# THE IMPACT OF COMPETITION IN THE MOBILE SECTOR OF SURINAME:

## A CUSTOMER PERSPECTIVE

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# 1 EXECUTIVE SUMMARY

1.1 On 4th June 2007, the Government of Suriname provided operating licenses to two mobile companies – Digicel and Uniqa. The granting of the licenses brought the total amount of mobile service providers in Suriname to three. The objective of this study is to examine the impact of the additional two companies on Suriname's mobile phone sector. Specifically, the study seeks to determine whether or not customers have benefitted from any competition that has taken place in the market so far. These benefits would include: reduced call charges, improved service and call quality and greater options (brands) for customers.

1.2 The analysis undertaken relied on a survey of mobile customers in Paramaribo that was executed during November 2011. The survey was employed due to insufficient data available on the country's mobile sector. Through the use of the survey, aspects of the country's mobile sector and the overall general knowledge of the respondents about the benefits of competition were also captured.

## Key Findings

**Using a random sample of 554 mobile customers the following information was revealed about the Mobile Sector:**

1.3 The data suggests that since Digicel and Uniqa launched their mobile services in Suriname, there has been a significant increase in the number of subscriptions by new and existing mobile phone users. Evidence of some users switching from the incumbent TeleG to new entrants was also observed in the sector. Specifically it was found that:

- The mobile penetration rate for the sample was estimated at 135.6 percent (or 1.3 mobile subscriptions per respondent). This may be as a result of polarised network effects leading to high cross-network call charges (i.e., users may find it more economical to have a subscription with more than one mobile phone operator so as to reduce the need for cross-network calls).

- The data collected suggests that the incumbent mobile provider, TeleG, has the largest market share in Paramaribo (61.4 percent). Uniqa on the other hand holds the lowest market share (8.1 percent) in the city.

- Competition appears to have increased mobile phone access. 17.4 percent of the respondents did not have a mobile phone before the arrival of Digicel and Uniqa on the domestic mobile phone market.

- Promotional specials appear to be the major factor determining respondents' choice of mobile company or companies. However, seem to respondents consider call charges the least when choosing of mobile phone provider(s).

- The survey measured a 14 percent switch in customers from TeleG to the new service providers since December 2007. The sample also showed there was a corresponding gain in new subscriptions by TeleG for the corresponding period of time.

- The introduction of Uniqa and Digicel to the mobile sector also seems to have improved internet access among mobile customers in Paramaribo. Of the respondents who currently have internet on their mobiles, 82 percent did not have this feature prior to the entry of the two newer mobile operators. Moreover, 37 percent of those respondents indicated that they did not have access to the internet at all before the arrival of Digicel and Uniqa on the mobile market.

**Respondents' General Views on the Benefits of Competition**

1.4 Respondents were provided with general statements about the impact of competition between companies on prices, innovation and creativity of firms, and increased options for customers. This was to assess their general knowledge on the benefits of competition, prior to asking them specific questions about the mobile industry. Based on the data it appears that Surinamese are very aware of the expected benefits of having competition among firms.

- 84.7 percent of the respondents indicated that they believe competition between companies is a good thing and 88.4 percent thought that competition was beneficial to consumers

- A total of 86.9 percent of the respondents agreed that competition between companies result in a reduction in the prices of goods and services and 92.4 percent agreed that it delivers a greater variety of goods and services.

- A total of 81.7 percent agreed that with competition, companies have to innovate and become more creative.

- A small majority (54.6 percent) of the respondents agreed that competition was promoted in all sectors of Suriname's economy.

**Customers' Views of the Domestic Mobile Market since the Entry of Digicel and Uniqa**

1.15 Respondents were asked various questions in order to determine if they observed positive changes on the mobile market since Digicel and Uniqa launched their services. In general, mobile customers witnessed an improvement in the sector in terms of choices (brands) and service and call quality. The data collected suggests that:

- Overall, 93.3 percent of the respondents indicated that they were satisfied with the level of competition among the mobile operators in the Surinamese mobile sector.

- In terms of the level of competitive intensity, marketing and promotional initiatives were foremost in the competitive process of attracting customers and gaining market share in the market.

- The level of intensity by the mobile service operators to provide better call quality was rated the lowest by the sample.

- With regards to service quality:

- 69.7 percent of the sample said that they had observed an improvement in customer service since Digicel and Uniqa entered Suriname's mobile market.

- 65.4 percent of the respondents indicated that they have witnessed an improvement in call quality by mobile providers.

- With regards to options:

  - 74.4 percent pointed out that they have seen an increase in types of mobile phones (brands) on the market.

- With regards to prices:

  - 62.7 percent of respondents said that mobile call charges have not fallen since Digicel and Uniqa launched their services in Suriname. This information is however considered to be inconclusive as the majority of the respondents were not actually aware of mobile call charges to begin with.

- Most of the respondents with pre-paid subscriptions (88.0 percent) indicated that there has been an increase in promotional specials by their mobile service provider(s) since the arrival of Digicel and Uniqa on the mobile market.

**Recommendations**

- Increased efforts towards data collection and dissemination by the Telecommunications Authority of Suriname (TAS) to facilitate the competitive process in the mobile market in Suriname. The area of mobile call charges is a particular example since the survey indicated that a significant amount of customers were unfamiliar with local call rates.

- Based on the positive results observed from the mobile sector the Government of Suriname should consider introducing competition in other sectors of the economy.

- Competition advocacy for the business sector and Government agencies in Suriname should be considered by the Commission. This is in order to increase the knowledge about the benefits of competition to these parties. With respect to government agencies in particular, such advocacy may be important since a small majority of respondents believe that competition is not promoted in all sectors in Suriname.

## 2 INTRODUCTION

2.1 As part of its 2011 work programme the CARICOM Competition Commission (Commission) partnered with the Anton de Kom University to examine how competition has impacted the mobile sector of Suriname. The overarching goal of the research was to obtain empirical evidence to feed into the Commission's advocacy programme of promoting the benefits of competition in the CARICOM region.

2.2 Specifically, this study focuses on the impact of the entry of Uniqa and Digicel in 2007, on Suriname's mobile sector. In order to assess the impact of the two new companies, a survey was conducted to capture the views of Surinamese mobile customers to determine whether or not any positive changes have been observed in the domestic mobile sector. The survey was executed during November 2011.

2.3 The survey approach was taken because of the lack of data on the typical telecommunications performance indicators that are usually of interests to policy makers and competition practitioners[2]. The use of the survey also had the added benefit of capturing information on some characteristics of the country's mobile market since statistics in this area are not usually publicly available. Additionally, the survey was used to ascertain the level of awareness of Surinamese to basic concepts relating to competition. Regarding the latter, this information may prove useful for future advocacy work by the Commission in Suriname.

2.4 An important caveat to note is that this mobile study does not look at anti-competitive business conduct as set out under Chapter VIII of the Revised Treaty of Chaguaramas. As such, due to its narrow scope, the study should be considered as preliminary at best and the results could be used as a baseline for future research on the mobile sector in Suriname.

2.5 The outline of the paper is as follows. Section 3 presents a brief review of Suriname's mobile sector. This includes an overview of the sector's

[2] See "*Telecommunications Performance, Reforms and Governance*" by Estache et al. (2006) for the five main dimensions of telecom performance that are of interest to policy makers are fiscal costs, access rates, affordability of services, quality of service and productivity.

liberalisation process, the regulatory environment, the performance of the country's mobile sector over the past seventeen years, as well as a summary of the players in Suriname's mobile sector. Section 4 presents the methodology used and the results of the survey. Section 5 concludes.

## 3 SURINAME'S TELECOMMUNICATION SECTOR

### The Liberalisation Process

3.1 During the latter part of the 1990s, the significance of the liberalisation[3] of the telecommunications industry in the Caribbean came into focus under the structural adjustment and economic programmes that were supported by the International Monetary Fund (IMF) and other international financial institutions[4]. It was believed that the process of reducing barriers to entry would drive competition in the industry, and as a result provide the impetus for new markets and products. However, no real momentum was achieved until regional governments signed on to the General Agreement on Trade in Services (GATS) in 1997.

3.2 Similar to its Caribbean neighbours, Suriname commenced the liberalisation of its telecommunications industry following commitments made under the GATS[5]. In 1998, the Government of Suriname provisionally created a public authority, the Telecommunications Authority Suriname (TAS), to regulate and supervise telecommunications common carriers and service providers[6]. In the same year, a second operator, International Communication Management and Services (ICMS), entered the market, thus creating a duopoly. ICMS however operated until 2002,

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[3] The term liberalisation is used in most of the economic literature as it pertains to the telecommunication industry. This is consistent with the GATS which speak to the liberalisation of services. It is noted that most competitors in the telecommunications industry, and especially in developing countries, are foreign-owned, requiring countries to liberalise these industries.

[4] See "*Implications of the Liberalisation of Telecommunications for the Caribbean*". ECLAC (2002).

[5] It must be noted that Suriname signed on to the GATS in 1995.

[6] See "*Organization Plan Report*" prepared by Telecommunications Authority Suriname (2005).

when the duopoly ended due to problems related to interconnection conditions with Telesur[7].

3.3 In 2004, the Parliament of Suriname enacted the Telecommunications Act (S.B. 2004 No. 151). With the enactment of the Telecommunications Act the legislation that provisionally established the TAS was repealed. Chapter II of the Telecommunication Act established the TAS on a definitive basis. Chapter II of the Telecommunications Act also accords the TAS a more independent status than under the resolution of March 1998.

3.4 Competition was once again introduced to Suriname's mobile sector on April 16th 2007, giving effect to the Telecommunications Act[8]. Intelsur-UTS and Digicel received licenses to operate in the domestic sector. The two companies then launched their services to the public in December 2007.

**The Regulatory Environment**

3.5 As the regulatory body for Suriname's telecommunications industry, TAS in its mission statement sets out to supervise the telecommunications industry as an independent body on the basis of laws and regulations, and in a professional and objective manner introduce, encourage, coordinate and monitor the developments in the liberalised telecommunications industry[9].

3.6 It should be noted that while its mission statement indicates that the decisions of TAS would be objective and decoupled from political influence, the CEO of the institution is appointed for a five-year term by the President of Suriname. In addition, board members are appointed by the Minister of Transport, Communication and Tourism (TC), after recommendation by the supervisory board and approved by the council of

[7] See "Reforming the Telecom Sector: *A Critical Analysis of the Effect on Telesur in Suriname*" by Frijde, Benny L (2008) and the World Trade Organisation 2004 Report on Suriname .
[8] The Telecommunications Act was promulgated in the Bulletin of Acts on 10th March 2007.

[9] See http://www.tas.sr/ for more information about TAS.

ministers. Thus, policy-wise it could prove difficult for TAS to attain and maintain its stated objective of total autonomy from political influence.

3.7 According to Article 3 of the new Telecommunications Act the main tasks of TAS are:

1. To advise the Minister of TCT on telecommunication matters;
2. To prepare concession to be granted and to supervise compliance with its terms;
3. To supervise tariffs of regulated or special assigned services;
4. To grant permits and to supervise compliance with its terms;
5. Responsible for frequency spectrum management and control;
6. To represent the government at international organisations like the ITU, Inter-American Telecommunication Commission (CITEL), Caribbean Association of National Telecommunications Organisations (CANTO) and International Telecommunications Satellite Organization (INTELSAT);
7. To manage the telephone numbering plan;
8. To settle disputes among concessionaires; and
9. To manage a universal service fund.

## SURINAME'S MOBILE PHONE SECTOR

### Overview of the Current Mobile Service Providers in Suriname

3.8 Three mobile service providers currently operate in Suriname. These mobile operators are TeleG, Digicel, and Uniqa.

### A. TeleG

3.9 TeleG is the mobile brand of the state-owned fixed-line operator Telesur. The process that led to the creation of Telesur in 1945 began with the merger of the National Radio Broadcasting Service and the National Telephone Service. The 1945 merger established the National Telegraph and Telephone Service (LLT) which was a state telecom office. In 1973 the legal status of LTT as a governmental department was changed. However, it was clear that the intended changes in the telecommunication industry could not be achieved with the aforementioned legal status. As

such, in 1981 the LTT was transformed into a state-owned entity with a corporate personality and more managerial freedom, named Telesur.[10]

### B. Digicel

3.10 In April 2007, Digicel was awarded a mobile license to operate in Suriname. This led to the company launching its operation in the country in December 2007. Digicel's entry into the Surinamese mobile sector effectively brought an end to the 25-year telecommunications monopoly that was held by Telesur. The company made an initial investment of US $60 million in building a state-of-the-art network[11]. According to Digicel, it employs close to 150 persons in its offices in Suriname. The company also estimated that an additional 1,000 jobs have been created through its local dealerships and partners.

### C. Uniqa

3.11 Uniqa entered the Suriname telecommunications market in 2007, following effectuation of the new Telecommunications Act that liberalised the telecommunication sector. Uniqa is owned by Intelsur and United Telecommunications Services (UTS) which is a Suriname-Curacao joint-venture. At its launching ceremony the company's officials disclosed that the company invested up to US $20 million in its operations.

### D. Market Shares as at April 2008

3.12 As the only mobile operator in Suriname prior to December 2007, TeleG controlled 100 percent of the domestic mobile market. However, according to Frijde (2008), within the first five months of Digicel and Uniqa launching their mobile services, TeleG appeared to lose 36 percent of its market share (**see Figure 1**).

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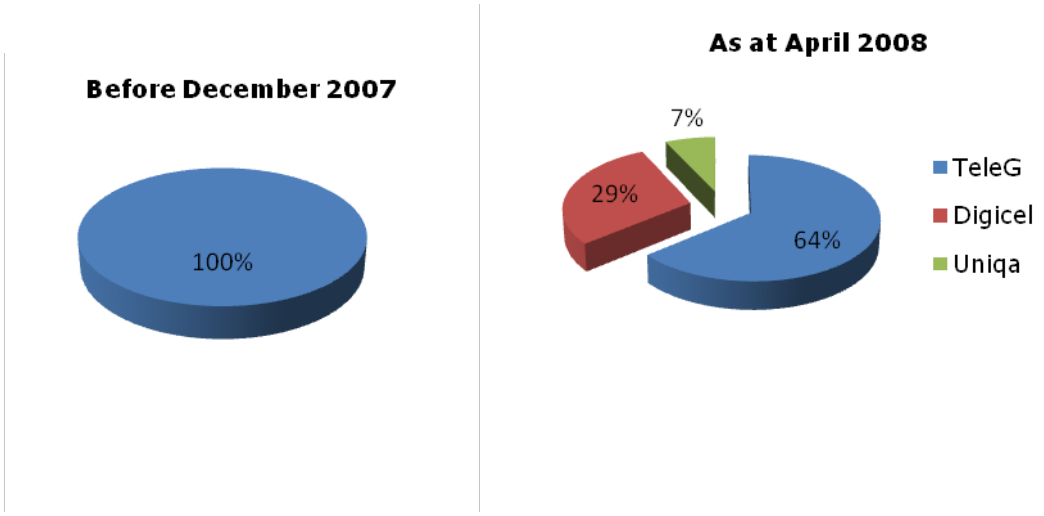
[10] See "*Reforming the Telecom Sector: A Critical Analysis of the Effect on Telesur in Suriname*" by Benny L. Frijde (2008).

[11] For more information about Digicel's launch in Suriname see http://www.digicelgroup.com/en/media-center/press-releases/achievements/digicel-launches-in-suriname

**Figure 1: Mobile Market Shares in Suriname as at 2008**




Source: Adapted from Frijde (2008)

3.13 Frijde (2008) also indicated that during the five months leading up to April 2008, TelesG's market share basically remained constant. This led to the conclusion that TelesG's loss of market share was as a result of an increase in the size of Suriname's mobile market. Frijde (2008) indicated that the increase in market size was attributed to two factors: firstly, TeleG and Digicel extended their mobile services to a small part of the interior; and secondly, during the initial phase of competition, numerous customers subscribed to more than one mobile operator. The multiple subscriptions allowed customers to experience the difference in service quality between competitors and to take advantage of the promotions that arose from the competition that was occurring.

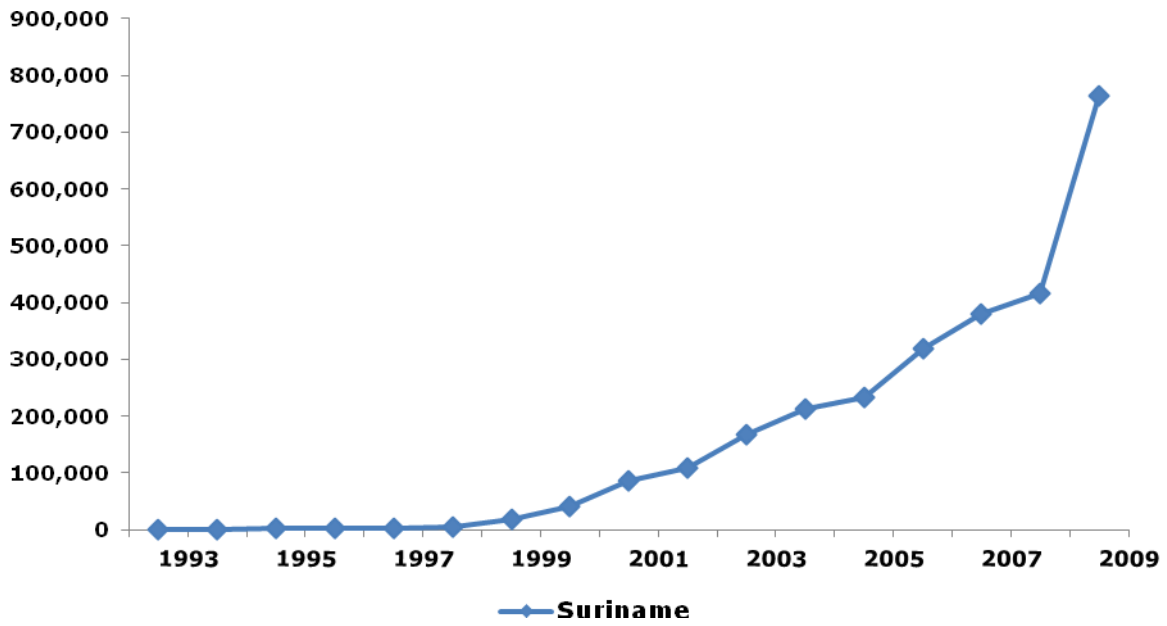
3.14 A major limitation to the current assessment of Suriname's mobile sector is the lack of public data to continue the work of Frijde (2008) on mapping its evolution after April 2008. Efforts to obtain more recent data on mobile subscriptions, sales revenues and employment statistics from the three mobile operators were unsuccessful. TAS was also contacted for assistance given it supplies data on the telecommunications sector to several international agencies. However, permission was not granted from the mobile operators to disseminate their individual data.

### E. Performance of Suriname's Mobile Sector from 1993 to 2009

3.15 The mobile sector in Suriname developed considerably over the period 1993 to 2009. According to the International Telecommunications Union (ITU), in 1993 the country registered 1,078 mobile telephone subscriptions (**see Figure 2**). For a national population, estimated at 424,312 during that year, this means that only 0.25 percent of Suriname's population had a mobile subscription.

3.16 However, since 1993 the number of mobile subscriptions in the country has steadily increased. This development is typical in most countries as mobile subscriptions are often positively influenced by the growing affluence of populations over time, increased competition, as well as the continuous adoption of new technologies. **Figure 2** also shows that the total number of mobile subscriptions in Suriname increased by 82 percent in 2009 over the estimates recorded for 2008. It is noted that this sharp increase came a full year after Digicel and Uniqa started to provide their mobile services in Suriname. As such, the entry of the two companies may be regarded as having a positive effect on mobile subscriptions in the country.

**Figure 2: No. of Mobile Subscriptions in Suriname (1993-2009)**

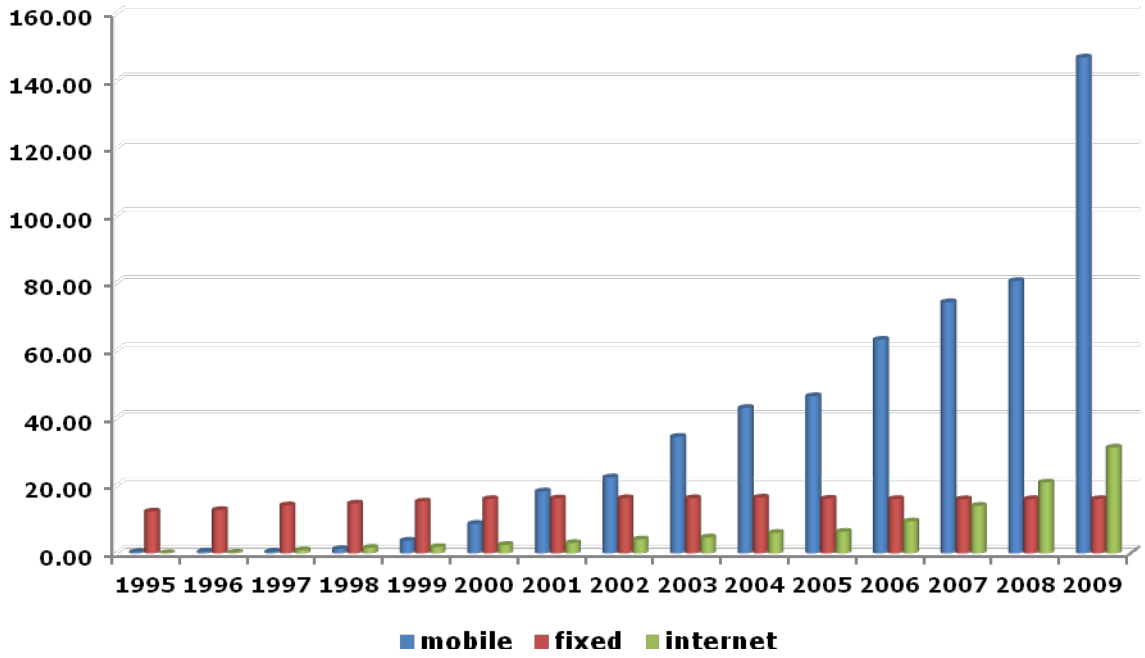



Data Source: International Telecommunications Union (ITU)

### F. Comparison of Mobile Market to other telecommunication subsectors

3.17 The development of Suriname's mobile sector has over the years outpaced other domestic telecommunication sectors such as fixed-line subscriptions and internet. **Figure 3** presents a graphical depiction of the mobile, fixed-line and internet penetration statistics for Suriname. From the graph it can be seen that in 2009, Suriname's fixed line penetration was estimated at 16.1 percent. This represents an increase by 3.69 percentage points over the 12.4 percent that was recorded in 1995.

**Figure 3: Mobile, Fixed-line and Internet Penetration in Suriname (1995-2009)**




Data Source: International Telecommunications Union (ITU)

3.18 **Figure 3** also shows that internet penetration increased significantly in 2009 to reach 31.4 percent from the 0.1 percent recorded in 1995. It is noted however, that pace of the development of the internet sector is still not as comparable to what have been witnessed in the mobile sector.

3.19 The rapid growth of Suriname's mobile sector relative to its other telecommunications sectors may be explained by Vogelsang (2009)[12] who suggested that several factors have contributed to the accelerated pace of the mobile sectors in developing countries. These factors include:

a) the lack of a full fixed network penetration in developing economies;
b) mobile networks can be laid out more quickly than fixed telephone lines;
c) mobile networks are not necessarily linked to an entrenched fixed network bureaucracy; and
d) Mobile telephony is also quickly making substantial inroads into the internet market that was previously dominated by Digital Subscriber Line (DSL) technology.

## 4 MOBILE CUSTOMER PERCEPTIONS ABOUT COMPETITION IN THE MOBILE SECTOR

4.1 Given the lack of adequate time-series data to allow for a robust econometric assessment of the impact of competition in the mobile sector, a survey of mobile customers was employed. The survey sought to capture information on mobile customers' views on the sector since Digicel and Uniqa launched their services in Suriname. Specifically, under question was whether they observed any improvements in prices of mobile phones, call prices, promotional specials and service quality (both customer service quality and call quality).

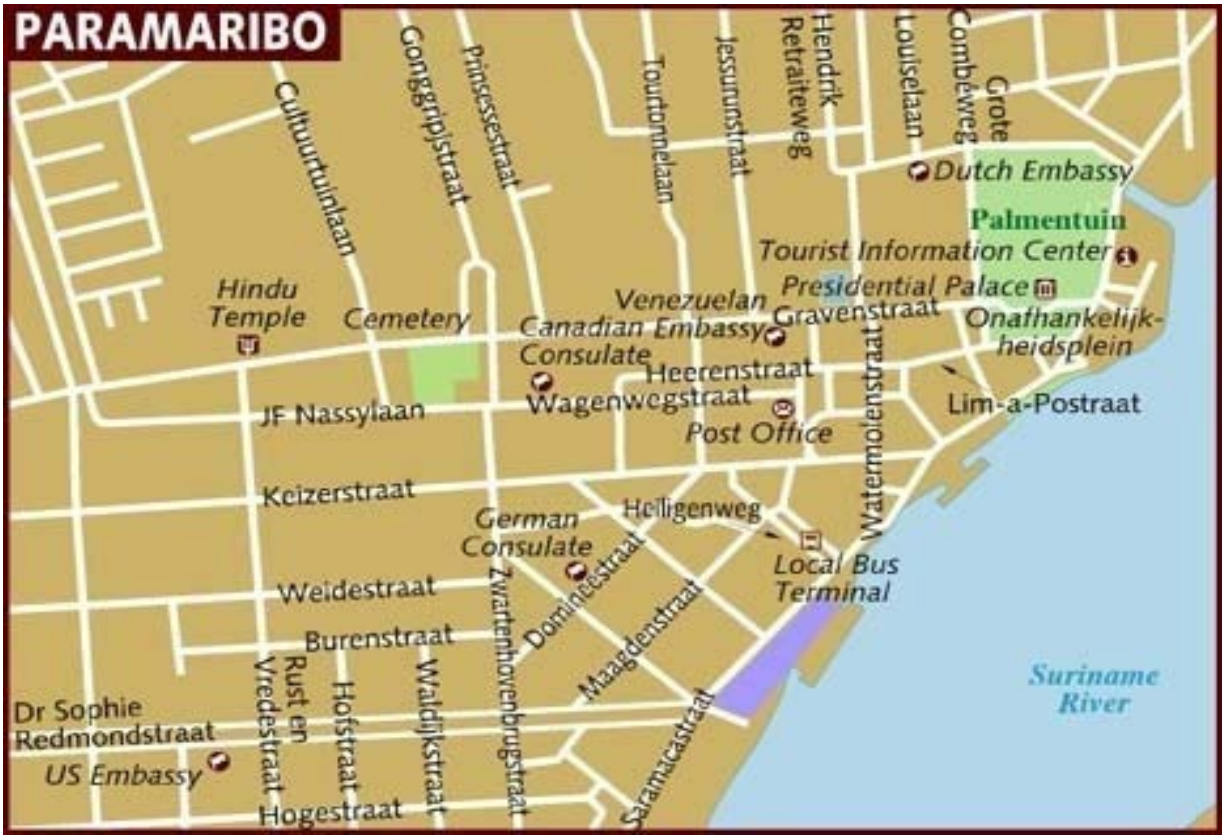
### Survey Methodology

### A. Sample Design

4.2 Suriname is approximately 64,000 square miles and has an estimated population of 490,000 inhabitants. As a result of the country's relatively large size, the survey concentrated on Paramaribo, the country's capital and where more than half of the population resides (**see Figure 4 for a map of Paramaribo**).

[12] See "*The Relationship between Mobile and Fixed Line Communications: A Survey*" prepared by Ingo Volgensang dated 2009.

**Figure 4: Map of Paramaribo**




4.3 A two-stage sampling procedure was employed where: firstly, a randomised cluster sample of 600 households[13] in Paramaribo was obtained, and secondly, one person was randomly selected from each household to participate in the survey. Regarding the cluster sample, this method was chosen based on the following factors:

a) Limited resources (including both financial and human resources) for the exercise;
b) The need for the survey to be undertaken in as quick a time as possible; and
c) The nature of the study (customer perceptions).

[13] The objective was obtain a final sample size that would have provided as small a margin of error at the 95 percent confidence level as possible. For the population of Paramaribo, a sample of 600 households would give a 4 percent margin of error. It is however recognized that by the use of the cluster sample technique the margin of error may be a bit higher.

4.4 The sample was provided by the General Statistics Bureau of Suriname (GBS) and is based on the country's 2004 population census statistics.

### B. Respondent Selection

4.5 The random selection of individuals from each of the 600 households was done by having the enumerators identify the individual (mobile customer of 18 years or older) in the household with the most recent birthday. This approach was used since birthdays are socially noteworthy, and hence it is likely that an arbitrary initial respondent would be able to identify who in the household would have most recently marked this occasion.

### C. Students and Faculty Members

4.6 The interview-based survey was conducted by 30 students from the Anton de Kom University. These students were recruited by two lecturers of the University and were subjected to an initial interview before being selected to participate in the survey.

### D. Survey Instrument

4.7 The final questionnaire contains a brief introductory paragraph intended to inform the respondents about the objectives of the survey. This introductory segment is then followed by 27 questions that can be broadly classified into four categories (**see Appendix 1**). The first category of questions sought to capture demographic information about the sample, such as the sex, age, and income of the respondents. Other information also captured including the name of the respondent and his/her contact number. This information was also important for the Commission to apply back-stopping measures to ensure that the students went to their assigned households.

4.8 A second category of questions sought to test the respondents' general knowledge about the effects of competition on markets. Particularly, if they agree that competitive pressure lowers prices, increases the range of choices of consumers and promotes innovation within firms. This was to

ensure that the likelihood of biased responses with respect to the mobile sector was reduced.

4.9 The third set of questions focused on obtaining information on aspects of the domestic mobile sector. This included market share information as well as factors that determine why customers choose particular mobile service operators.

4.10 The fourth and final set of questions pertained to competition in the domestic mobile sector. Specifically, in this section respondents were asked to provide their views on whether they are satisfied with the level of competition in the mobile sector, the intensity of the efforts of mobile service providers in certain areas such as marketing and promotion and the pricing of products to mention a few.

4.11 It must be noted, that prior to the actual enumeration of the final survey, the questionnaire was first pilot-tested using students of the Anton de Kom University. Feedback was obtained on the clarity of the survey instrument, as well as recommended thresholds for such variables as age and whether or not to use income ranges or employment status.

## SURVEY RESULTS AND ANALYSIS

### Demographic Profile of Respondents

4.12 As mentioned previously, the randomised sample employed consisted of 600 households in Paramaribo from which one mobile customer was randomly selected to participate in the survey. This would have provided a sample of 600 mobile customers. However, the total number of respondents eventually interviewed by the students amounted to 554, resulting in a success rate of 92.3 percent[14].

[14] Factors that did not allow for the full survey included: individuals not wanting to participate in the survey, some students were unable to contact several of the targeted individuals indicated by the selection criteria, the sample was based on the 2004 population census therefore some of the households were now businesses and in one case a school, and in some households the occupants were very old and did not own a mobile phone.

4.13 **Table 1** presents the demographic information of the sample. **Table 1** shows that of the total number of mobile customers interviewed, female respondents accounted for 55.3 percent of the sample, while 44.7 percent of respondents were male.

**Table 1: Demographic Information of the sample**

| Gender of Respondents | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| Male | 246 | 44.7 | **44.7** |
| Female | 304 | 55.3 | **100.0** |
| Missing System | 4 | | |
| **Total** | **554** | **100.0** | |
| **Age of Respondents** | **Frequency** | **Percent** | **Cumulative Percent** |
| 18-25 | 120 | 21.7 | **21.7** |
| 26-35 | 123 | 22.3 | **44.0** |
| 36-45 | 126 | 22.8 | **66.8** |
| 46-55 | 86 | 15.6 | **82.4** |
| 56-65 | 55 | 10.0 | **92.4** |
| Over 65 | 42 | 7.6 | **100.0** |
| Missing System | 2 | | |
| **Total** | **554** | **100.0** | |
| **Employment status of Respondents** | **Frequency** | **Percent** | **Cumulative Percent** |
| Self employed | 82 | 14.8 | **14.8** |
| Employed for wages/salaries | 226 | 40.8 | **55.6** |
| Unemployed | 34 | 6.1 | **61.7** |
| Housewife/husband | 48 | 8.7 | **70.4** |
| Full-time student (school only) | 80 | 14.4 | **84.8** |
| Part-time student | 24 | 4.3 | **89.2** |
| Retired | 57 | 10.3 | **99.5** |
| Unable to work (disabled) | 3 | 0.5 | **100.0** |
| **Total** | **554** | **100.0** | |

4.14 With regards to age, individuals in the 35 to 45 age range accounted for 22.8 percent of responses. On the other hand, persons over the age of 65 represented only 7.6 percent of the mobile customers sampled.

4.15 The survey also captured a range of employment statuses. Respondents who are employed for wages or salaries represented 40.8 percent of the

sample. Self-employed accounted for 14.8 percent. Only 4.3 percent of the respondents indicated that they were part-time students while three (3) individuals or 0.5 percent of the sample pointed out that they were unable to work (physically disabled).

## Information about the Mobile Sector from the Sample

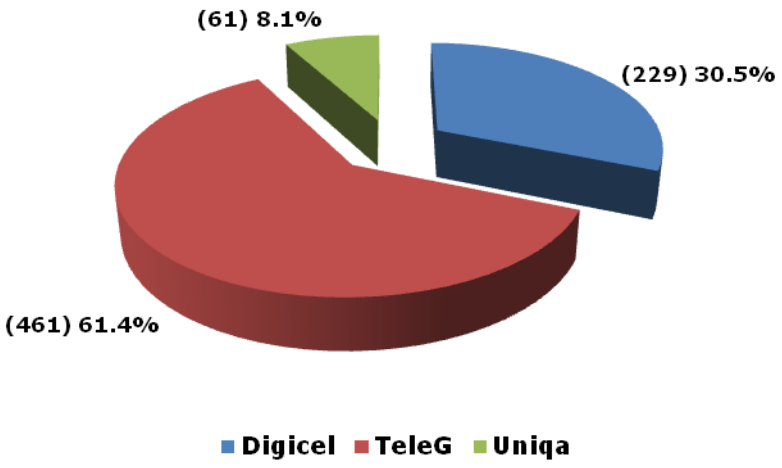
### A. General Information on the Sector

4.16 As mentioned earlier, detailed statistics on the mobile sector in Suriname are not widely available to the public. This section therefore uses data collected from the sample to gain some general insights into the sector. Respondents were asked to identify the mobile provider(s) that they are currently subscribed to. The data collected showed that for the 554 mobile customers interviewed, the total number of mobile subscriptions held was 759. This suggests a mobile penetration rate of 135.6 percent (or approximately 1.4 mobile subscriptions per individual) for the sample.

4.17 The high mobile penetration may be due to the prohibitive charges for cross-network call charges. As a result, mobile customers in most cases seem to prefer to subscribe to more than one mobile operator to avoid these charges. Additionally, as pointed out by Frijde (2008), multiple subscriptions allow these mobile customers to capitalise on any promotional specials that are available from the various mobile companies.

4.18 **Figure 5** provides a graphical depiction of the market share of the mobile operators derived from the sample. From the diagram, it can be seen that 61.4 percent of the respondents have mobile subscriptions with TeleG, while 30.5 percent and 8.1 percent have subscriptions with Digicel and Uniqa respectively.

**Figure 5: Current Mobile Subscriptions of the Sample**




4.19 The mobile market shares of the sample shown in **Figure 5** vary slightly from the national market shares calculated by Frijde (2008) for April 2008 (**see page 9**). Therefore, it appears that TeleG is the dominant mobile provider in Paramaribo and most likely across Suriname as a whole.

4.20 The information on mobile service providers was also analysed based on age (**see Table 2**). From **Table 2** it can be seen that TeleG was the leading mobile service provider in all age demographics. The table also shows that the 36 to 45 age group were the highest subscribers to TeleG, representing 24.2 percent of the total number of the company's subscribers. The 18 to 25 age group followed close behind with 24.1 percent.

**Table 2: Subscriptions to mobile service providers by age demographic**

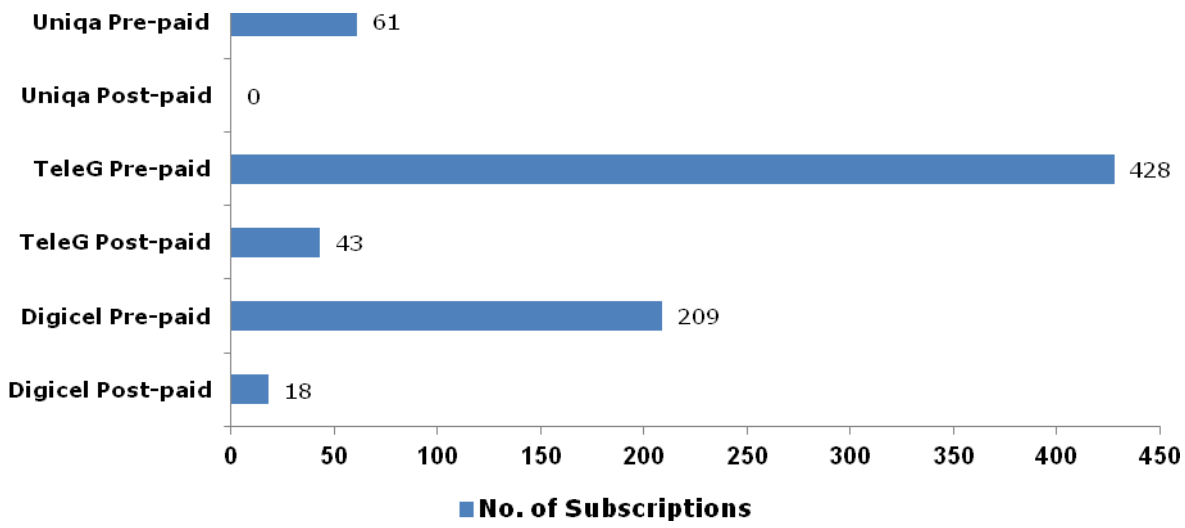
| Ages of Respondents | TeleG | Digicel | Uniqa | Total |
|---|---|---|---|---|
| 18-25 | 95 | 67 | 18 | **180** |
| 26-35 | 103 | 52 | 12 | **167** |
| 36-45 | 110 | 54 | 17 | **181** |
| 46-55 | 73 | 29 | 6 | **108** |
| 56-65 | 44 | 15 | 6 | **65** |
| Over 65 | 34 | 12 | 1 | **47** |
| **Total** | **459** | **229** | **60** | **748** |

4.21 It was also noted that for the respondents over the age of 65, 72.3 percent were subscribers to TeleG. This suggests that most of the older respondents have remained loyal to the incumbent mobile service provider. In contrast, **Table 2** shows that the 18 to 25 age group were the main subscribers to both Digicel and Uniqa, suggesting that competition in the domestic mobile sector may be largely driven by this demographic.

### B. Information on Pre-paid and Post-paid services

4.22 Respondents were further asked to reveal the types of mobile packages to which they are currently subscribed. From **Figure 6** it can be observed that the respondents from the sample favoured pre-paid services, irrespective of the mobile provider. In fact, pre-paid subscriptions accounted for 92 percent of the subscriptions held by the sample.

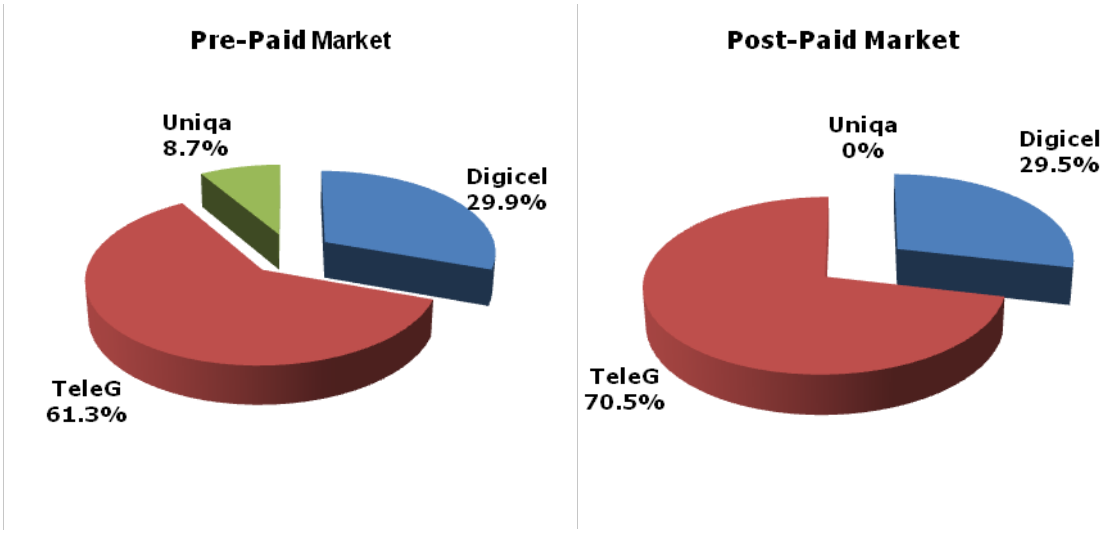
**Figure 6: Pre- and Post-paid Mobile Subscriptions by Service Provider**




4.23 **Figure 7** also shows that the vast majority of respondents currently utilise the TeleG pre-paid service. From the information collected, TeleG holds 61.3 percent of the total number of pre-paid subscriptions. It was noted that TeleG also holds 70.5 percent of the total post-paid

subscriptions for the sample. None of the respondents had a Uniqa post-paid subscription.

**Figure 7: Comparison of Pre- and Post-paid Subscriptions by Service Provider**




## C. Information from the Sample on Mobile Usage

4.24 The survey also collected information on the number of mobile service providers that respondents are subscribed to. **Table 3** shows that of the 554 persons interviewed, 70 percent currently use only one mobile provider while 133 (24 percent) use two mobile service providers. Only 6 percent of the respondents indicated that they use all three of the mobile service providers operating in Suriname's mobile sector. In many market it is challenging for new entrants to compete against established companies. These findings may possibly support this idea as well as indicate that for a substantial proportion of mobile users, the services of the three providers are not regarded as substitutes.

**Table 3: Total No. of mobile service providers subscribed to**

| Total Number of Mobile Providers | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| One provider | 388 | 70.0 | **70.0** |
| Two providers | 133 | 24.0 | **94.0** |
| Three providers | 33 | 6.0 | **100.0** |
| **Total** | **554** | **100.0** | |

4.25 **Tables 4 and 5** summarise the number of mobile providers that respondents subscribe to broken down by their age groupings and employment statuses respectively. From **Table 4** it is revealed that 22.5 percent of respondents that utilise only one mobile service provider are within the 26 to 35 age category. This was closely followed by those respondents within the 36 to 45 age range. On the other hand, respondents in the 18 to 25 age group recorded the highest number of mobile users that utilise two mobile service providers. Respondents within the 18 to 15 and 36 to 45 age groups were also the highest mobile users that utilise all three service providers.

**Table 4: Total No. of mobile service providers subscribed to by age**

| Ages of Respondents | Number of Providers Subscribed To | | | Total |
|---|---|---|---|---|
| | One Provider | Two Providers | Three Providers | |
| 18-25 | 69 | 42 | 9 | **120** |
| 26-35 | 87 | 28 | 8 | **123** |
| 36-45 | 80 | 37 | 9 | **126** |
| 46-55 | 66 | 17 | 3 | **86** |
| 56-65 | 48 | 4 | 3 | **55** |
| Over 65 | 37 | 4 | 1 | **42** |
| **Total** | **387** | **132** | **33** | **552**[15] |

4.26 With respect to employment status, respondents employed for wages and salaries had the highest usage recorded (**see Table 5**). However, 30.5 percent of the respondents within this category indicated they were subscribed to more than one mobile operator. On the other hand, while full-time students were the second highest number of users of both two and three mobile service providers 43.8 percent of these respondents were subscribed to more than one mobile service provider. The data nonetheless does not provide any evidence that there is a significant relationship between income and the usage of more than one mobile operator. This is based on the low uptake of services from additional mobile operators by the other non-income groups.

[15] Note that two persons did not indicate their age. As such the total number of observations for this query was 552 instead of 554.

**Table 5: Total No. of mobile service providers subscribed to by employment status**

| Employment Status of Respondents | Number of Providers Subscribed To | | | Total |
|---|---|---|---|---|
| | One Provider | Two Providers | Three Providers | |
| Self employed | 58 | 19 | 5 | **82** |
| Employed for wages/salaries | 157 | 55 | 14 | **226** |
| Unemployed | 25 | 8 | 1 | **34** |
| Housewife/husband | 37 | 10 | 1 | **48** |
| Full-time student | 45 | 28 | 7 | **80** |
| Part-time student | 15 | 6 | 3 | **24** |
| Retired | 48 | 7 | 2 | **57** |
| Unable to work | 3 | 0 | 0 | **3** |
| **Total** | **388** | **133** | **33** | **554** |

### D. Determinants for Choosing Mobile Service Providers

4.27 This section attempts to identify some of the elements that affected the respondents' choices of current mobile service providers. The respondents were provided with several possible factors that an average person may tend to consider when they are choosing a mobile service provider. These factors include: the prices of calls (call charges), the prices of the phones sold, and the reputation of the mobile service provider to name a few.

4.28 Using a five-point rating system (1 being the lowest and 5 the highest) the respondents were asked to evaluate each of the factors in terms of importance. The mean responses of the sample were then calculated in order for analysis to be undertaken within and across the three mobile service providers operating in Suriname (**see Table 6**).

4.29 **Table 6** suggests that promotional specials offered by mobile service providers are the major factor that respondents in the sample considered when choosing their current mobile service provider(s)[16]. Network

[16] The results were compared to those of "*A Review of the Jamaican Telecommunications Sector*" prepared by the Fair Trading Commission and the Office of Utility Regulation in 2007. The study showed that call charges are the most important factor Jamaicans consider when thinking of subscribing to a mobile operator. It is possible that call charges are more transparent in Jamaica than in Suriname, leading to contrasting results.

coverage of mobile providers was rated second overall, followed by the reputation of the service provider and then having family and friends on the same network[17]. Most notable was the fact that the prices of the phones sold by mobile service providers recorded the lowest score among the factors rated.

**Table 6: Determinants for choosing mobile service providers**

| On a scale of 1-5 how important were the following in helping you to choose your mobile service provider(s) | Mean Scores | | | MEAN |
|---|---|---|---|---|
| | Digicel | TeleG | Uniqa | |
| Network coverage of the mobile service provider | 4.13 | 4.01 | 3.42 | **3.85** |
| Prices of phones from the mobile service provider | 3.50 | 3.55 | 3.27 | **3.44** |
| Prices of calls from the mobile service provider | 3.44 | 3.51 | 3.88 | **3.61** |
| Packages offered by the mobile service provider | 3.56 | 3.51 | 3.40 | **3.49** |
| Friends and family having the same mobile service provider | 3.81 | 4.02 | 3.07 | **3.63** |
| Reputation of the mobile service provider | 3.91 | 3.78 | 3.47 | **3.72** |
| Types of phones sold by the mobile service provider | 3.70 | 3.68 | 3.03 | **3.47** |
| Specials offered by the mobile service provider | 4.22 | 4.29 | 4.07 | **4.19** |

4.30 **Table 6** also shows that for respondents who are subscribed to Digicel, the lowest level of importance was given to the prices charged for calls by the mobile operator. However, for TeleG, the area of lowest importance for its customers when they made the decision to subscribe to this mobile operator was the mobile packages that the company offered. Uniqa's customers on the other hand indicated that the types of phones sold by the company as well as family and friends being on the same network,

[17] In the above-mentioned Telecommunications study in Jamaica, network coverage was also rated as the second major factor considered when choosing a mobile operator.

were the least important factors in their decision to subscribe to this service.

### E. Comparison of the Pre- and Post-Liberalised Mobile Sector in Suriname

4.31 The introduction of competition to a market often results in some customers switching from the product (or service) of an incumbent firm to those of rival companies. Respondents were therefore asked if they had a subscription with the incumbent mobile service provider (TeleG) before Digicel and Uniqa were introduced to the domestic mobile sector in December 2007.

4.32 A comparison between the number of respondents who are currently subscribed to TeleG and those who had the service before competition began is presented in **Table 7**. The table shows that prior to December 2007, 457 or 82.6 percent of respondents had a TeleG mobile subscription, while the other 96 (17.4 percent) did not. This finding in itself suggests that competition may have impacted positively on mobile penetration for the sample. However, in order to truly determine the role of competition on mobile penetration in Suriname an econometric assessment would be required[18].

**Table 7: Comparison of mobile subscriptions before and after Digicel and Uniqa launched their services in Suriname**

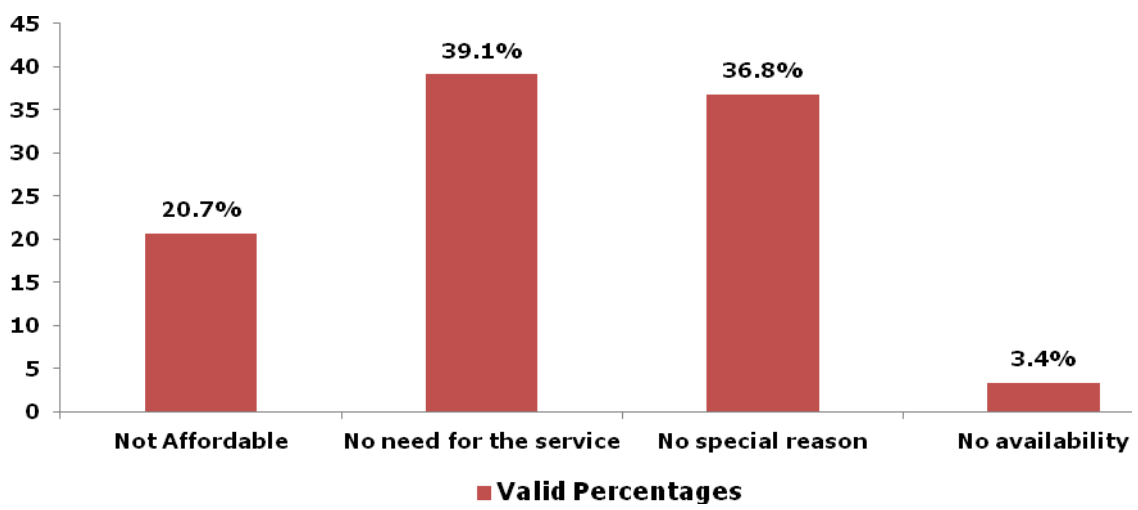
| Subscriptions to TeleG | Were you subscribed to Tele before competition was introduced into Suriname's mobile sector? | | Total |
|---|---|---|---|
| | Yes | No | |
| Yes | 396 | 61 | **457** |
| No | 64 | 32 | **96** |
| **Total** | **460** | **93** | **553** |

[18] See for example "*An Assessment of Telecommunications Reform in Developing Countries*" by Fink et al. (2002) and "*An Econometric Analysis of Telecom Competition, Privatization, and Regulation in Africa and Latin America*" by Wallsten (2001). Both research efforts used econometric models to examine the impact of competition on fixed-line penetration.

4.33 **Table 7** further reveals that of the 460 respondents that had TeleG service before competition was introduced into Suriname's mobile sector, 396 or 86.1 percent were still currently subscribed to this mobile service provider. It is notable that although 64 of TeleG's customers switched to other mobile service providers since competition recommenced in the market in December 2007, the company attracted 61 new subscribers during the same period. Therefore, with respect to the sample, the level of subscriptions of TeleG appears to have remained almost the same before and after Digicel and Uniqa arrived on the mobile market. This finding is also consistent with what Frijde (2008) observed at the aggregate level.

4.34 As a follow-up question for persons who did not have a mobile phone before competition started, the enumerators were instructed to investigate the reason for this occurrence. It was found that 39.1 percent of the respondents stated they had no need for the service; while 36.8 indicated there was no special reason for not having a mobile phone prior to the arrival of Digicel and Uniqa on the market (**see Figure 8**). Most notable, is the fact that 20.7 percent of the respondents highlighted that they could not afford to have a mobile phone. This statistic possibly suggests that mobile phones in Suriname have become more affordable since December 2007.

**Figure 8: Reasons for not having a Mobile Phone before the arrival of Digicel and Uniqa**



4.35 An analysis of the sample's usage of the internet on their mobile phones before and after Digicel and Uniqa launched their services was also conducted. This was in order to determine if the respondent's access to the internet had improved since the two mobile operators launched their services. The enumerators therefore asked respondents whether or not they currently have internet on their phones, as well as if they had the service prior to the period in which competition in the mobile sector recommenced in December 2007. The cross-tabulated responses to the two questions are presented in **Table 8**. The table shows that from the 194 respondents with internet on their mobiles, 82 percent did not have access to this mobile phone service before that period.

**Table 8: Comparison of the level of internet access on mobiles before and after Digicel and Uniqa launched their services in Suriname**

| | Before competition began in the mobile market did you have access to the internet on your mobile phone? | | Total |
|---|---|---|---|
| | Yes | No | |
| Currently have access to the internet with your mobile phone(s)? | 35 | 159 | 194 |

4.36 Further analysis was conducted to determine if there were any respondents who, prior to competition on the market, had no access to the internet at all (e.g. home or work), but now have the internet on their mobiles. From the cross-tabulated responses, 37 percent of the 189 respondents that currently have internet on their mobiles, did not have access to the internet at all prior to the entry of Digicel and Uniqa on the mobile market. Based on this finding it appears that the entry of the two additional mobile operators has improved internet access in Suriname.

**Summary Note (1)**

4.37 The market information obtained from the sample showed that Suriname's mobile sector is driven by pre-paid subscriptions, with specials being the main basis for customers choosing the service operator that they

subscribe to. The survey also suggests that TeleG, the incumbent mobile service provider remains dominant in Paramaribo's mobile sector. Information from the sample further indicates that although the size of the mobile market has increased since December 2007, the number of mobile users that have switched from TeleG to take advantage of the newer providers, have been replaced almost equally by new TeleG subscriptions. As such, the mobile subscriptions for TeleG remained fairly constant. The data also suggest that there is still a lot of inertia with regards to existing customers of TeleG Moreover, given that this is an oligopolistic market structure with some users not substituting the services of these providers (i.e., having more than one subscription) it is not entirely clear that there is vigorous competition in the market except within the 18 to 24 age demographic.

**Respondents' General Understanding about the Concept of Competition**

4.38 Prior to substantive inquiries about the domestic mobile sector, the respondents were asked a series of general questions pertaining to competition. This was in order to test their views on the concept of competition in general and in Suriname in particular.

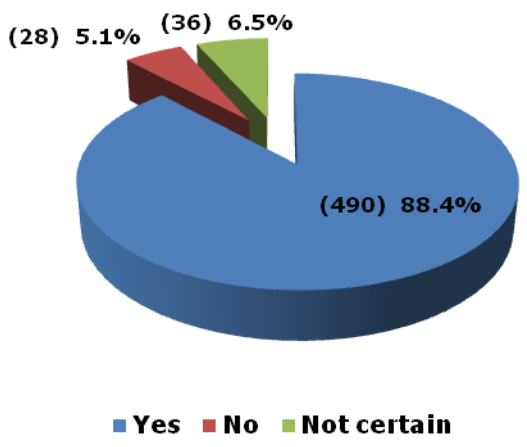
4.39 The respondents were first asked to offer their general opinion on competition between companies. Specifically, they were provided with a menu of options ranging from "very good" to "very bad" from which to choose. From the responses, 84.7 percent indicated that they thought that competition between companies was either very good or simply just good (**see Table 9**). However, 10.1 percent revealed that they were not certain about the results of competition between firms. Only 5.2 percent of respondents thought that competition between companies was either very bad or just bad.

**Table 9: Respondents' general opinion on competition between companies**

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| Very good | 117 | 21.2 | **21.2** |
| Good | 351 | 63.5 | **84.7** |
| Not certain | 56 | 10.1 | **94.8** |
| Bad | 25 | 4.5 | **99.3** |
| Very bad | 4 | 0.7 | **100.0** |
| Missing System | 1 | | |
| **Total** | **554** | **100.0** | |

4.40 Respondents were then asked if in their opinion competition between companies is beneficial to customers. From the responses, the majority (88.4 percent) indicated they believe that competition is beneficial to customers, while 6.5 percent were unsure (**see Figure 9**). A small number, (5.1 percent) of the respondents, however believe that competition impacts negatively on customers.

**Figure 9: Respondents' opinion on whether or not competition between companies is beneficial to customers**



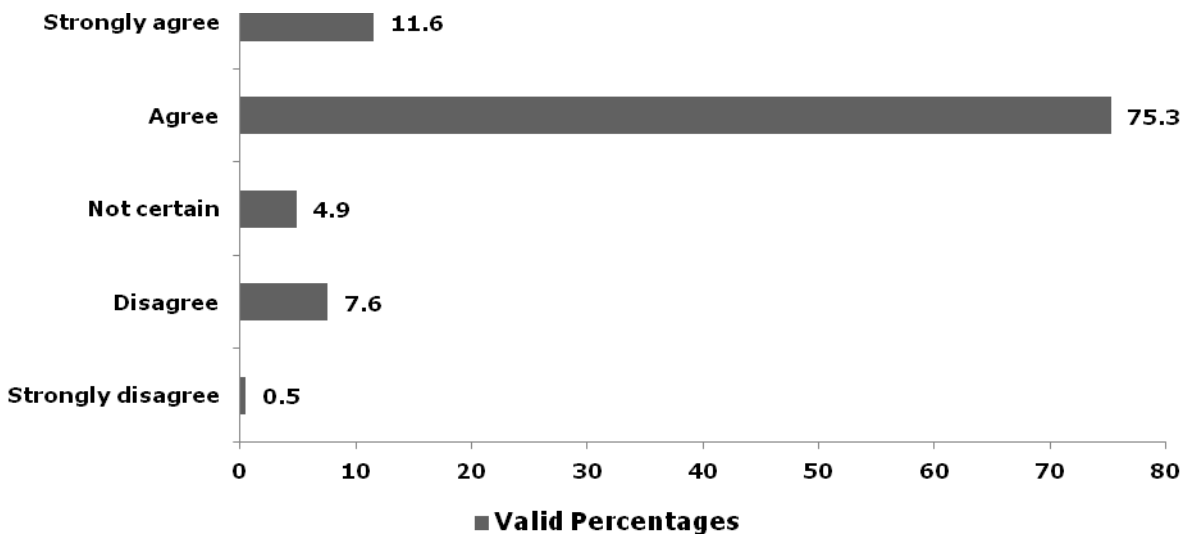

4.41 The enumerators were then requested to read out four general statements about the impact of competition to the respondents. The

respondents were subsequently asked about their opinions on the validity of the statements. Again, a menu of options, this time ranging from "strongly agree" to "strongly disagree", were provided for the respondents to choose from.

**Statement One (1)**

4.42 The first statement recited to the respondents was: "Competition between companies generally results in the reduction in prices of goods and services". **Figure 11** presents the responses from the sample. As shown in **Figure 10**, 86.9 percent of the persons interviewed highlighted they either "strongly agree" or "agree" with the statement. On the other hand, 8.1 of the respondents indicated that they either "strongly disagree" or simply "disagree" with the assertion. Only 4.9 percent of the respondents were "uncertain".

**Figure 10: Respondents' opinions on whether or not competition between companies generally results in the reduction of prices of goods and services**

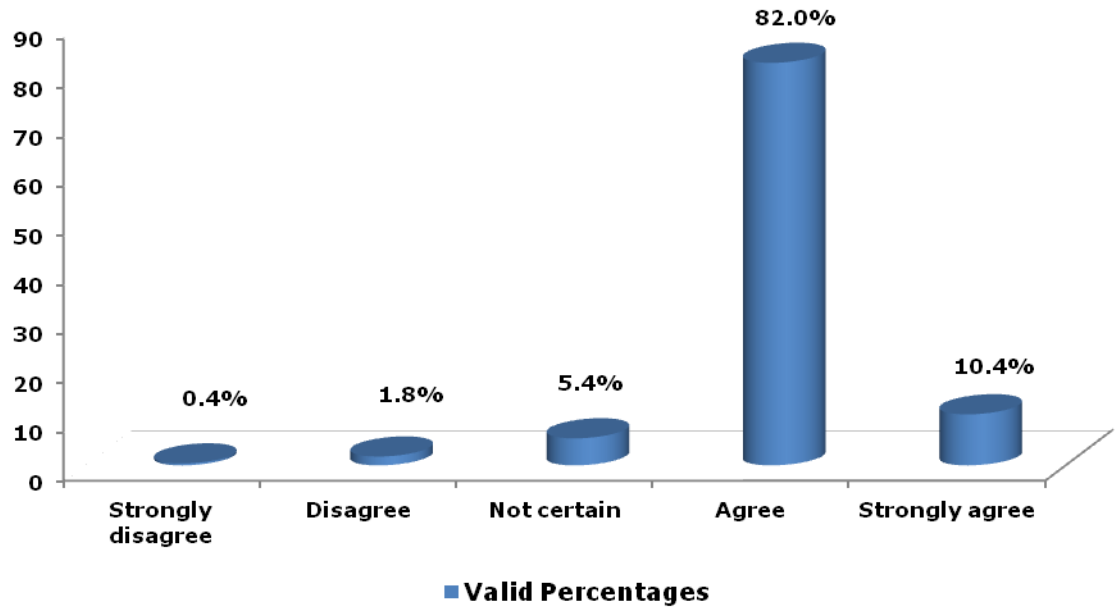



**Statement Two (2)**

4.43 The second statement read to the respondents sought to obtain their opinions one whether competition between companies generally results in a broader array of goods and services in markets. 92.4 percent of

respondents indicated that they either “strongly agree” or “agree” with the statement (**see Figure 11**). Only 2.2 percent of the respondents however “strongly disagree” or “disagree” with the statement, while 5.4 percent were uncertain about the impact of competition on the options of products available to customers.

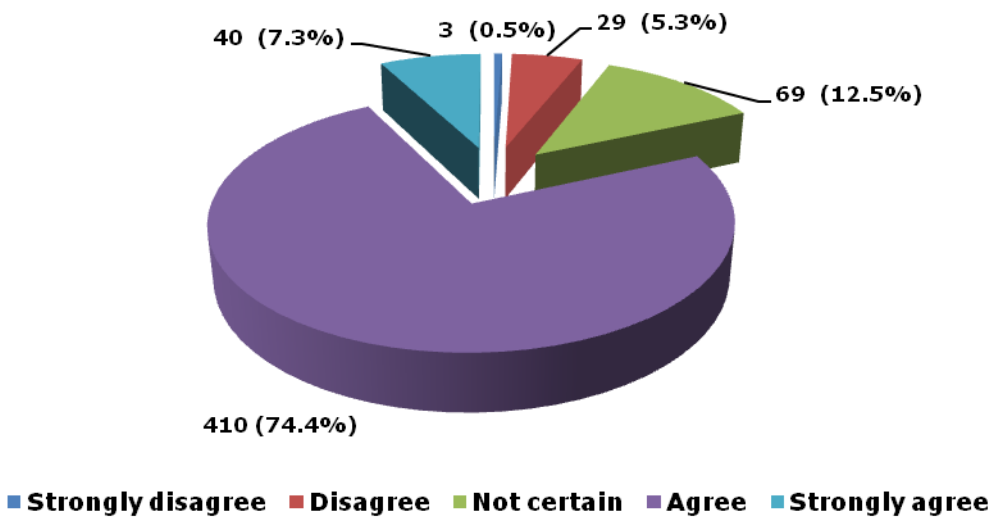
**Figure 11: Respondents' opinions on whether or not competition between companies generally results in a broader array of goods and services on the market**




**Statement Three (3)**

4.44 The third statement sought to determine from respondents if they viewed competition as an impetus for innovation and creativity among companies. In total, 81.7 percent of the persons interviewed indicated they either “strongly agree”, or “agree” with the statement (**see Figure 12**). Most notable perhaps was the fact that 12.5 percent of the respondents were uncertain whether competition had this desired effect on markets.

**Figure 12: Respondents' opinions on whether or not competition between firms generally leads to innovation and increased creativity**

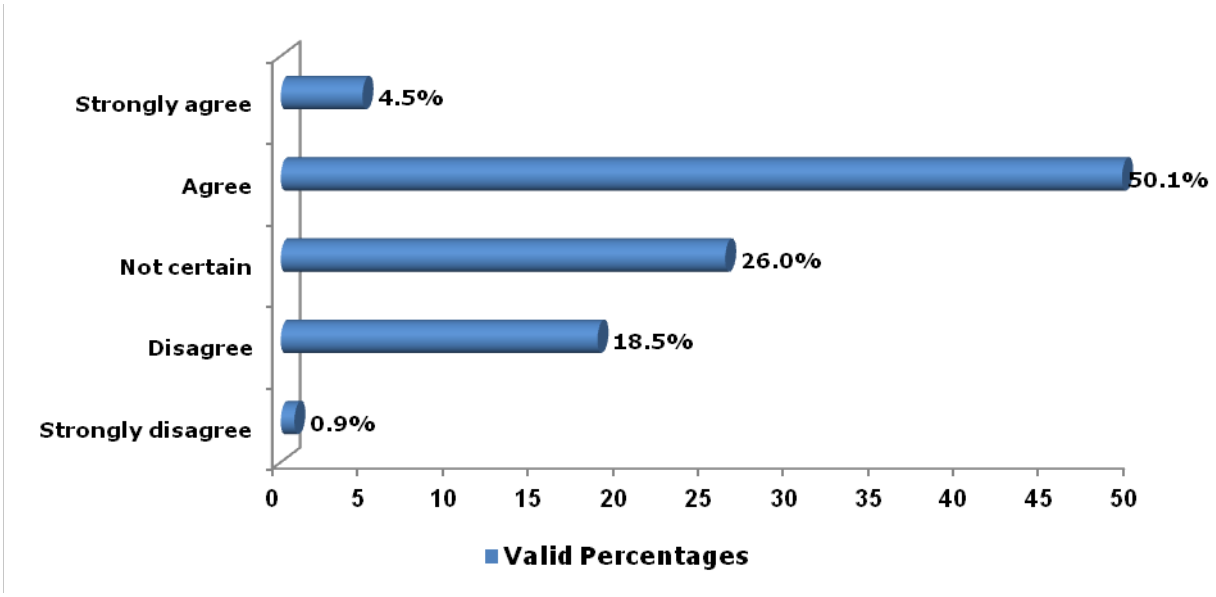



**Statement Four (4)**

4.45 The fourth and final statement served as a test of the respondents' general views of competition in Suriname. Specifically, the enumerators read the statement: "In Suriname competition between companies is promoted in all sectors of the economy."

4.46 The reaction to this statement from the sample was much different than the previous questions. Although the majority of respondents (54.6 percent) indicated that that they either "strongly agree" or simply "agreed" with the statement, 26.0 percent were uncertain about the statement's validity (**see Figure 13**). Moreover, 19.4 percent either "strongly disagree" or "disagree" with the statement.

**Figure 13: Respondents' reaction to the suggestion that competition is promoted in all sectors in Suriname**




**Summary Note (2)**

4.47 An initial test was conducted to determine whether the respondents from the sample understood the concept of competition and its benefits. Based on the responses to questions pertaining to the impact of competition on prices, increased options to customers and company innovation to name a few, it was clear that the respondents had a good grasp of the concept of competition and what they should expect in a competitive business environment. The fact that the respondents generally have a good idea about competition therefore makes their responses related to the domestic mobile sector more credible.

## Customers' Perceptions on Competition in the Domestic Mobile Sector

### A. General Observations of Mobile Customers

4.48 This section presents the general views of domestic mobile users, on competition in the mobile sector in Suriname. Firstly, the enumerators were instructed to read three statements to the respondents that related to possible changes in Suriname's mobile market after competition commenced in December 2007. The respondents were then asked about

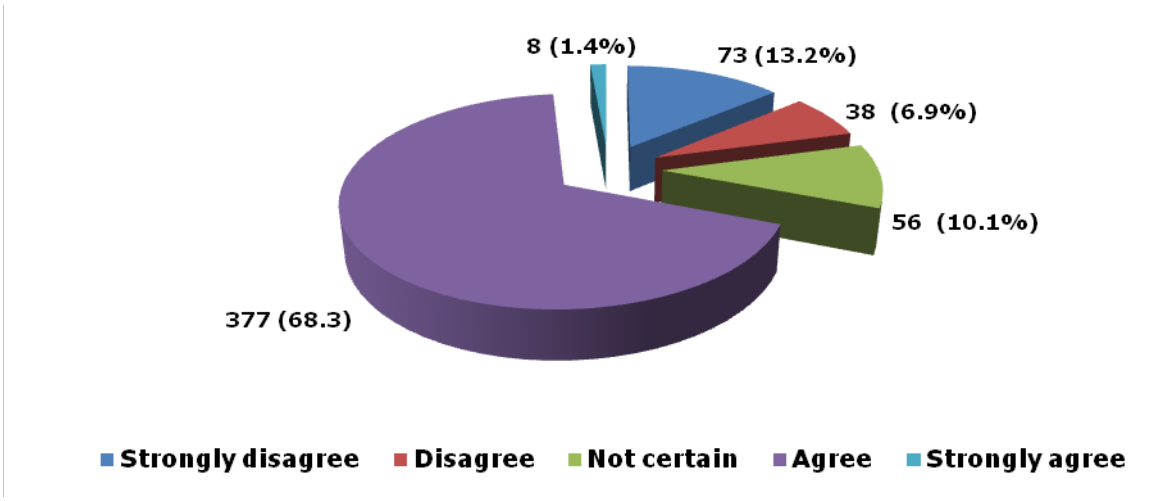
their opinions on the validity of the statements. Again, the menu of options ranging from "strongly agree" to "strongly disagree", were provided for the respondents to choose from.

**Statement One (1)**

4.49 The economic literature has shown that prior to the liberalisation of telecommunications industries in developing countries incumbent service providers were not service-oriented[19]. The first statement that was read to the respondents was that since competition in the mobile sector in Suriname commenced, customer service has improved. In this case customer service referred to after-sales service or customer support.

4.50 **Figure 14** presents a graphical depiction of the responses to the statement from the sample. As shown in **Figure 14**, the majority (69.7 percent) of the persons interviewed highlighted that they either "strongly agree" or "agree" with the statement. On the other hand, 20.1 of the respondents indicated that they either "strongly disagree" or simply "disagree" with the assertion. A small number (10.1 percent) of the respondents were uncertain.

**Figure 14: Customer service has improved since Uniqa and Digicel launched their services in Suriname**

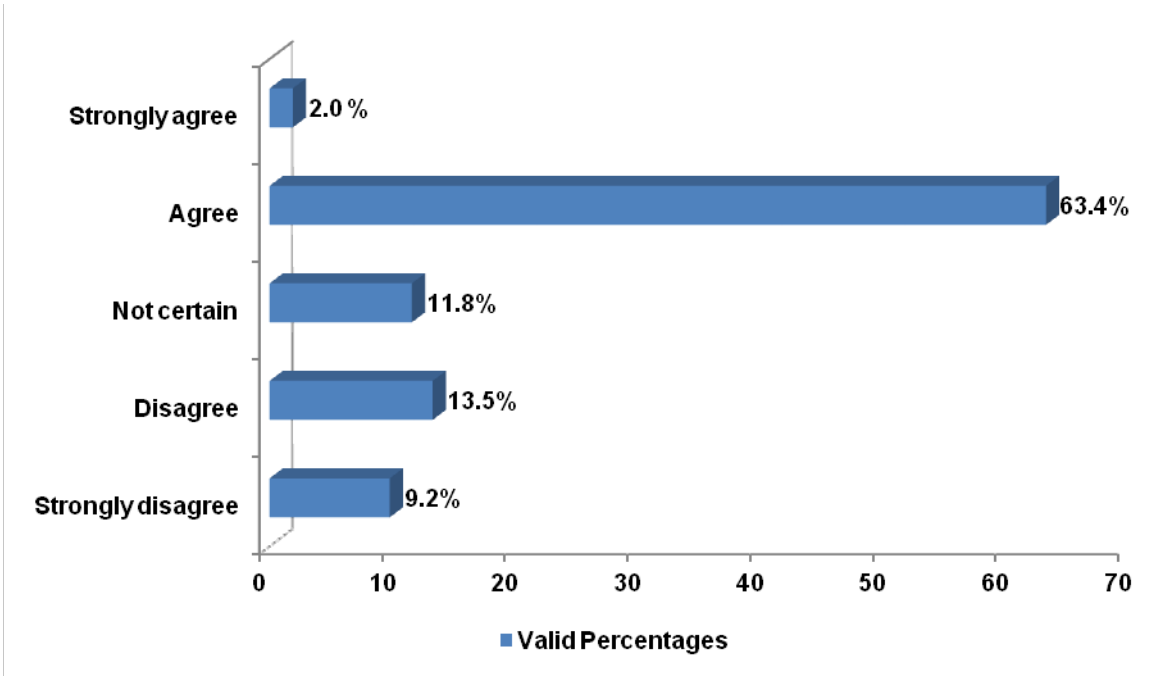



[19] See for instance "*Telecommunications Reforms in Developing Countries*" by Roger Noll (1999) and "*Telecommunications Performance, Reforms and Governance*" by Estache et al. (2006).

**Statement Two (2)**

4.51 In competitive markets firms make trade-offs between the quality of their products (or services) and the prices that they charge. For example, suppliers may choose to provide higher or lower quality products or services. This section seeks to examine whether or not mobile customers in Suriname witnessed improved call quality from their mobile service providers. A second statement was read to the respondents stating: "Since competition in Suriname's mobile sector began, the call quality of mobile operators has continued to improve". The views of the customers are shown below in **Figure 15**.

**Figure 15: Call quality of mobile operators has continued to improve since the arrival of Uniqa and Digicel to Suriname**

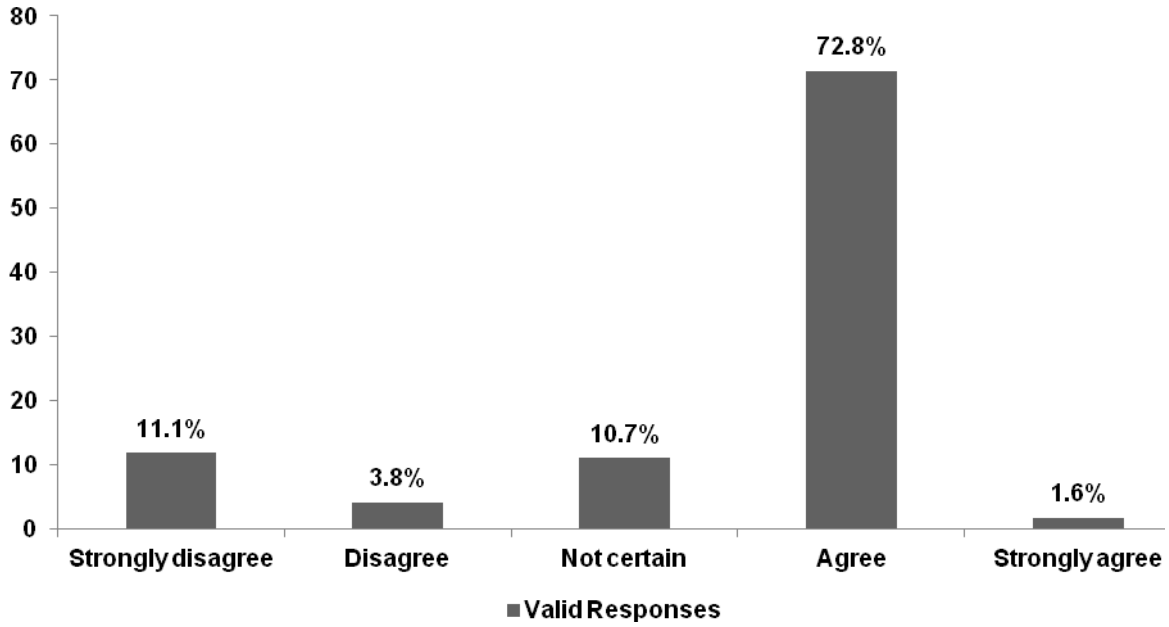



4.52 From Figure 15 we can see that 65.4 percent of the persons that responded indicated that they either "strongly agree" or "agree" with the statement. A total of 22.7 percent of the respondents however "strongly disagree" or "disagree" with the statement, while 11.8 percent were unsure about whether they observed an improvement in the call quality of mobile operators since competition in the mobile sector commenced.

**Statement Three (3)**

4.53 The final question in this category sought to obtain from the respondents their views on whether they have observed a wider variety of types of phones (brands) in Suriname since competition recommenced in the mobile sector. For this statement 74.4 percent of the respondents indicated they either "strongly agree" or "agree" that they had indeed witnessed more brands on the domestic mobile market (**see Figure 16**). It was noted that 14.9 percent of the respondents however stated that they either "strongly disagree" or "disagree" with the statement, while 10.7 percent were uncertain of the statement's validity.

**Figure 16: There are more types (brands) to choose from since Digicel and Uniqa launched their services in Suriname**




4.54 **Table 10** also presents a breakdown of the responses from the sample by age and by employment status in order to determine if there are any patterns from the responses that may be explained by these demographics. With respect to the age demographic the table shows that of the number of respondents that did not agree that there is a wider variety of types of phones were mostly within the 18 to 25 and 26-35

grouping. The 26 to 35 age group also recorded the highest number of respondents who were uncertain of whether there were more brands of phones on the domestic market. The table also reveals that a significant amount of retired individuals were uncertain about whether or not there were more brands of phones to choose from since competition began.

**Table 10: There are more types of phones (brands) to choose from since Digicel and Uniqa launched their services in Suriname**

| Ages of Respondents | Strongly disagree | Disagree | Not certain | Agree | Strongly agree | Total |
|---|---|---|---|---|---|---|
| 18-25 | 18 | 9 | 9 | 81 | 2 | **119** |
| 26-35 | 10 | 9 | 15 | 87 | 2 | **123** |
| 36-45 | 16 | 2 | 10 | 93 | 4 | **125** |
| 46-55 | 8 | 0 | 7 | 70 | 1 | **86** |
| 56-65 | 6 | 1 | 7 | 41 | 0 | **55** |
| Over 65 | 3 | 0 | 11 | 28 | 0 | **42** |
| **Total** | **61** | **21** | **59** | **400** | **9** | **550** |
| **Employment status** | **Strongly disagree** | **Disagree** | **Not certain** | **Agree** | **Strongly agree** | **Total** |
| Self employed | 16 | 2 | 10 | 52 | 1 | **81** |
| Employed for wages/salaries | 24 | 7 | 16 | 174 | 5 | **226** |
| Unemployed | 4 | 2 | 5 | 22 | 1 | **34** |
| Housewife/husband | 1 | 2 | 5 | 39 | 0 | **47** |
| Full-time student | 11 | 7 | 6 | 54 | 2 | **80** |
| Part-time student | 2 | 1 | 2 | 19 | 0 | **24** |
| Retired | 3 | 0 | 15 | 39 | 0 | **57** |
| Unable to work | 0 | 0 | 0 | 3 | 0 | **3** |
| **Total** | **61** | **21** | **59** | **370** | **9** | **552** |

### B. Customer Views on the Pre-paid and Post-paid Mobile Packages

4.55 Rivalry for increased market share often includes the offering of discounts, specials and other various incentives developed by competing firms that are aimed at attracting new customers into the market as well as attracting existing customers away from competitors. The Surinamese mobile sector is no different. Mobile service operators on the domestic

market offer incentives/specials (deals) such as extended talk time and double the amount of mobile credit purchased to mention a few.

4.56 Respondents, who indicated they were subscribed to mobile pre-paid services, were therefore asked whether or not they had witnessed an increase in specials from their mobile provider(s) after competition in the domestic sector commenced. From **Table 11** it is shown that 88 percent of respondents indicated that they did observe an increase in specials from their mobile service providers.

**Table 11: Responses to whether or not more specials are offered by provider(s) since Uniqa and Digicel launched their services in Suriname**

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| Yes | 419 | 88.0 | **88.0** |
| No | 57 | 12.0 | **100.0** |
| **Total** | **476** | **100.0** | |

4.57 Similarly, respondents who noted they had post-paid subscriptions were asked if they had observed a reduction in the rates that they paid for mobile calls after competition began in December 2007. Of the responses obtained from the survey, 62.7 percent of the respondents indicated they did not think that making calls with their mobile service provider has become less expensive in recent years (**see Table 12**). On the other hand, 37.3 percent of respondents in the sample indicated they did see some reduction in call charges.

**Table 12: Respondents' opinions of whether or not mobile calls have become less expensive since Digicel and Uniqa launched their services in Suriname**

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| Yes | 19 | 37.3 | **37.3** |
| No | 32 | 62.7 | **100.0** |
| **Total** | **51** | **100.0** | |

4.58 Further analysis was therefore conducted to determine if respondents were actually aware of the prices of calls from their mobile service

operators. **Table 13** presents the cross-tabulated responses of persons who were aware of call charges and also indicated whether or not they observed a reduction in the charges for calls. From the table it is shown that of the 32 respondents that revealed they did not see a reduction in call charges, only 12 (or 37.5 percent) actually knew the prices of calls in the first instance. In contrast, 63.2 percent of the 19 respondents who noted that there was a reduction in call charges were in fact aware of the prices to start with.

4.59 Based on this information, it is therefore inconclusive whether or not there has been a reduction in call charges in the domestic mobile sector.

**Table 13: Comparisons between respondents who are aware of call charges and those who observed a reduction in call charges**

| | | Has making calls become less expensive since competition in the mobile sector began? | | |
|---|---|---|---|---|
| | | Yes | No | Total |
| Are you aware of the prices for calls? | Yes | 12 | 12 | **24** |
| | No | 7 | 20 | **27** |
| Total | | **19** | **32** | **51** |

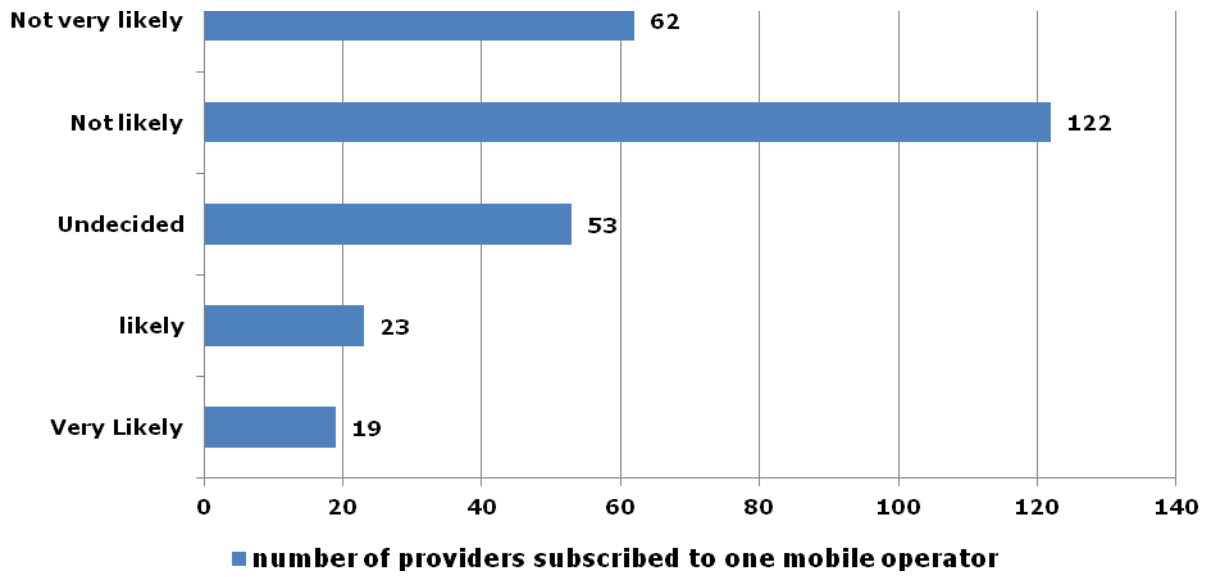
### C. Likelihood of Mobile Customers in Suriname Switching Providers

4.60 In competitive markets it is expected that consumers would often tend to switch to suppliers that make them more financially better off or offer perceived better quality products or services. This section examines the likelihood of Surinamese mobile customers, who are subscribed to only one mobile operator, switching six months after the date they were enumerated.

4.61 From the 279 valid responses to this question, 184 respondents (65.9 percent) were either “not likely” or “very not likely” to switch to another mobile operator in the following 6 months after being surveyed (**see Figure 17**). A further 19 percent of the customers interviewed were not

certain if they would change their current mobile operator. These findings may support the earlier supposition that there is still a lot of inertia in Suriname's mobile sector.

**Figure 17: Likelihood of customers with one mobile subscription switching their provider**




4.62 Possible explanations for the observed high levels of inactivity in the sector may be that switching providers is not always inexpensive, may be time consuming, or may involve some effort in researching the other options of mobile operators available. Future studies would have to be conducted to examine this issue in greater depth.

4.63 With regards to the number of mobile customers who were thinking about changing their mobile service provider (15.1 percent), a small majority (51.9 percent) indicated that this would be because they are seeking better call charges. The second biggest reason customers think about switching their mobile service provider is for one that offers better promotional specials. Only 3.7 percent of customers who are thinking about switching their mobile service provider would do so because of the ease of purchasing credit. This result seems plausible as most corner shops in Suriname sell credit for more than one mobile company at a time.

### D. Measuring the Intensity of the Efforts of Mobile Providers

4.64 This section looks at respondents' views on the intensity of the efforts of Suriname's mobile service providers in several areas including marketing and promotion, call quality, the pricing of products (both phones and calls) and service quality to name a few. Using the five-point rating system (1 being the lowest and 5 the highest) used before, the respondents were then asked to rate the level of the intensity between the three mobile service providers for each area. The mean responses of the sample were then calculated in order for analysis to be undertaken.

4.65 **Table 14** presents the mean scores of the responses. The table shows that on average the respondents rated marketing and promotion as the most intense aspect of the mobile market. This is closely followed by efforts by the mobile operators to offer promotional specials. Competition to provide better call quality was rated the least intense area of rivalry among the domestic mobile service providers.

**Table 14: Customer ratings on the level of intensity of the efforts of mobile service providers**

| On a scale of 1-5 how would you rate the intensity of the following in the mobile sector? | Mean Scores |
|---|---|
| Efforts at marketing and promotion | **4.25** |
| Efforts to offer better call quality | **3.73** |
| Efforts at pricing their products (phones and calls) | **3.81** |
| Efforts to offer better service quality | **3.87** |
| Efforts at the offering of specials | **4.22** |

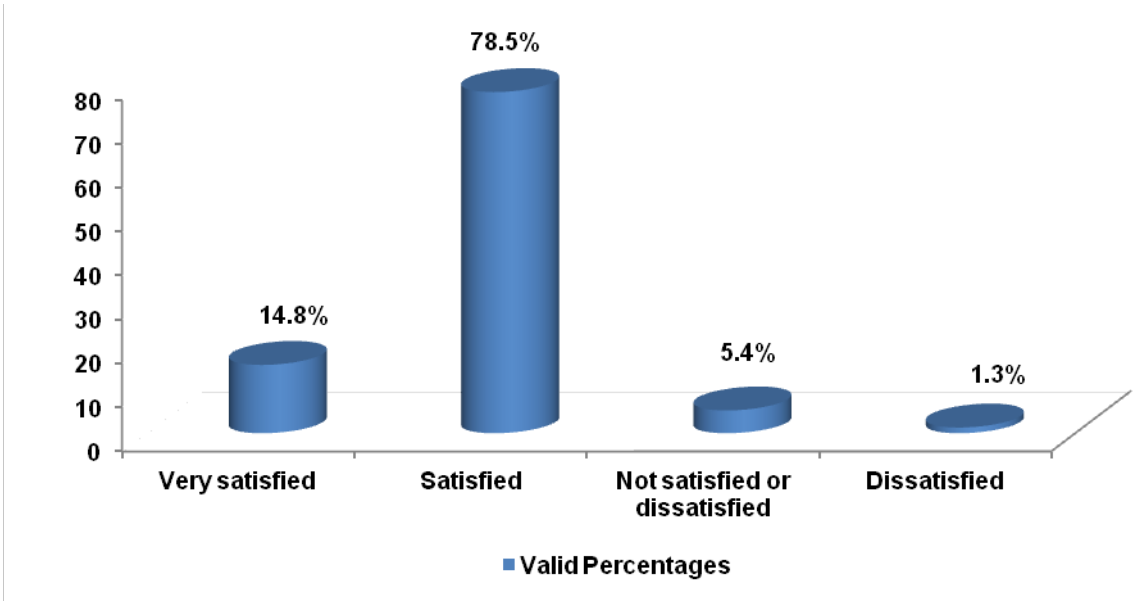
### E. Overall Mobile Customer Satisfaction with the Domestic Market

4.66 The final question on the survey instrument asked the respondents if they were satisfied with the level of competition in Suriname's mobile market. Most respondents (93 percent) indicated they were either "very satisfied" or "satisfied" (**see Figure 18**). This suggests that respondents are generally happy about competition in the local mobile market. Only 5.4 percent of those interviewed indicated that they were "not satisfied or

dissatisfied" and 1.3 percent noted they were "dissatisfied" about the current market conditions[20].

4.67 A breakdown of the demographic information collected for the responses to the question are also presented in **Table 15**.

**Figure 18: Respondents' level of satisfaction with competition in Suriname's mobile sector**




[20] Unfortunately no follow-up questions were asked in relation to the source of the dissatisfaction of the minority. Future research would have to be conducted to determine this.

**Table 15: Respondents' level of satisfaction with competition in Suriname's mobile sector by age and employment status**

| Ages of Respondents | Very Satisfied | Satisfied | Not satisfied or dissatisfied | Dissatisfied | Total |
|---|---|---|---|---|---|
| 18-25 | 25 | 88 | 5 | 2 | **120** |
| 26-35 | 6 | 110 | 5 | 2 | **123** |
| 36-45 | 25 | 94 | 7 | 0 | **126** |
| 46-55 | 9 | 70 | 5 | 2 | **86** |
| 56-65 | 9 | 42 | 4 | 0 | **55** |
| Over 65 | 8 | 29 | 4 | 1 | **42** |
| **Total** | **82** | **433** | **30** | **7** | **552** |
| **Employment status** | **Very Satisfied** | **Satisfied** | **Not satisfied or dissatisfied** | **Dissatisfied** | **Total** |
| Self employed | 17 | 60 | 4 | 1 | **82** |
| Employed for wages/salaries | 31 | 180 | 12 | 3 | **226** |
| Unemployed | 5 | 26 | 3 | 0 | **34** |
| Housewife/husband | 3 | 42 | 2 | 1 | **48** |
| Full-time student | 10 | 66 | 4 | 0 | **80** |
| Part-time student | 6 | 17 | 0 | 1 | **24** |
| Retired | 10 | 41 | 5 | 1 | **57** |
| Unable to work | 0 | 3 | 0 | 0 | **3** |
| **Total** | **82** | **435** | **30** | **7** | **554** |

## 5 CONCLUSION

5.1 The objective of this study was to assess the impact of competition in the mobile sector of Suriname. The study focused specifically on the views of mobile customers in Suriname to determine whether or not any positive changes were observed from the entry of Digicel and Uniqa to the domestic mobile sector.

5.2 Overall, the results of the survey demonstrated that competition in the mobile sector is driven mainly by the 18 to 25 age demographic, which is mainly responsible for switching from the services of TeleG to those of the newer mobile companies. However, despite finding evidence of some switching with the arrival of the two newer players, in general the market

is still characterised by inertia especially among customers subscribed to one mobile service provider.

5.3 Based on the observations of the mobile customers it was generally concluded that with the entry of Digicel and Uniqa to the mobile phone sector:

a) The number of brands of mobile phones on the market have increased;
b) Call quality for mobiles has improved; and
c) Customer service quality has improved.

5.4 These positive outcomes conform to what is generally expected when companies participate in a competitive environment. Nevertheless, the Commission notes that given the moderate level of competition observed from the data collected, more benefits can be obtained by Surinamese mobile customers if greater competition in the sector is encouraged.

5.5 The results of the study also raised the important issue of a greater need for relevant information about the mobile sector to be made available to customers. This is especially since most mobile customers seem unaware of the call charges from the mobile companies operating in Suriname. Increased efforts at data collection on call charges and their public dissemination are seen as key steps that should be considered by the TAS, as this information could allow customers to receive greater benefits from competition. Regarding how the information on call charges could be shared with the public, this could be done via the agency's website or in the local newspapers.

5.6 Additionally, the results of the survey point to a further need for increased competition advocacy in Suriname. This is recommended since only 54 percent of individuals interviewed felt that competition is promoted in all sectors of Suriname's economy. Efforts by the Commission to increase the knowledge and awareness of the business sector and government agencies about competition policy should therefore be continued and expanded.

5.7 Finally, the Commission recognises that the scope of this research on the mobile sector in Suriname was narrowly defined with the aim of merely highlighting the benefits that competition created for customers. No examination was undertaken on data roaming services, which are reported to be high, or mobile internet services which are reported to be non-customer friendly due to inadequate interconnection.

5.8 Further work may be required to examine other areas of the telecommunications sector that may be more relevant to competition enforcement. Possible areas for assessment may possibly include whether or not those anti-competitive business conduct identified in the Revised Treaty of Chaguaramas are present in Suriname's mobile sector. For example, the matter relating to interconnectivity for rival service providers as this was a prominent issue in the past that was suggested to have led to one of the country's mobile service operators exiting the sector. This could be an area for future investigation.

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**APPENDIX 1**

**CARICOM COMPETITION COMMISSION & ANTON DE KOM UNIVERSITY**
**MOBILE CUSTOMER QUESTIONNAIRE**

Date: _____ Address: _____ QUESTIONNAIRE NO: ☐☐☐☐

Name of Respondent:_____ Telephone number of Respondent (Optional): _____

**In December 2007, Digicel and Uniqa entered Suriname's mobile sector and began competing with Telesur.** The CARICOM Competition Commission and the Anton de Kom University are conducting a study to determine the impact of this competition on the mobile sector of Suriname. The information obtained from this questionnaire will provide us with an idea of the performance of the sector from the viewpoint of the customer. **We would greatly appreciate if you would take a few minutes to answer the following questions. Thank you for your time!** All of the information that we collect will be used in a confidential manner.

**For the following questions please select the answers that are applicable to you.**

1. Gender: Male ☐ Female ☐
2. Age of respondent: 18- 25 ☐ 26-35 ☐ 36-45 ☐ 46-55 ☐ 56-65 ☐ Over 65 ☐
3. Which one of these categories best describes your current employment situation:

   Self-employed ☐ Employed for wages/salary ☐ Unemployed ☐ House wife/husband ☐

   Full-time student (study only) ☐ Part-time student (work and study) ☐ Retired ☐ Unable to work (disabled) ☐
4. In general, what do you think about competition between companies?

   Very Good ☐ Good ☐ not certain ☐ Bad ☐ Very Bad ☐

5. In general, do you think that competition between companies is beneficial to customers?

Yes ☐ No ☐ Not certain ☐

| **The following are statements about competition. Please indicate if you strongly disagree, disagree, are not certain, agree or strongly agree with each of them.** | **Strongly Disagree** | **Disagree** | **Not certain** | **Agree** | **Strongly Agree** |
|---|---|---|---|---|---|
| 6. **Competition between companies generally results in a reduction in the prices of goods and services.** | ☐ | ☐ | ☐ | ☐ | ☐ |
| 7. **Competition between companies generally results in a broader array of products and services on the market.** | ☐ | ☐ | ☐ | ☐ | ☐ |
| 8. **With competition, companies have to innovate and become more creative.** | ☐ | ☐ | ☐ | ☐ | ☐ |
| 9. **In Suriname, competition between companies is promoted in all sectors of the economy.** | ☐ | ☐ | ☐ | ☐ | ☐ |

10. Which mobile phone service provider(s) are you currently subscribed to? **Please select as many as appropriate. Note that this also includes SIM cards.**

DIGICEL ☐ TELE G ☐ UNIQA ☐

11. On a scale of 1 to 5 (1 being the lowest and 5 the highest), how important were the following in helping you to choose your mobile service provider(s). **Please circle your answers for each mobile service provider that <u>you are subscribed to</u>.**

**A. DIGICEL**

| | Lowest | | | | Highest |
|---|---|---|---|---|---|
| a) Network coverage | 1 | 2 | 3 | 4 | 5 |
| b) Price of phones sold | 1 | 2 | 3 | 4 | 5 |
| c) Price of calls | 1 | 2 | 3 | 4 | 5 |
| d) Packages | 1 | 2 | 3 | 4 | 5 |
| e) Reputation of the company | 1 | 2 | 3 | 4 | 5 |
| f) Friends and family with the same provider | 1 | 2 | 3 | 4 | 5 |
| g) Types of phones sold | 1 | 2 | 3 | 4 | 5 |
| h) Specials (gratis) | 1 | 2 | 3 | 4 | 5 |

**B. TELEG**

| | Lowest | | | | Highest |
|---|---|---|---|---|---|
| a) Network coverage | 1 | 2 | 3 | 4 | 5 |
| b) Price of phones sold | 1 | 2 | 3 | 4 | 5 |
| c) Price of calls | 1 | 2 | 3 | 4 | 5 |

| | | | | | |
|---|---|---|---|---|---|
| d) Packages | 1 | 2 | 3 | 4 | 5 |
| e) Reputation of the company | 1 | 2 | 3 | 4 | 5 |
| f) Friends and family with the same provider | 1 | 2 | 3 | 4 | 5 |
| g) Types of phones sold | 1 | 2 | 3 | 4 | 5 |
| h) Specials (gratis) | 1 | 2 | 3 | 4 | 5 |

## C. UNIQA

| | **Lowest** | | | | **Highest** |
|---|---|---|---|---|---|
| a) Network coverage | 1 | 2 | 3 | 4 | 5 |
| b) Price of phones sold | 1 | 2 | 3 | 4 | 5 |
| c) Price of calls | 1 | 2 | 3 | 4 | 5 |
| d) Packages | 1 | 2 | 3 | 4 | 5 |
| e) Reputation of the company | 1 | 2 | 3 | 4 | 5 |
| f) Friends and family with the same provider | 1 | 2 | 3 | 4 | 5 |
| g) Types of phones sold | 1 | 2 | 3 | 4 | 5 |
| h) Specials (gratis) | 1 | 2 | 3 | 4 | 5 |

12. Did you have a mobile phone before UNIQA and DIGICEL were introduced to Suriname's mobile market in December 2007? If your answer is "**Yes**" please go to question 17, otherwise proceed to question 16.

Yes ☐ No ☐

13. **If you answered "No" to question 15**, what was your main reason for not having a mobile before December 2007? Kindly select **1 option**.

Not Affordable ☐ No availability in your area ☐

No need for the service ☐ not applicable ☐

No special reason ☐

| **The following are statements about Suriname's mobile sector after Uniqa and Digicel launched their services. Please indicate if you strongly disagree, disagree, are not certain, agree or strongly agree with each of them.** | **Strongly Disagree** | **Disagree** | **Not certain** | **Agree** | **Strongly Agree** |
|---|---|---|---|---|---|
| 14. **Since Uniqa and Digicel launched their services in December 2007, I have seen an improvement in the customer service of my mobile phone service provider(s).** | ☐ | ☐ | ☐ | ☐ | ☐ |
| 15. **Since Uniqa and Digicel launched their services in December 2007, I have seen an improvement in the call quality (in terms of my ability to hear the other party) of my mobile phone service provider(s).** | ☐ | ☐ | ☐ | ☐ | ☐ |
| 16. **Since Uniqa and Digicel launched their services in December 2007, I have many more phones (brands) to choose from.** | ☐ | ☐ | ☐ | ☐ | ☐ |

17. Do you currently have access to the internet with your mobile (cellular) phone(s)? **If your answer is No, please go to question 23; otherwise kindly proceed to question 21**.

Yes ☐ No ☐

18. Before Uniqa and Digicel launched their services here in Suriname, did you have access to the internet with your phone?

Yes ☐ No ☐ not applicable ☐

19. Before Uniqa and Digicel launched their services here in Suriname, did you have access to the internet at all?

Yes ☐ No ☐ not applicable ☐

20. What type of mobile phone service(s) do you have? **Please tick as many as appropriate!**

DIGICEL Pre-paid (card) ☐ TELEG Pre-paid (card) ☐ UNIQA Pre-paid (card) ☐

DIGICEL Post-paid (bill) ☐ TELEG Post-paid (bill) ☐ UNIQA Post-paid (bill) ☐

21. **If you have a post-paid (bill) service**, are you aware of the prices for calls that each of the mobile operators in Suriname charge for this service? **If you do not have a post-paid service kindly go to question 26 otherwise continue.**

Yes ☐ No ☐ not applicable ☐

22. **If you have a post-paid (bill) service,** in your opinion has making calls become less expensive since Uniqa and Digicel launched their services in Suriname?

Yes ☐ No ☐ Not certain ☐ not applicable ☐

23. **If you have a pre-paid (card) service**, in your opinion have you seen an increase in the number of specials (aanbiedingen) from your mobile provider(s) since Uniqa and Digicel launched their services in Suriname?

Yes ☐ No ☐ Not certain ☐ not applicable ☐

24. **If you are only subscribed to 1 mobile service provider**, are you likely to switch to another mobile service provider in the next 6 months? **This includes purchasing a SIM card from another mobile service provider. If not likely, undecided or not applicable is chosen go to question 29.**

Very Likely ☐ likely ☐ undecided ☐ Not likely ☐ Not very likely ☐ not applicable ☐

25. **If you are likely to switch to another mobile provider in the next 6 months**, what would be the main reason for your decision? **Kindly select only one (1) option.**

| | | | |
|---|---|---|---|
| Better rate/charges | ☐ | Easier to purchase credit/ pay bills | ☐ |
| Better customers service | ☐ | Better products (phones) | ☐ |
| More specials (gratis) | ☐ | not applicable | ☐ |

26. On a scale of 1-5 (**where 5 is the highest**), how would you rate the intensity of the efforts of mobile service providers in Suriname with respect to the following areas? **Please circle your answer.**

| | **Lowest** | | | | **Highest** |
|---|---|---|---|---|---|
| a) Marketing and promotion | 1 | 2 | 3 | 4 | 5 |
| b) Prices | 1 | 2 | 3 | 4 | 5 |
| c) Call quality | 1 | 2 | 3 | 4 | 5 |
| d) Service quality | 1 | 2 | 3 | 4 | 5 |
| e) Specials (gratis) | 1 | 2 | 3 | 4 | 5 |

27. Are you satisfied with the level of competition in the **mobile** sector in Suriname? (**Please select your answer from the options below)**

- Very satisfied ☐
- Satisfied ☐
- Not satisfied or dissatisfied ☐
- Dissatisfied ☐
- Very dissatisfied ☐

**END OF QUESTIONNAIRE**
**THANK YOU FOR PARTICIPATING!!!!!!!!!!**

Name of Enumerator (Signature): _____

Name of Enumerator (Print):_____