



Annual Market Report
Telecommunications and Broadcasting
Sectors

January – December 2006

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1. Overall Market Data

This report presents information on the markets within the telecommunications and broadcasting sectors which includes data on subscriptions, gross revenues and tariffs of the relevant markets. The data is also used by the Authority to determine the market share of the relevant service operators and to monitor and inform policy decisions that will facilitate the orderly development of markets within these sectors.

The data presented are primarily based on the results of a survey of concessionaires conducted within the telecommunications and broadcasting sectors for the period 1st January to 31st December 2006, historical data series and other information made available to the Telecommunications Authority of Trinidad and Tobago (TATT) up to the time of publication of the report.

TATT will seek to publish regular market updates on the telecommunications and broadcasting sectors. However the frequency of the publications will be dependent on the timeliness of responses by concessionaires to the Authority's survey.

1.1. Total Authorization

Under the ambit of the Telecommunications Act 2001, TATT is responsible for making recommendations to the Minister of Public Administration and Information for the granting of concessions¹. In addition, TATT is authorized under Section 36 of the Telecommunications Act, 2001 and responsible for the granting of licences. In accordance with these legislative powers, TATT granted a total of 83 licences while 64 concessions were granted by the Minister based on TATT's recommendations as at December 2006 (Table 1).

¹ Concessions are required for the operation of public telecommunications networks, the provision of public telecommunications services and the provision of broadcasting services.

Table 1: Number of Authorizations

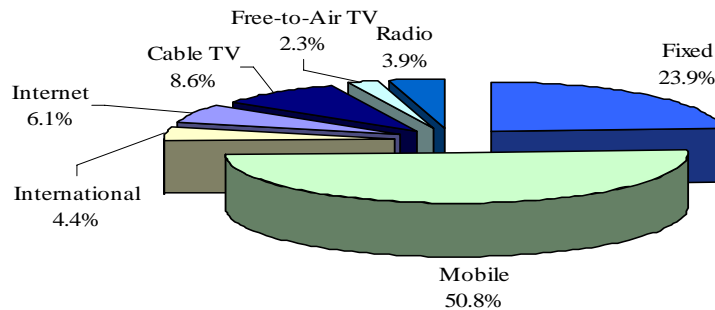
Total Authorizations	December 2006
Licences	
Spectrum	3
Station	
Amateur Radio	21
Maritime	5
Satellite	2
Broadcast	36
General Radiocommunications	9
Special Events	7
Total	83
Concessions	
Fixed	6
International	8
Mobile	3
Broadcasting	47
Total	64

Source: Policy, Pricing & Research Unit TATT

1.2. Overview of the Telecommunications and Broadcasting Markets

In 2006, the estimated gross revenue take-up of the telecommunications and broadcasting sectors totaled TT\$ 3.3 billion or US\$ 518 million which represented approximately 3 per cent of GDP for that year. Of this amount, mobile services obtained the most revenues with approximately 50.8 per cent of the earnings for the year. The fixed² market accounted for 23.9 per cent, while subscription broadcasting (cable TV) represented 8.6 per cent, Internet and International voice market obtained shares of 6.1 and 4.4 per cent respectively. The smallest market within the ICT sector was the free-to-air TV broadcasting services which accounted for approximately 2.3 per cent of the total earnings for the year ending December 2006. The radio broadcasting market was the second smallest market with a 3.9 per cent market share.

Figure 1: Telecommunications and Broadcasting Sectors Market Share by Revenues 2006



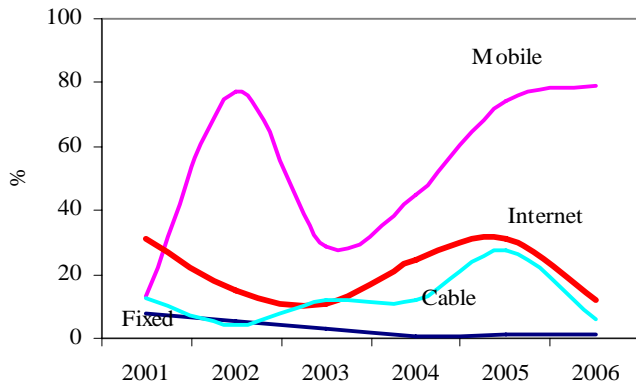
Source: Policy, Pricing & Research, TATT

² Fixed market revenues include revenues earned from fixed voice (excluding international), fixed access and leased circuits.

Growth in gross revenues within the telecommunications and broadcasting sectors was primarily driven by increased subscribers within the markets. This is confirmed in Figure 2 below which depicts the annual growth rates of subscribers³ for a few markets within the telecommunications and broadcasting sectors.

Figure 2 reveals that the selected markets had positive annual growth rates for subscribers. That is, all markets grew annually between 2001 and 2006. The mobile market experienced increasing annual growth rates since 2003 to obtain the highest annual growth rate in 2006. In addition, the Internet market also had increasing growth rates since 2003 but recorded lower rates for 2006. Similarly, the cable TV market experienced consistent increase in annual growth rates over the review period with the exception of 2006 when there was a decline in the growth rate. Lastly, the annual growth rates for fixed line subscribers over the review period trended downwards consistently since 2001.

Figure 2: Annual Growth Rates for Subscribers 2001-2006

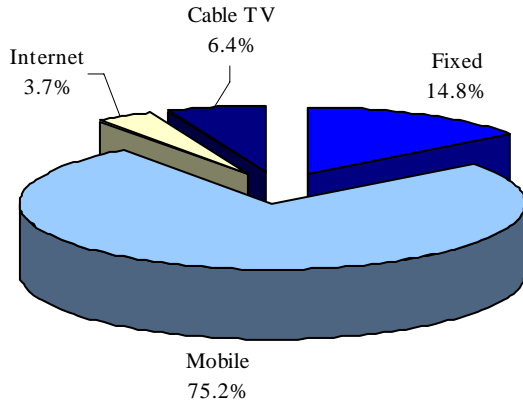


Source: Policy, Pricing & Research, TATT

During 2006, the mobile, fixed line, Internet and cable TV markets recorded a total of 2.2 million subscribers. Of this total, the mobile market accounted for the majority of subscribers with 1.6 million or 75.2 per cent, fixed line was next with 325,549 or 14.8 per cent while cable TV and Internet recorded 139,822 or 6.4 per cent and 81,064 or 3.7 per cent respectively.

³ For the purpose of the report, subscribers or subscriber base is measured by the number of subscriptions sold to consumers by providers in the relevant markets.

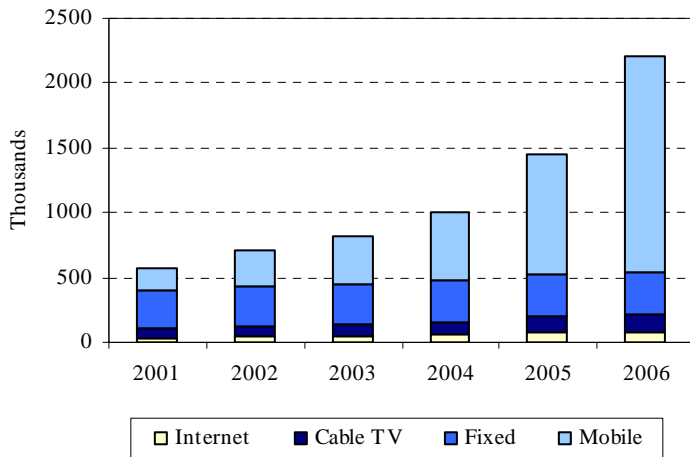
Figure 3: Market Share of Subscribers as at December 2006



Source: Policy, Pricing & Research, TATT

A six year time series of the total number of subscribers for fixed line, mobile, subscription broadcasting and Internet markets revealed that the subscriber base increased from 566,976 to 2,201,887, a phenomenal increase of 1,634,911 or 288.4 per cent since 2001. This significant increase in total subscribers is highlighted by an annual average growth rate of 31.4 per cent between 2001 and 2006. Figure 4 below shows this exceptional six year series.

Figure 4: Total Subscribers 2001-2006



Source: Policy, Pricing & Research, TATT

Box 1: Overview of the Domestic Economy

The economy of Trinidad & Tobago has continued on its robust growth path in 2006 with an increase in real GDP of 12 per cent. This increase reflects a significant improvement on the 8.0 per cent growth achieved in 2005. The driving force behind this economic boom lies with the energy sector which grew by 20.6 per cent as a result of the expansion of the petroleum industry and increased world oil prices. In addition, the non-energy sector also increased by 6.5 per cent in 2006.

During 2006 the external current account recorded a surplus of US\$1.6 billion, a decrease of 13.1 per cent over the previous year. This decrease in the surplus on the current account was the first since the oil boom started and was driven mainly by a 19.5 per cent increase in imports. Imports increased by US\$1.1 billion during 2006 while exports expanded by US\$2.4 billion, a 25.1 per cent increase on the US\$9.7 billion recorded in 2005.

Table 2: Selected Economic Indicators

	2000	2001	2002	2003	2004	2005	2006 ^P
Population (millions)	1.29	1.30	1.30	1.30	1.31	1.31	1.31
GDP (US\$ millions)	7,702	8,959	9,327	10,745	11,071	12,268	18,278
GDP per capita (US\$)	5,951	6,892	7,166	8,246	8,470	9,365	13,923
Real GDP (US\$ millions)	7,435	8,492	8,951	10,351	10,676	11,530	12,913
Real GDP Growth (%)	7.3	4.3	6.8	13.2	6.2	8.0	12.0
Inflation rate (%) (period average)	3.6	5.5	4.2	3.8	3.7	7.2	9.1
Exchange rate (TT\$ per US\$)	6.3	6.2	6.2	6.3	6.3	6.3	6.3
Unemployment rate (%)	12.2	10.8	10.4	10.5	8.4	8.0	6.2
External Current Account (US\$ millions)	544	446	76	985	1,647	3,594	4,655

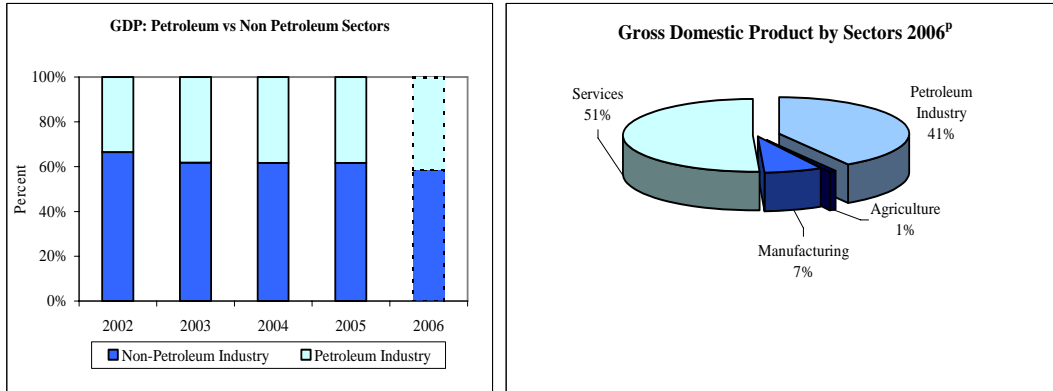
Source: Central Bank of Trinidad & Tobago, Central Statistical Office, CSO

^P 2006 data are provisional

Other economic highlights for 2006 include the stable exchange rate, the double digit inflation and a low unemployment rate. The US\$ exchange rate remain at TT\$6.3 to US\$1, the inflation rate increase significantly from 7.2 per cent at the end of 2005 to 9.1 per cent at the end of 2006 (which was primarily due to higher food prices) while the unemployment rate declined further to 6.2 per cent as at the end of December 2006.

In the real sector the petroleum industry accounted for approximately 41 per cent of the country's production, second to the services sector. The services sector dominated production in 2006, accounting for approximately half of the GDP of the country and averaging 55.4 per cent since 2000. Despite this dominance the non petroleum sector's output as a percentage of GDP has been declining over the last five years. Figure 5 highlights the decline resulting from the increase in output of the petroleum sector.

Figure 5: Gross Domestic Product



Source: Review of the Economy 2006

^P 2006 figures are provisional

Despite the decline in the non-petroleum sector, new investments are expected for the services sector especially in the communications industry. Liberalization of the telecommunications sector started with the entrant of Digicel Trinidad Limited, which made significant investment in the mobile market. Similar investments in the international market are expected as four providers of international network/services were granted concessions in 2006, two of which landed off-island cable in Trinidad and Tobago in 2007. These types of investments are expected from entrants to the sector which will provide new impetus in the telecommunications services market and provide advanced products and services to consumers.

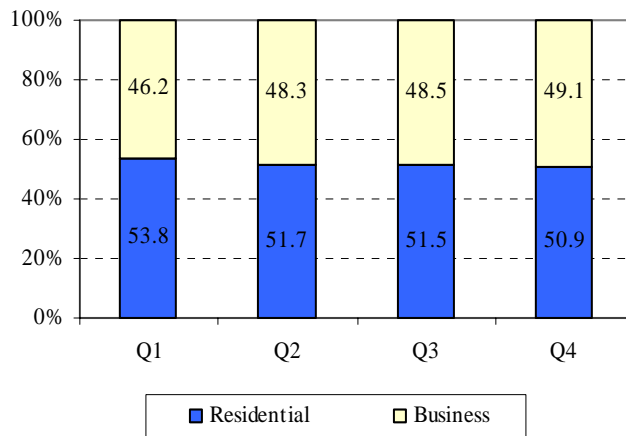
2. Fixed Line Market Data

This section provides information on fixed line telecommunications services, that is, services provided over a public domestic fixed (wired) telecommunications network. As at December 2006, there were six operators authorized to provide fixed domestic telecommunications services to the public over wired facilities. They are Telecommunications Services of Trinidad and Tobago (TSTT), Columbus Communications Trinidad Limited (Flow), Computer Technologies Services Limited (CTSL), RVR International Limited, TRICO Industries Limited and Independent Cable Network of Trinidad and Tobago Limited (ICNTT). Even though authorizations were given to all of the above during 2006, TSTT was still the sole provider of domestic fixed line voice services during the review period. All these concessionaires are also authorized to provide subscription broadcasting service providers.

2.1. Fixed Line Revenues

For the year ending December 31, 2006, the total gross revenues earned from fixed line subscribers amounted to TT\$780 million. Of this amount, residential customers accounted for TT\$405.7 million or 52 per cent of the total earnings. Revenues from business customers on the other hand, accounted for TT\$ 374.3 million, or 48 per cent, the minority of total earnings for the year.

Figure 6: Fixed Line Subscriber Revenues 2006

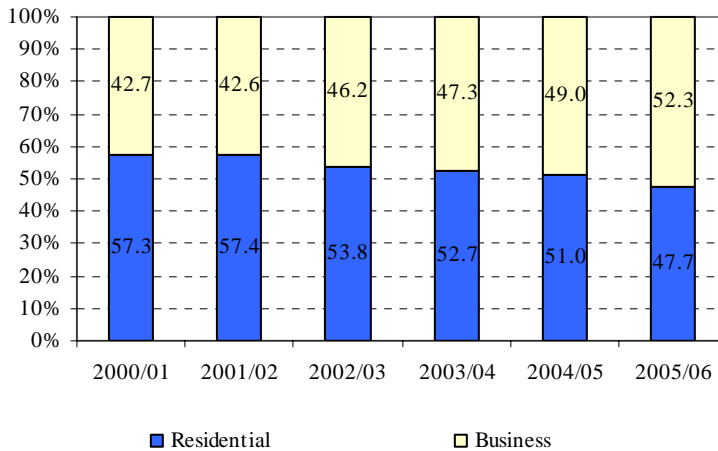


Source: Policy, Pricing & Research Unit, TATT

At a disaggregated level, business customers’ share of the total earning increased from a 46.2 per cent of total revenues in the first quarter of the year to a relatively equal share of 49.1 per cent of total revenues for the last quarter. Figure 6 above highlights this gradual increase in the market share of business fixed line customers during the four quarters of 2006. The gradual increase in the market share of business customers during 2006 was consistent with the six year trend seen in Figure 7 below.

For the six year period 2000/01 to 2005/06, the percentage of revenues earned from residential customers declined steadily from 57.3 per cent in 2000/01 to 47.7 per cent in the 2005/06 year. Figure 7 shows a steady decline in the percentage share of the revenues of residential customers compared to consistent increases in the gross revenues collected from business customers over the six year period. Figure 7 below reveals that residential subscribers dominated the market with higher percentage share of market revenues since the 2001/02. However, during the 2005/06 year, business customers contributed the majority of the total fixed line revenues reversing this dominant trend.

Figure 7: Fixed Line Revenues FY 2000/01 – FY 2005/06⁴



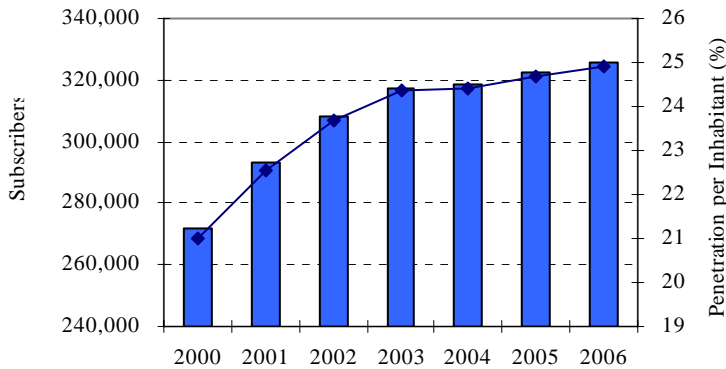
Source: Policy, Pricing & Research Unit, TATT

⁴ FY represents the financial year for TSTT: April to March.

2.2. Fixed Line Subscribers

Subscribers of fixed line telephone service increased by 3,211 or 1 per cent in 2006 to end the year with a total of 325,549 subscribers. This minimal growth seen in fixed line subscriber base has been consistent over the past four years. Figure 8 below shows that fixed line subscribers increased steadily between 2000 and 2003. However, since 2003 the fixed line market has been relatively stable.

Figure 8: Fixed Line Subscribers & Penetration per 100 Inhabitants 2000 – 2006



Source: Policy, Pricing & Research Unit, TATT

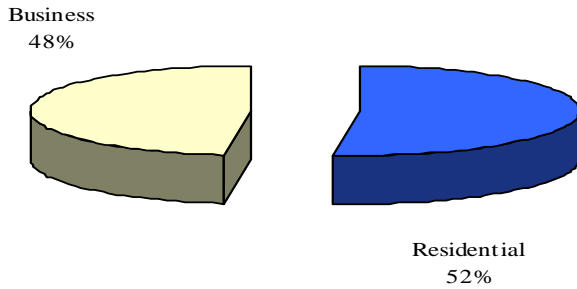
The reduction in the growth of fixed line subscribers coincides with the market approaching saturation level. As at December 2006 there exist 265,717 residential fixed line subscribers. This represents 77 per cent of the 347,000 estimated households in Trinidad and Tobago in 2006. Figure 8 also depicts the fixed line per inhabitant penetration rate over the seven year period. The fixed line per inhabitant penetration rate has grown from 21 per cent in 2000 to 24 in 2003 and has since remained relatively stable since, reaching the highest penetration rate of 25 per cent in 2006. Trinidad and Tobago can now boast that 77 in every 100 households have access to fixed line telephone service. However, fixed-line tele-density⁵ stood at 25 at the end of the review period.

From the perspective of subscriber base, the market share of residential and business customers shows a similar trend to the market share depicted by revenues for the calendar year ending December 2006. The data on fixed-line services with respect to revenues and subscribers depicted that residential customers accounted for the majority of the market for 2006. That is, residential

⁵ This represents the number of persons in every 100 inhabitants that has access to a fixed line phone.

customers accounted for 81.6 per cent (265,717 subscribers) of the total subscriber base and 52.0 per cent of market revenues. Similarly, business subscribers accounted for 16.4 per cent (59, 832 subscribers) of the total subscriber base and 48.0 per cent by revenues.

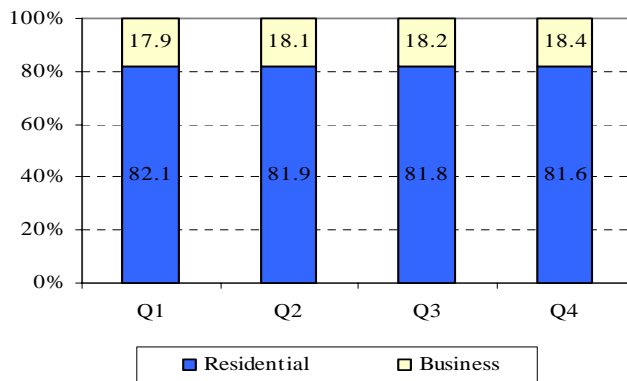
Figure 9: Market Share of Fixed Line Telephone Service by Revenues as at December 2006



Source: Policy, Pricing & Research Unit, TATT

Residential subscribers dominated the market share in fixed line market during 2006 with an average market share of 81.8 per cent over the four quarters and the split between the residential and business fixed line customers remained relatively constant, as can be seen in Figure 10 below. The fixed line penetration per household throughout Trinidad and Tobago was also relatively constant within the four quarters of 2006 with an average rate of 93.6 subscribers per 100 households.

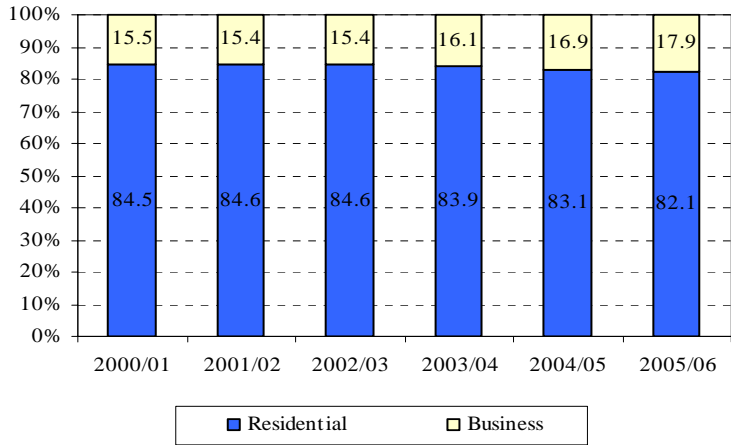
Figure 10: Fixed Line Subscribers 2006



Source: Policy, Pricing & Research Unit TATT

Figure 11 below shows that the percentage of residential fixed line customers declined slightly from the 2000/01 to 2005/06 period⁶. Although there was a decline in residential customers in the 2005/06 year, the overall subscriber base for fixed line customers increased by 0.4 per cent. This overall increase resulted from a 6.6 per cent growth in business customers during the period.

Figure 11: Fixed Line Subscribers FY2000/01-FY2005/06



Source: Policy, Pricing & Research Unit TATT

⁶ Based on TSTT's financial year: April to March.

3. Mobile Market Data

The telecommunications market was opened to competition in December 2005 when concessions were granted to two additional mobile service providers, Digicel Trinidad Limited and Laqtel Limited. Digicel officially launched their services in Trinidad and Tobago in April 2006. Laqtel on the other hand has failed to launch since the granting of their concession and to date has not offered any mobile services to the citizens of Trinidad and Tobago. Therefore the mobile data presented below represents aggregate information for TSTT and Digicel, the only mobile service providers during the review period. It should be noted that for the period under review, TSTT and Digicel were operating based on a “Sender Keep All”, (SKA) arrangement in the absence of a formal interconnection agreement⁷. While there was no formal interconnection agreement in place, the SKA arrangement allowed customers to make calls between TSTT and Digicel networks. However, to date customers are still unable to send text message across networks.

3.1. Mobile Subscribers

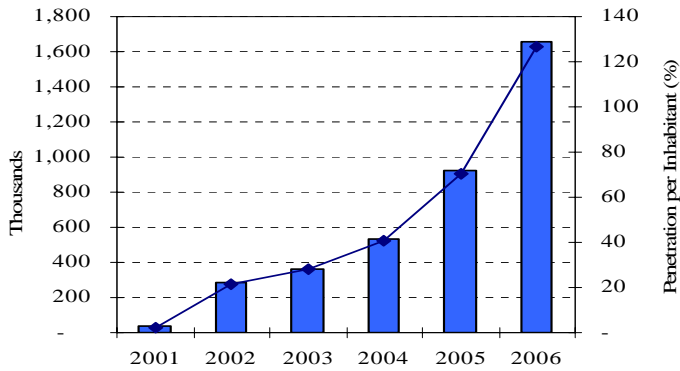
As at December 2006, the estimated number of mobile subscribers totaled 1,654,921⁸. This represents an extra-ordinary increase of 730,862 or 79.1 per cent over the previous year. Of this total, 1,494,986 were prepaid customers while other 159,935 were postpaid. The growth in subscribers during 2006 was the highest recorded increase in the mobile market since 2001. Figure 12 below shows the exponential growth in subscribers since 2001 with an exceptional increase over the 2005- 2006 period.

At the end of 2006, the number of mobile subscribers increased to 126.6 per 100 inhabitants, from the 70.7 per 100 inhabitants recorded in 2005. This marks a remarkable achievement since the launch of mobile telephony in Trinidad and Tobago. Figure 12 below also highlights an increasing trend of the level of penetration of mobile technology in Trinidad and Tobago since 2001. It should be noted that this penetration rate may not be indicative of the number of persons owning a mobile handset in Trinidad and Tobago due to individuals owning multiple handsets.

⁷ There have been a number of disputes lodged with the Authority in relation to Interconnection between TSTT and Digicel. The outstanding disputes between the two companies are in relation to mobile and fixed termination rates, interim interconnection charges, fixed transit rates, re-imbusement of funds for interconnection equipment and SMS charges.

⁸ This is an estimated figure for the total number of mobile subscribers based on data provided by mobile providers.

Figure 12: Mobile Subscribers 2001-2006

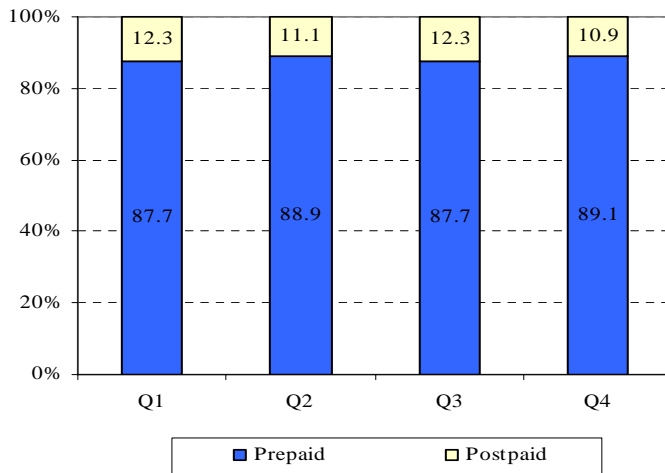


Source: Policy, Pricing & Research Unit TATT

3.2. Mobile Revenues

Mobile revenues for 2006 totaled TT\$1.64 billion, of which prepaid customers accounted for TT\$1.45 billion or 88.3 per cent while postpaid customers contributed TT\$191 million or 11.3 per cent of the total earnings. Prepaid customers continue to generate the majority of revenues earned for mobile services during 2006 as depicted in Figure 13 below. In fact, prepaid customers contributed an average of TT\$363 million per quarter while postpaid accounted for an average of TT\$47.9 million per quarter.

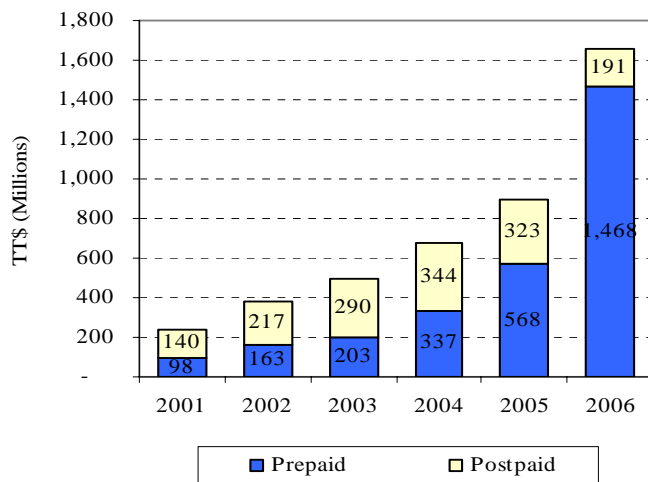
Figure 13: Mobile Market Revenues 2006



Source: Policy, Pricing & Research Unit TATT

Interestingly, the increase in revenues from prepaid mobile customers has been a characteristic feature of the mobile market since 2001. Figure 14 below highlights the fact that revenues from prepaid mobile customers have grown so much that in 2005 it surpassed the revenues earned from post-paid customers, which accounted for the majority of the market share since 2001. This reverse in trend is consistent with the recent surge in the number of prepaid customers. As at December 2006 there were 1,494,986 prepaid customers an increase of 83.2 per cent over the 678,855 customers recorded in December 2005. This upward trend in mobile revenues is highlighted by the TT\$1.420 billion or 596 per cent increase recorded for the six year period 2001-2006.

Figure 14: Mobile Market Revenues 2001-2006



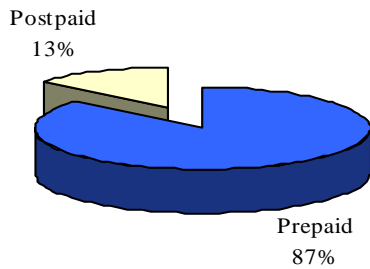
Source: Policy, Pricing & Research Unit, TATT

Prepaid or “Pay-as-you-go”⁹ mobile phone service has gained popularity in Trinidad and Tobago as this service provides substantial benefits over the postpaid or contract-based mobile service in that it allows customers to budget and monitor their spending pattern on mobile calls. In addition customers prefer the “off-the-shelf” package of prepaid phones that requires minimum identification, and are suited for anyone, especially students or low-income earners. This growing phenomenon of prepaid mobile service is not unique to Trinidad and Tobago but is a global trend as highlighted by the fact that the total prepaid mobile phones in the OECD grew from 4 per cent in 1997 to 40.8 per cent in 2003¹⁰.

⁹ Prepaid or the Pay-as-you-go” mobile service was first invented by Telecomunicações Móveis Nacionais, S.A., (TMN), the Portuguese mobile service provider, in September 1995.

¹⁰ OECD Communications Outlook 2005

Figure 15: Mobile Market Share by Subscriber as at December 2006



Source: Policy, Pricing & Research Unit, TATT

3.3. Mobile Tariffs

The highly anticipated event of Digicel's entry in the market in April 2006 was at the forefront of the transformation of the telecommunications sector from a single firm, monopoly market to a competitive one.

The nine months of competition within the mobile market in 2006 saw the proliferation of promotional offers by both mobile service providers to attract new customers and maintain their existing clientele. However, even in this pricing warfare the retail tariffs¹¹ for mobile calls remained the same for both service providers over the review period. Despite no changes to the mobile tariffs by both service providers, there would have been temporary changes to what consumers pay per call over time as a result of promotional offers.

Appendix III provides a full listing of the mobile tariff packages for bmobile and Digicel that existed in December 2006. It should be noted that these tariffs may have changed since December 2006.

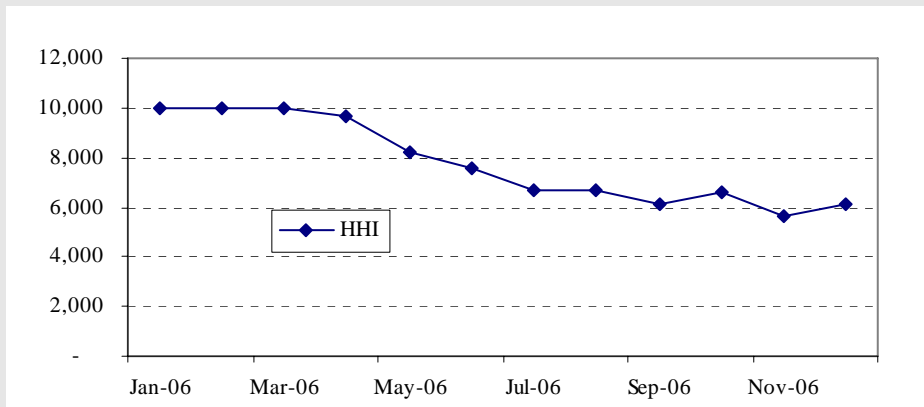
¹¹ Mobile tariffs refer to the published prices of mobile voice service providers as stipulated in section C2 of their concession. This does not include promotional price changes that are offered on a temporary basis to gain market share.

Box 2: Competition within the Mobile Market

With competition in the mobile sector, it is critical that the Authority monitors the development of the market so as to ensure that consumers' welfare is maximized. Unlike a monopolistic market, a competitive market generally exhibits increased consumer welfare as firms compete to provide a product or service at the lowest possible cost. As a result of this increased efficiency, consumers will benefit from reduced prices as firms compete to gain market share. Furthermore, monitoring is also necessary so as to guard against collusion. That is, with only two mobile service providers within the mobile market, the possibility exists that both firms can collude in setting the prices for handsets or mobile voice services.

The Authority can monitor the mobile market by examining the level of concentration of firms. A useful measure that is used to indicate market concentration is the Hirschman-Herfindahl Index, HHI¹². This index gives an overall measure of the concentration of firms within a particular market and can also be used as an indicator of potential market power. The HHI was calculated for the mobile market of Trinidad and Tobago for the period January to December 2006. The results are plotted in Figure 16 below.

Figure 16: Hirschman-Herfindahl Index of Mobile Market 2006



Source: Policy, Pricing & Research Unit, TATT

The mobile market for Trinidad and Tobago was found to be concentrated. Although this result is expected for a market with a small number of firms, it is important to note that the HHI declined steadily from 10,000 in January to 6,128 in December. This result shows that the new entrant is gaining market share in the mobile market.

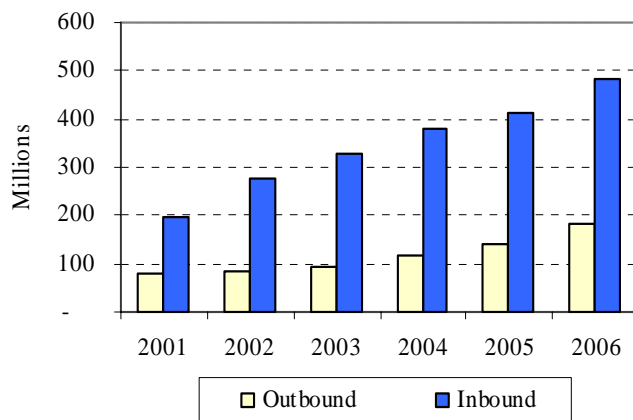
¹² HHI is a useful tool that measures the concentration of firms within a particular market. It is computed as the sum of the squares of the market shares of all firms in the market. The guidelines used for market concentration are: HHI < 1000 – **Unconcentrated**, 1000 < HHI < 1800 – **Moderately Concentrated** and HHI > 1,800 **Concentrated**.

4. International Traffic Data

As at December 2006, concessions were granted to seven concessionaires for the provision of public international telecommunications services, which included the provision of international voice services. They were TSTT, Digicel Trinidad Limited, Laqtel Limited, Open Telecom, 360 Communications Limited, Columbus Communications Trinidad Limited and Lisa Communications. Of these seven concessionaires, only five offered international services during the review period. In addition, only two concessionaires responded to the survey conducted. Therefore, the data presented below represents information submitted by two international voice service providers in the market.

Total outgoing traffic from Trinidad and Tobago, for 2006, was estimated to be 183.4 million minutes while incoming traffic was approximately 480.9 million minutes. The continuing trend of incoming traffic being greater than outgoing traffic means that Trinidad and Tobago receives net gain on international traffic. Figure 17 below reveals that incoming traffic has been consistently greater than outgoing.

Figure 17: International Traffic Data 2001-2006



Source: Policy, Pricing & Research Unit, TATT

Gross revenue¹³ for international traffic for the year ending December 2006, was estimated at TT\$145.1 million for outgoing calls and TT\$196.7 million for incoming calls. The revenue derived from international calls has been declining since 2001 when the international settlement rates declined in the global market. In addition, local call centers began competing with TSTT in 2003 for market share by offering cheaper rates for international outgoing calls.

¹³ Gross revenue refers to the total amount of money earned from international calls. Outgoing international call revenue is a collection of revenue earned from residents making calls from the domestic network to persons abroad. Incoming international revenue is settlement revenue earned from foreign exchange carriers who pay to terminate calls locally.

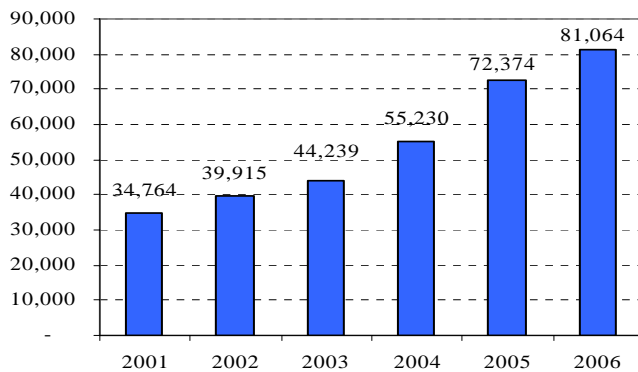
5. Internet Market Data

Prior to 2004, the Internet services market was the only market in the telecommunications sector that had some level of competition, with more than one company providing Internet services.

As at December 2006, there were eleven major Internet Service Providers (ISPs) in Trinidad and Tobago: TSTT, CableNett Limited, Carib-Link Limited, Cari Direc, Caribbean Interactive Limited, Illuminat Limited, InterServ Limited, Lisa Communications Limited, Opus Network Limited, WOW Net (2001) Limited and Green Dot Limited.

The number of Internet subscribers increased steadily over the five year period 2001-2006 as depicted in Figure 18 below. As at December 2006, the total estimated number of subscribers was 81,064, an increase of 8,690 connections since 2004. Internet connection with high speed access has been a new phenomenon worldwide. The demand for high speed access to Internet services has increased in Trinidad and Tobago in 2006 to 20,613 with 14,246 residential connections and 6,367 business connections.

Figure 18: Internet Subscribers 2001-2006

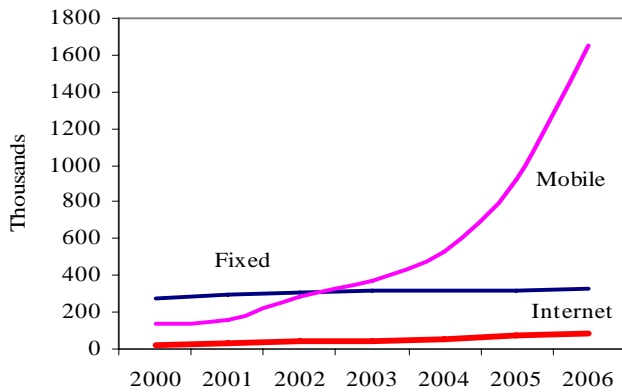


Source: Policy, Pricing & Research Unit, TATT

Although the number of Internet subscribers has been increasing steadily over the last six years, the Internet penetration rate it is still below that of fixed line and mobile services. Figure 19 provides a graphical comparison of the fixed line, mobile and Internet market by subscribers. The figure shows that the Internet market has been under-performing in comparison to the other

markets with the lowest penetration rate over the six year period. The mobile market had the highest penetration rate in 2006 with 126 subscribers per 100 inhabitants while fixed achieved 25 per 100 inhabitants and Internet managed 6 per 100 inhabitants. This low penetration rate for the Internet market may be a result of low international bandwidth availability and international bottlenecks. However, it is expected that with the liberalization of the international market and entry of broadband wireless access providers in 2007 that the penetration rate in this market will improve significantly.

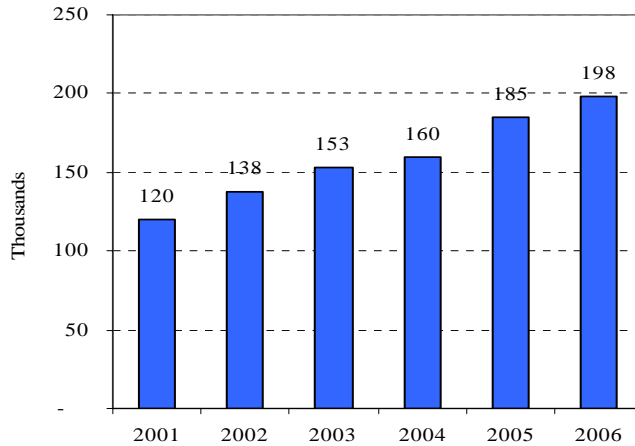
Figure 19: Internet Penetration 2001-2006



Source: Policy, Pricing & Research Unit, TATT

By comparison to the number of Internet subscribers, the number of Internet users in Trinidad and Tobago stood at 15.4 per 100 inhabitants for 2006, which is higher than the average Caribbean rate of 11.5¹⁴ per cent during the period.

¹⁴ www.Internetworldstats.com

Figure 20: Internet Users 2001-2006

Source: Policy, Pricing & Research Unit, TATT

Table 7 in Appendix II shows a wide variance in the monthly rental charges for Internet services for seven ISP providers as at December 2006. Dial-up access charges ranged between TT\$ 79.35 to TT\$ 799.25 per month, with an average monthly rental charge of TT\$229.69. The cost of high speed Internet access for residential customers averaged TT\$546.25 per month. Business customers had a wider variety of packages available from ISPs. The cost of high speed Internet access for business customers ranged from TT\$1,000 to TT\$12,411 per month for connections with speed in excess of 256 kbps, depending on the features or specifications required for the particular business.

6. Broadcasting Market Data

The broadcasting market in Trinidad and Tobago has grown considerably over the last ten years. In 2006, the market comprised six (6) operators of free-to-air TV broadcasting services, seven¹⁵ (7) providers of subscription-broadcasting services, four (4) cable based broadcasters¹⁶ who broadcast via leased channels of the subscription broadcasting service providers, and thirty (30) operators of free-to-air FM radio broadcasting services. Table 5 below gives a breakdown of the concessions granted within the broadcasting market as it relates to coverage.

Table 3: Broadcasting Market Concessions as at December 2006

Free-to-Air Radio	
National	22
Major Territorial	6
Minor Territorial	1
Niche	1
	30
Free-to-Air TV	
National	4
Major Territorial	2
	6
Subscription TV	
National	3
Major Territorial	1
Minor Territorial	1
Niche	2
Cable-based Broadcasters	4
	11
Total	47

Source: Policy, Pricing & Research Unit, TATT

6.1. Free-to-Air TV Market

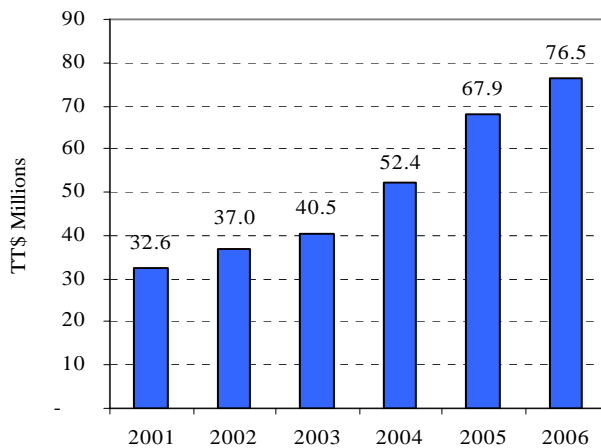
Prior to 1991, there existed one free-to-air TV broadcaster, the government-owned Trinidad & Tobago Television, (TTT). In September 1991, a new broadcaster, CCN-TV6 launched its service providing alternative programming to viewers. Since then, the market for free-to-air broadcasting services grew considerably. In 2006, the market for free-to-air TV broadcasting service

¹⁵ Seven (7) concessions were granted in total, but only six companies were providing services in the review period.

¹⁶ Cable-based broadcasters are concessionaires that broadcast via leased channels of subscription broadcasting service providers.

comprised six operators. They were Advance Community Television Network Limited (ACTN), Caribbean Communications Network Limited (TV6), Gayelle Limited, Caribbean News Media Group (CNMG), World Indian Network Television Limited (WINTV), and the Government of Trinidad and Tobago (GOTT).

Figure 21: Gross Revenues for Free-to-Air TV Broadcasting Service Providers 2001-2006



Source: Policy, Pricing & Research Unit, TATT

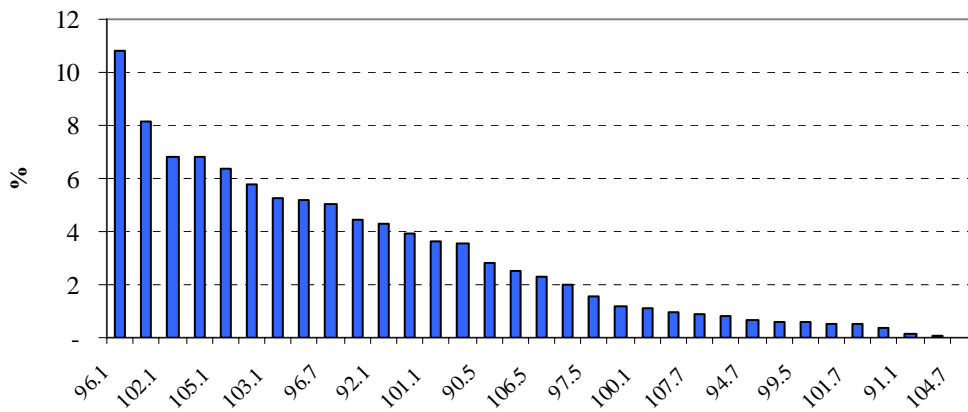
Gross revenues for the free-to-air TV broadcasting market have increased steadily over the last six years. In 2006, total estimated gross revenues for this market stood at TT\$76.5 million, an increase of 12.8 per cent over last year. This increase resulted from an estimated increase of 13.6 per cent in revenues for TV6. Figure 21 above shows the increasing trend in revenues for the free-to-air TV broadcasting market since 2001.

6.2. Free-to-Air FM Radio Market

The free-to-air FM radio market consisted of thirty radio stations in 2006. Although this number is relatively large, it must be noted that some concessionaires within this market operate more than one FM radio station.

Due to the number of FM radio stations in operation, listeners have a wide variety of options in radio programming on stations offering different types of music, talk shows, programming for diverse cultures and sports. Figure 22 below shows the result of a survey conducted during 2006. In this survey 96.1 had the highest listenership with 10.8 per cent followed by 97.1, 102.1, and 98.1 with 8.2, 6.9 and 6.8 per cent shares respectively. The remaining FM radio stations had listenership shares range from 1 per cent to 6 per cent.

Figure 22: Listenership Market Share 2006



Source: Caribbean Development Strategies, Media Trace Report 2006

As at December 2006, the total estimated gross revenues for the free to air FM radio market was TT\$127.6 million. This represents approximately 3.9 per cent of the total estimated revenues for the telecommunications and broadcasting sectors in 2006.

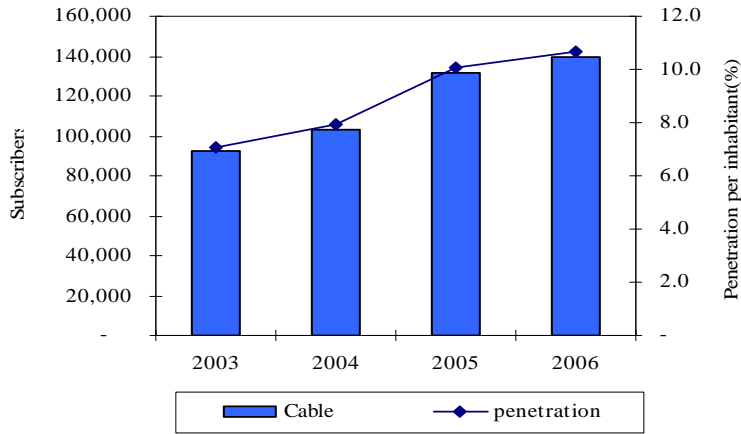
6.3. Subscription Broadcasting (Cable Television) Market

In 2006, the broadcasting sector comprised six concessionaires within the subscription broadcasting services market and four (4) cable based broadcasters who broadcast via leased channels of the subscription broadcasting service providers. In addition, another subscription provider has been granted a concession and is scheduled to start operation in the near future.

The six subscription television broadcasting services providers that were in operation in 2006 were Columbus Communications Trinidad Limited (CCTL), DirecTV Trinidad Limited, TRICO Industries Limited, RVR International Limited, Computer Technologies and Services Limited,

and Independent Cable Network of Trinidad and Tobago ICNTT. In December 2006, the total number of cable subscribers stood at 139,822, a 6.2 per cent increase since December 2005. Figure 23 below shows the consistent increase in the estimated number of cable subscribers since 2003. The figure also shows the penetration of cable services in Trinidad and Tobago. The penetration rate has increased from 7.1 per cent in 2003 to 10.7 per cent in 2006.

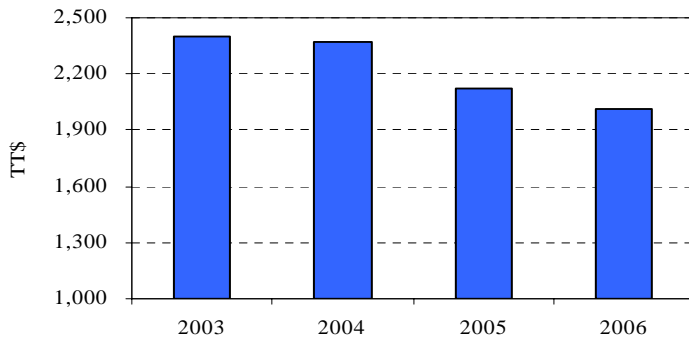
Figure 23: Cable Subscribers 2003-2006



Source: Policy, Pricing & Research Unit, TATT

Although the estimated number of subscribers for the cable subscription market has been increasing steadily, the average revenue per user, ARPU, has been decreasing gradually. Figure 24 below highlights this decreasing trend in ARPU since 2003.

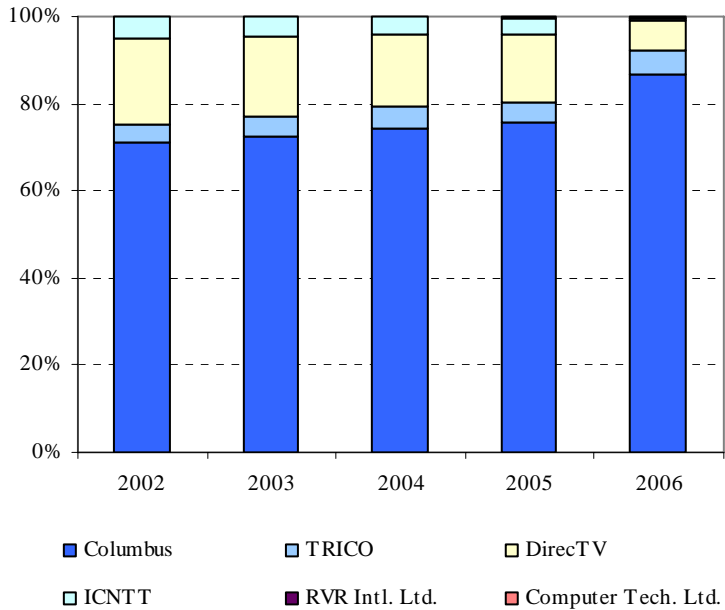
Figure 24: Cable Average Revenue per User, ARPU 2003-2006



Source: Policy, Pricing & Research Unit, TATT

For the year ending December 2006, the subscription broadcasting services market made estimated gross revenues of TT\$280.9 million. CCTL dominated the market posting the majority of the revenues over the period 2002-2006. Figure 25 below shows a consistent increase in the percentage share of revenues for CCTL, which gained a compound annual growth rate, CAGR, of 12.3 per cent in revenues and 9.9 per cent in subscribers, since 2001. In aggregate, the subscription broadcasting market grew by a CAGR of 12.1 in subscribers and 8.4 per cent in revenues since 2000 and 2001 respectively (see Table 6 in Appendix I).

Figure 25: Subscription TV Revenues 2002-2006



Source: Policy, Pricing & Research Unit, TATT

The four cable-based broadcasters that broadcast via leased CCTL cable channels in 2006 were Trinidad Publishing (CNC3), IETV, Synergy Entertainment Limited and the Parliament of the Republic of Trinidad and Tobago.

7. Summary and Outlook

Since 2003, the voice telephony market has been dominated by the cellular service market and this is expected to continue in the medium term especially if Laqtel Trinidad Limited enters the market in 2007. It is predicted that the increased mobile density experienced over the last five years will begin to stabilize having surpassed the one hundred per cent coverage of the population in December 2006.

Fixed line subscriber base is expected to increase in the short term as a result of the entry of five new operators in the domestic fixed line voice market and potential entrants in the broadband wireless access market in 2007. The growth in fixed line subscribers will also depend on the offering of triple play¹⁷ packages by these new service providers and TSTT to residential customers. These customers may opt to subscribe to triple play packages from a single provider rather than having subscription to different telecom service providers for different services. This new type of offering may increase the number of subscribers in the fixed line market only if the customers are new. Otherwise, subscription to triple play will not necessarily have an effect on the total number of fixed subscribers. In addition, the growth in the business subscriber base is expected to continue over the medium term.

The Internet market will attract more subscribers as the market becomes more developed with new technological advances and reduced prices. The number of subscribers is expected to grow consistently as was experienced in the last five years. The number of broadband subscribers is expected to grow considerably especially with the proliferation of alternative backbone network facilities for both domestic and international providers. The number of persons using the Internet should also grow significantly over the next two years as the government has embarked on various initiatives to transform the country into a knowledge based society by 2008. This project includes the establishment of community access centers that will provide citizens with increased access to computers and broadband Internet services. In addition, The Authority is expecting to grant concessions to new providers before the end of 2007 to provide broadband wireless Internet services.

¹⁷ The offering of Internet, telephony and cable TV services on the same medium.

The growth trend experienced in the broadcasting sector over the last five years is expected to stabilize. Radio and television stations will now compete for clients and audience market share given the large number of stations in operation. The number of cable subscribers is expected to grow considerably, especially with the introduction of triple play packages that will be offered by new telecommunications service providers.

Appendix I: Domestic Telecom Market Data

Table 4: Domestic Telecom Statistics

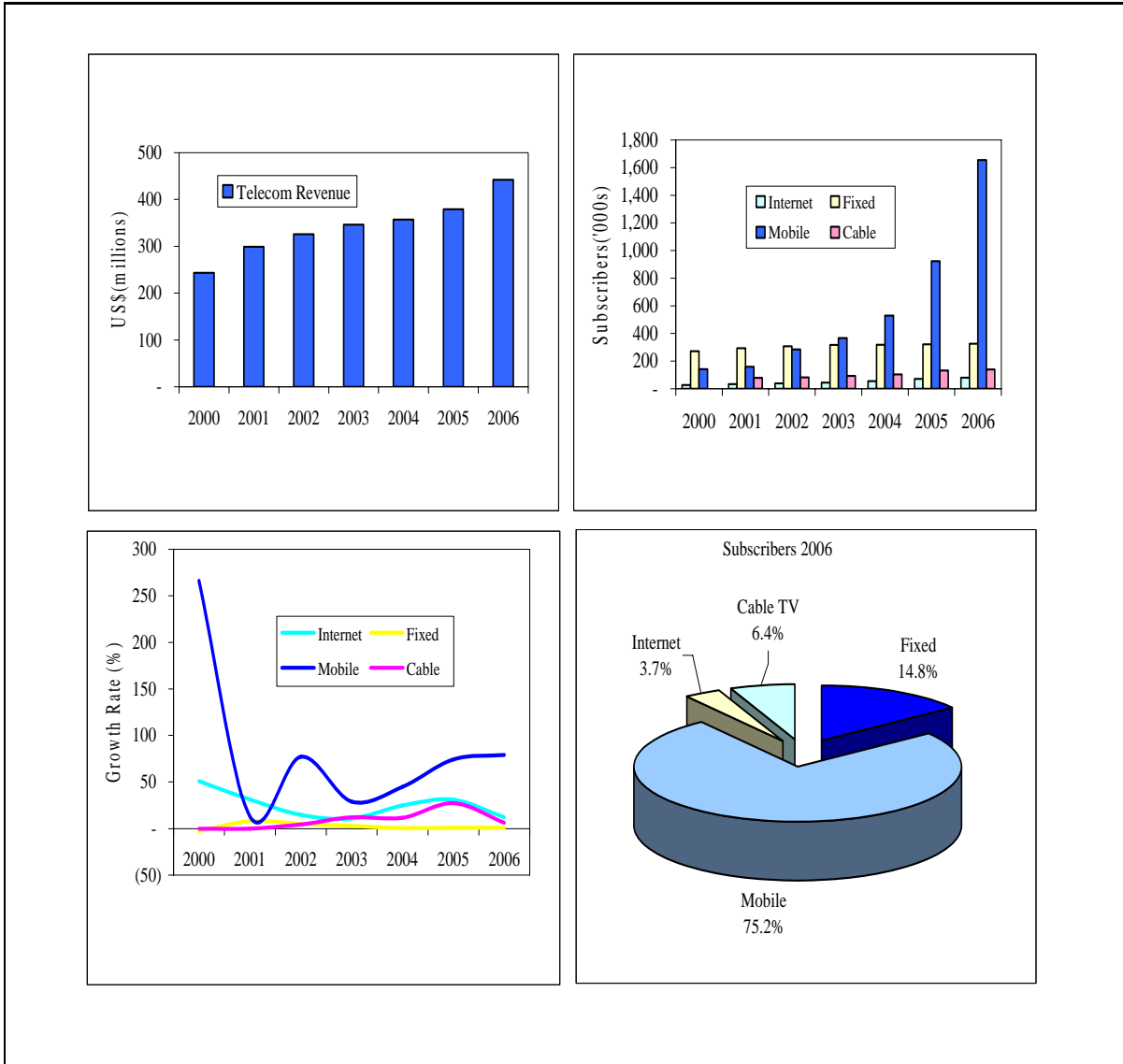
<i>Domestic Telecom Statistics</i>								<i>CAGR*</i>	
		<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>(2000-2006)</i> %
General	Population (millions)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	0.2
	GDP per capita (US\$)	5,950.7	6,891.6	7,166.3	8,246.2	8,470.3	9,365.4	13,922.8	15.2
	Telecom revenue (US\$ million)	243.5	298.9	326.0	346.3	357.0	379.3	441.7	10.4
	Total telephone subscribers ('000s)	413.2	453.3	592.2	683.3	849.3	1,246.4	1,980.5	29.8
	Total telephone subs. per 100 inhabitants	31.9	34.9	45.5	52.4	65.0	95.2	151.2	29.6
	Average revenue per user (ARPU) US\$	589.3	659.4	550.4	506.8	420.3	304.3	223.0	(14.9)
Fixed	Main telephone lines ('000s)	271.6	293.2	308.3	317.3	318.9	322.3	325.5	3.1
	Main lines penetration (%)	21.0	22.6	23.7	24.4	24.4	24.6	24.9	2.9
	Average revenue per user (ARPU) US\$	...	349.1	362.1	267.9	254.8	272.1	277.9	(4.5)
	Main lines growth (%)	(2.6)	8.0	5.2	2.9	0.5	1.1	1.0	
Mobile	Mobile subscribers ('000s)	141.6	160.1	283.9	366.0	530.4	924.1	1,654.9	50.6
	Mobile penetration (%)	10.9	12.3	21.8	28.1	40.6	70.5	126.3	50.3
	Average revenue per user (ARPU) US\$	...	225.8	212.4	213.5	203.8	153.1	159.1	(6.8)
	Mobile growth (%)	266.4	13.0	77.3	28.9	44.9	74.2	79.1	
Internet	Internet subscribers ('000s)	26.5	34.8	39.9	44.2	55.2	72.4	81.1	20.5
	Internet users ('000s)	100.0	120.0	138.0	153.0	160.0	184.5	198.4	12.1
	Internet penetration (%)	2.0	2.7	3.1	3.4	4.2	5.5	6.2	20.3
	Average revenue per user (ARPU) US\$	...	...	...	...	...	...	389.2	
	Internet growth (%)	51.0	31.4	14.8	10.8	24.8	31.0	12.0	
	Internet host	6,596.0	6,872.0	7,209.0	8,003.0	12,207.0	16,132.3	17,812.2	18.0
Personal computers ('000s)	80.0	90.0	103.5	119.0	137.0	146.5	159.8	12.2	
Traffic	International -Outgoing (min. million)	15.8	15.2	81.0	91.9	108.4	141.0	183.4	50.4
	International -Incoming (min. million)	163.4	147.0	233.0	328.4	354.7	414.5	480.9	19.7
	Inbound/Outbound int'l traffic ratio	10.3	9.7	2.9	3.6	3.3	2.9	2.6	
Cable	Cable subscribers ('000s)	...	78.9	82.4	92.5	103.4	131.6	139.8	12.1
	Cable penetration(%)	...	6.0	6.3	7.1	7.9	10.1	10.7	12.1
	Average revenue per user (ARPU) US\$	...	376.7	395.3	380.9	376.5	337.3	318.9	(3.3)
	Cable growth (%)	...	...	4.5	12.3	11.7	27.3	6.2	
ICT Index	Digital Access Index (DAI)	...	...	...	...	...	0.53	0.62	
	Digital Opportunity Index (DOI)	...	...	...	...	...	0.45	0.53	

*CAGR - Compound Annual Growth Rate

Data in bold are estimates

Source: Policy, Pricing & Research Unit, TATT

Figure 26: Domestic Telecom Statistics



Source: Policy, Pricing & Research Unit, TATT

Appendix II: Published Internet Tariffs

Table 5: Internet Monthly Charges (for the period January to December 2006)

Service Provider	Internet Package Services	Downstream Speed kbps	Installation Cost TT\$	Monthly Charges TT\$
CableNett www.cablenett.net	Dial-Up #1	56	115.00	100.00
	Dial-Up #2	56	115.00	138.00
	Dial-Up #3	56	115.00	207.00
	Dial-Up #4	56	115.00	345.00
	Turbo Dial-Up	56	-	179.95
	High Speed-Resident	128	575.00	690.00
	High Speed #1	128	1,500.00	1,000.00
	High Speed #2	256	1,500.00	1,550.00
	High Speed #3	384	1,500.00	2,100.00
	High Speed #4	512	1,500.00	2,565.00
CaribLink www.carib-link.net	Dial-Up #1	56	115.00	115.00
	Dial-Up #2	56	115.00	161.00
	Dial-Up #3	56	115.00	230.00
	Dial-Up #4	56	115.00	345.00
	Dial-Up #5	56	115.00	414.00
	Turbo Dial-Up	56	-	179.95
	High Speed-Resident	128	575.00	690.00
	High Speed #1	128	1,500.00	1,000.00
	High Speed #2	256	1,500.00	1,550.00
	High Speed #3	384	1,500.00	2,100.00
High Speed #4	512	1,500.00	2,565.00	
greendot www.mail.tt	Residential #1	128	1,725.00	316.25
	Residential #2	256	1,725.00	431.25
iINTERSERVE www.trinidad.net	Dial-Up #1	56	115.00	138.00
	Turbo Dial-Up	56	-	179.95
	High Speed-Resident	128	575.00	690.00
	High Speed #1	128	1,500.00	1,000.00
	High Speed #2	256	1,500.00	1,550.00
	High Speed #3	384	1,500.00	2,100.00
High Speed #4	512	1,500.00	2,565.00	
Lisa Communications www.rave-tt.net	Dial-Up #1	56	115.00	79.35
	Dial-Up #2	56	115.00	184.00
	Dial-Up #3	56	115.00	230.00
TSTT www.tstt.co.tt	Dial-Up #1	56	115.00	79.35
	Dial-Up #2	56	115.00	143.75
	Dial-Up #3	56	115.00	230.00
	Dial-Up #4	56	115.00	799.25
	Dial-Up #5	56	115.00	345.00
	Residential High Speed	256	552.00	460.00
	Business 1	128	874.00	1,150.00
	Business 2	256	874.00	1,788.25
	Business 3	384	874.00	2,415.00
	Business 4	512	874.00	3,053.25
	Business 5	768	874.00	3,691.50
	Business 6	1544	874.00	4,329.75
WOWnet www.wow.net	WOW@Home	56	100.00	125.00
	WOW@Work	56	100.00	200.00
	WOW@Work Ultra	56	100.00	375.00
	Pipeline-64	64	2,300.00	5,984.00
	Pipeline-128	128	2,300.00	12,411.00
	WOW.net S.N.A.P.	56	1,250.00	1,625.00

Source: Policy, Pricing & Research Unit, TATT

Appendix III: Published Mobile Tariffs

Table 6: Digicel Mobile Tariffs (for the period January to December 2006)

Prepaid Charges

	Digicel Day Vat Inclusive		
	Day	Evening	Weekend
Mobile to Mobile	1.15	0.85	0.55
Mobile to Fixed	1.25	0.95	0.65
Mobile to bmobile	1.60	1.50	1.40

	Digicel Night Vat Inclusive		
	Day	Evening	Weekend
Mobile to Mobile	1.55	0.60	0.55
Mobile to Fixed	1.60	0.75	0.65
Mobile to bmobile	1.60	1.50	1.40

Postpaid Charges

	Digicel Vat Inclusive			
	Monthly Fee	Bundled Minutes	Effective Rate	Charges for Additional Minutes
Postpaid 120	\$95.00	120	0.79	0.75
Postpaid 240	\$185.00	240	0.77	0.85
Postpaid 360	\$255.00	360	0.71	1.40

International Charges

	Digicel Vat Inclusive		
	Day	Evening	Weekend
USA, Canada, UK, Caribbean, Venezuela, India	1.50	1.10	1.00
ROW	3.00	2.10	2.00
Other countries*	6.85	6.85	6.85

Other countries* includes Antartica, Ascension, Cook Islands, Cuba, Falkland Islands, Guinea Bissau, Honduras, Saint Helena Sao Tome & Principe, Solomon Islands, Vanuatu, Thuraya, Iridium, Inmarsat

Source: www.digiceltt.com

Table 7: TSTT Mobile Tariffs (for the period January to December 2006)**Prepaid Charges**

	bmobile - Standard Prepaid Plan Vat Inclusive		
	Day	Evening	Weekend
Mobile to Mobile	1.50	0.75	0.58
Mobile to Fixed	1.50	0.75	0.58
Fixed to Mobile	1.50	0.75	0.58

	bmobile - Optional \$1 anytime Prepaid Plan Vat Inclusive		
	Day	Evening	Weekend
Mobile to Mobile	1.15	1.15	1.15
Mobile to Fixed	1.15	1.15	1.15
Fixed to Mobile	1.15	1.15	1.15
Rates Reduced after 3 minutes	0.29	0.29	0.29

Postpaid Charges

	bmobile Vat Inclusive			
	Monthly Fee	Bundled Minutes	Effective Rate	Charges for Additional Minutes
Basic	86.25	100	0.86	0.86
Bonus	161.00	200	0.81	0.81
Beyond	299.00	400	0.75	0.75

Fixed to Mobile

	Day	Evening	Weekend
Fixed to Mobile	0.92	0.92	0.92
Rates Reduced after 3 minutes	0.29	0.29	0.29

International rates

	bmobile Vat Inclusive		
	Day	Evening	Weekend
US, Canada, UK & Ireland	1.44	1.15	0.58
Caribbean, Venezuela & India	1.73	1.15	0.86
Rest of the World	2.88	2.30	1.73

Source: www.bmobile.co.tt