by implementing applicable laws, treaties and agreement through fair transparent and Independent processes”

The Eastern Caribbean Telecommunications Authority (ECTEL) was established on 04 May 2000 by Treaty signed in St. George’s, Grenada, by the Governments of five Eastern Caribbean States— Commonwealth of Dominica, Grenada, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines.

ECTEL is the regulatory body for telecommunications in its Member States It is made up of three components - A Council of Ministers, a regional directorate and a National Telecommunications Regulatory Commission (NTRC) in each Member State.

The **Council of Ministers** made up of the Ministers responsible for Telecommunications in the ECTEL states, and the Director General of the OECS as an ex-officio member. Responsibilities include giving directives to the Board of Directors on matters arising out of the Treaty, and ensuring that the Board is responsive to the needs of the Member States in the implementation of telecommunications policy.

The **Board of Directors** comprises one member and an alternate from each Member State and the Managing Director of ECTEL as an ex-officio member. Responsibilities include making recommendations to the Council on any matter relating to telecommunications, and establishing rules and procedures consistent with the Treaty for the management and operation of the ECTEL Directorate.

The NTRCs – National Telecommunications Regulatory Commissions – are the Telecommunications regulators at the national level in each Member State. They are responsible for the processing of applications and advising the Minister on the award of licences.

Also available from ECTEL – www.ectel.int

1. Annual Telecommunications Sector Review 2007-2008
2. Study of Telecommunications and ICT Usage by Small and Medium Size Enterprises in the ECTEL Member States
3. ECTEL News – Quarterly Newsletter



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Annual Telecommunications Sector Review 2008-2009

www.ectel.int