



MOBILE OPPORTUNITIES:

Poverty and Telephony Access in Latin America and the Caribbean

Background paper

Genderstanding Mobile Telephony. Women, Men and their Use of the Cellular Phones in the Caribbean

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GENDERSTANDING MOBILE TELEPHONY. WOMEN, MEN AND THEIR USE OF THE CELLULAR PHONES IN CARIBBEAN

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Genderstanding Mobile Telephony

Women, Men and their Use of the Cellular Phones in the Caribbean

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Abstract

This project provides background information as the foundation for a more intensive study to be entitled 'Genderstanding Mobile Telephony: Women, Men and their Use of the Cellular Phones in the Caribbean' on usage of mobile telephony by men and women across varied age ranges in the region. The data suggests that telephony has undergone dramatic transitions over the last five years. From an overwhelming presence of wire-line technology, the regional industry is now dominated by wireless subscribers getting service mainly through an interlocking network of cellular sites. The mobility spawned by this wireless revolution has had differentiated impacts on how men and

women now utilize the telephone. These trends are reflected in differing social classes, rural and urban areas and among men and women of differing ages. Strong demographic data on social groups in the Caribbean are provided as a context for understanding mobile usage.

The term 'genderstanding', borrowed from the work of Meryl James Sebro, is used to describe a nuanced understanding of gender relationships as they affect people in domestic, community and other social and cultural contexts. The logic of 'genderstanding' is to deepen and share understandings and sensitivity and to bridge unequal power relations between women and men. The concept can be extended to developing a better understanding of the social divide between the rich and the poor and their relationship to technologies such as the mobile telephone.

The focus of this study in its present form is on the English-speaking Caribbean for which data are currently available. But some attention is paid to trends in the linguistic groups in the region.

Objective And Definitions

Objective

The objective of the project is to provide a baseline study of how men and women use mobile communication devices in the Caribbean within the contexts of rural and urban settings and across different age ranges.

Definitions

Mobile Telephony – real-time, two-way switched voice service that is interconnected with the public switched network using an in-network switching

facility that enables the provider to reuse frequencies and accomplish seamless handoff of subscriber calls.¹

Cellular Telephone – A mobile telephone service provided by a network of base stations, each of which covers one geographic cell within the total cellular system service area.²

The Caribbean – The region consisting of the Caribbean Sea, its islands (including the West Indies) and the surrounding coasts.³ This paper will focus on the English-Speaking Caribbean, specifically the following territories: Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, Montserrat, St Kitts and Nevis, St Lucia, St. Vincent and the Grenadines, Suriname and Trinidad & Tobago.

Introduction: Overview Of Global Ict Development And Telephony The Caribbean

Over the last two decades, telecommunications providers all over the world have been engaged in a process of transformation. State-run companies or private monopolies had previously been the norm in the delivery of domestic services and international voice traffic. The dominant theory was that telecommunications like many other ‘utilities’ were natural monopolies, amenable only to operation by a single, often national infrastructure and service provider. However, this idea was turned on its proverbial head with the recognition that a diverse range of changing circumstances was accounting for new opportunities for a diverse competitive market.

“In recent years there has been widespread recognition that an expanded role of the market in telecoms can facilitate not only improved efficiency, but also the achievement of other public policy objectives as well. The significant changes in the role of

¹ FCC. 2006. <http://www.icc.illinois.gov/docs/tc/010924compFCCins.pdf>

² http://www.itu.int/ITU-D/ict/publications/wtdr_99/material/glossary.html

³ Concise Oxford Dictionary, Eleventh Edition. 2004. Oxford University Press

the market that are taking place in telecom internationally are not founded simply upon ideological shifts and a new found faith in the so-called free market. Nor are they a directly determined response to the dictates of new technologies. Rather, the inherited monopoly institutions (public or private) have had great difficulty adapting to changing economic, political and social conditions, of which changing technologies is only a part. Monopolies operating in a protected, stable environment are not well suited to adapt to new and increasingly diversified and dynamic market place.” (Melody 1997, p.3)

Currently, a majority of countries in the world has made the shift from a monopoly provider to a competitive regime, with the leading operators drawn in most cases from private enterprise. Some other countries are still in transition, with a minority maintaining single service providers. According to the ITU, at the beginning of 2003 “more than half of the countries in the world had fully or partially privatized their incumbent telecommunications operators. A further quarter (24%) of countries, although retaining State-owned incumbents – had introduced private sector participation through licensing of new fixed, international mobile operators. Less than one fifth of the countries in the world had no form of private participation in their telecom sector” (ITU 2003, p.1).⁴ Many more have since made the transition, with 2005 marking a shift to an even more dominant majority.

The more prevalent dual process of de-monopolization and privatization has also been under implementation in the Caribbean region, led by the largest English speaking territory, Jamaica that forms the focus of this Unit. We examine the transition from a Cable and Wireless monopoly to the early stages of a competitive environment, involving new players in the mobile sector, a restructuring of regulatory institutions and the creation of transitional legislation to govern the sector. The impact of these changes on all

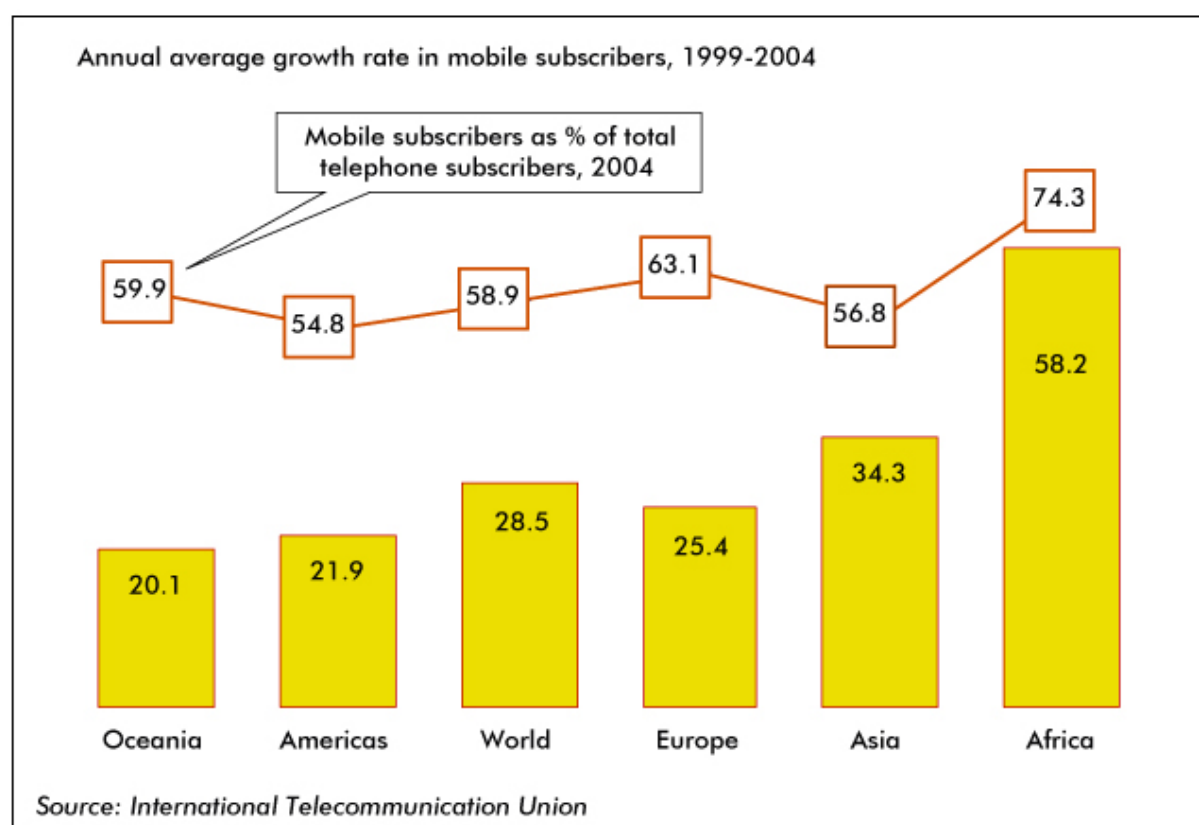
⁴ ITU. 2003. Trends in Telecommunications Reform: Promoting Universal Access to ICTs- Practical Tools for Regulators. Geneva: International Telecommunications Union.

stakeholders, including subscribers, Internet service providers, regulators and policymakers has been profound.

Mobile Telephony

It is against the foregoing background, that the study examines the emergence and role of mobile telephony globally and in the Caribbean region. Chart 1 places the Americas among regions in the lower end of the spectrum in terms of annual average growth rate in mobile subscribers between 1999 and 2004. Elsewhere in the analysis, we identify the Caribbean as representing a higher than average performance in the Americas in terms of mobile growth, with Jamaica being a stand out for an exceptional pace of growth.

Chart 1



Overall mobile growth between 1999 and 2004 was dramatic with a global increase of 28.5% in total mobile subscribers in the short spell of five years.

According to the ITU, Africa mobile penetration grew 58.2% in the period. Although, the Americas had a lower rate of growth than other 21.9% still represents a dramatic in a short time frame.

Latin America and the Caribbean are noted among the first to improve access and promote effective use of Information and Communication Technologies (ICTs) in locations that were previously deprived (Khalil 2007, 9). In addition, more innovative strategies have been applied throughout the Caribbean, giving special attention to socio-economic development. One study on telecommunications in the Caribbean and Latin America found that in the period 1998 to 2003, the number of cell phones increased from 20.5 million to 123.7 million and the region's portion of the world totaled increased from 6.5% to 8.8% (ECLAC 2005, 18). Similarly, fixed phones jumped from 58.3 million to 89.6 million over the same period (ECLAC 2005, 18). Growth of this nature is indicative of increased competition resulting from regulatory policies (ECLAC 2005, 49). While there is still room for improvement, CARICOM member states anticipate reforms in telecommunications that will make sure governments' goals, policies and objectives are accomplished (Conner 2004, 59), while growth continues.

Case Study: Jamaica

Jamaica is an example of the mobile explosion that has taken place in the Caribbean. Within less than six years, the network of mobile telephone subscribers in Jamaica had grown from about 300,000 to over 2 million, with the introduction of competition in the mobile sector. With this competition came a rapid build-out of the cellular infrastructure beyond the then existing Cable and Wireless network. The greatest competition to the incumbent operator came from the Irish firm trading in Jamaica and the Caribbean as Digicel. In its website, Digicel Jamaica Limited described its rapid growth in the market.

“In April 2001, when Digicel launched their GSM mobile service in Jamaica, the company anticipated reaching the

100,000 customer plateau by the end of its first year in operation. Instead, they hit the 100,000 mark a mere 100 days after launch! Never before in the history of mobile telecommunications had such tremendous growth been seen in a network, as Digicel broke record after record on its way to surpassing its major competitor as the mobile provider with the largest customer base in the island.”⁵

New players in the Jamaican market, including Columbus Communications, marketed as Flow, will diversify competition and challenge even the phenomenal performance of Digicel. The offer of optical fibre fixed line service, cable television and Internet service provision brings to the market the triple-play advantage which many subscribers find attractive. The alliance of Flow with a smaller cell phone provider MiPhone, gives an additional feature of mobile telephony to the Columbus customers.

Equivalent changes are underway in the Trinidad and Tobago, Barbados, and Eastern Caribbean markets where Cable and Wireless’ landline monopoly is being increasingly challenged by mobile providers and new competitors.

Demographic Profile Of The Caribbean

The following demographic profile of the Caribbean population has implications for patterns of mobile phone usage across sex, age, socio-economic groups as well as people living in rural and urban communities.

Population Trends And Characteristics

CARICOM’s publication “Women and Men in the Caribbean Community: Facts and Figures, 1980-2001”⁶ provides a comprehensive demographic overview of the English-speaking Caribbean. It notes that the population of 14

⁵ <http://www.digiceljamaica.com/about/>

⁶ CARICOM, (2003), “Women and Men in the Caribbean Facts and Figures 1980-2001.”

CARICOM member states was 6.4 million (2000) and is projected to reach 7.5 million in 2020.⁷ Table 1 shows population distribution by country.

Table 1: Population Distribution 2000/2001 (percent)

Jamaica	40.8
Trinidad and Tobago	19.7
Guyana	11.6
Suriname	6.8
Barbados	3.9
The Bahamas	4.7
Belize	3.6
St Lucia	2.4
St. Vincent and the Grenadines	1.7
Grenada	1.6
Dominica	1.1
Antigua and Barbuda	1.1
St Kitts and Nevis	0.7
Montserrat	0.1
Total	100.0

Source: CARICOM, Women and Men in the Caribbean: Facts and Figures 1980-2001, 11.

The population size of English-speaking CARICOM countries ranges from 2.6 million in Jamaica to 4,000 persons in Montserrat. Comparative data for 1980 and 2000 show, that in rank order, Jamaica has the largest population size accounting for approximately 40 percent of the region's total population. Trinidad and Tobago and Guyana are the second and third largest countries, accounting for 20 and 12 per cent respectively. Together these three account for almost three-quarters of the CARICOM region's population. The remaining 11 countries have smaller populations with Suriname accounting for 7 percent, and Montserrat accounting for 0.1 percent. Demographic trends show that population increases were higher for men than for women in the Bahamas, Belize, St Lucia and Suriname. The tables below present the sex distribution of the Caribbean population for CARICOM countries.

The sex distribution is approximately 51% female and 49% male except in Belize in 1990/1991 census. For 2000/2001, males were in the majority in Suriname, Trinidad and Tobago, Montserrat and Dominica. This data when set against mobile telephony use by sex will help to indicate trends in usage.

⁷ CARICOM Women and Men in the Caribbean Facts and Figures 1980-2001(2003); UN Population Division, 2001.

Table 2: **Population of the English-speaking Caribbean by Sex 2000/2001**

Countries	Females	Males	Total
Antigua and Barbuda	37,419	34,890	72,309
Bahamas	155,833	147,778	303,611
Barbados	130,084	119,926	250,010
Belize	115,442	116,669	232,111
Dominica	34,926	36,313	71,239
Grenada	51,834	50,798	102,632
Guyana	377,018	366,016	743,034
Jamaica	1,305,052	1,300,735	2,605,787
Montserrat	2,480	2,792	5,272
St Kitts and Nevis	23,078	22,806	45,884
St Lucia	76,338	74,805	151,143
St. Vincent and the Grenadines	56,020	55,797	111,817
Suriname	217,120	218,677	435,797
Trinidad and Tobago	629,315	633,051	1,262,366
TOTAL	3,211,959	3,181,053	6,393,012

Source: CARICOM, (2003), "Women and Men in the Caribbean Facts and Figures 1980-2001."

Population Growth Rates

Slower population growth rates across the Caribbean are attributed to migration rather than significant increases in births and deaths. This historical trend is likely to continue, which has implications for social and economic planning including projected cellular telephone usage.

Population: Sex Composition/Distribution

As Table 2 indicates, for most countries, women only slightly outnumber men in the region with a ratio of 101 women to 100 men in 2000/2001. The male/female ratios of individual countries show variations but six of the 14 countries have almost equal numbers of males and females (ratios of 99, Belize, Suriname, and Trinidad and Tobago; 100 for Jamaica and St Vincent and the Grenadines; and 101 for St Kitts and Nevis).

An emerging trend in some countries is that the population of females is declining which suggests that either more women are migrating than men and/or more men than women are entering each country. For the 2000/2001 census, five countries had more men than women: Montserrat (6 percent fewer women); Dominica (two percent fewer) and less than half a percent fewer in Belize, Suriname, and Trinidad and Tobago of the respective total populations.

Age Distribution

The age distribution of populations provides important information for developing a profile of cellular phone users across specific age groups. Over the last decade, the data have indicated slightly more boys than girls under the age of 15 years, which is consistent with declining levels of fertility in most countries. Data from the 2000/2001 census also showed that the proportion of children under 15 years ranged from a low of 21 percent in Barbados to a high of 41 percent in Belize. In 2000/2001, children^{8[3]} accounted for approximately 30 percent of the population in Belize, Dominica, Grenada, Jamaica, St Kitts and Nevis, St Lucia, St Vincent and the Grenadines and Suriname. (CARICOM 2003).

Table 3: **Percent Distribution of the female and male populations by age groups 2000/2001**

Countries	Females				Males			
	Age groups				Age groups			
	0-14	15-24	25-64	65+	0-14	15-24	25-64	65+
Antigua and Barbuda	25	17	49	9	28	18	48	6
Bahamas	29	17	49	6	30	17	47	4
Barbados	21	14	52	13	23	15	52	10
Belize	41	20	35	4	41	20	35	4
Dominica	33	20	37	10	33	20	38	9
Grenada	34	20	36	9	36	21	37	6
Guyana	29	18	48	5	30	19	47	4
Jamaica	31	19	43	8	31	18	45	7
Montserrat	22	18	44	16	24	17	43	17
St Kitts and Nevis	30	18	42	9	31	19	41	8
St Lucia	31	19	42	8	32	19	42	7
St. Vincent and the Grenadines	37	20	35	8	38	21	36	5
Suriname	32	19	43	6	35	19	41	5
Trinidad and Tobago*	25	18	49	8	26	20	49	6
TOTAL	29	18	45	7	30	19	45	6

*1999 data

Source: CARICOM, (2003), "Women and Men in the Caribbean Facts and Figures 1980-2001."

⁸ It is also noted that none of the Caribbean countries has changed the age distribution categories to reflect the UN definition of a child as 0-17 years.

Stable Youth Populations

The composition of this age group, comprised of persons 15-24 years, has remained relatively stable and varies little across countries. For 2000/2001, youth comprise 17-20 percent of the female and 17-21 percent of the male populations in all countries except Barbados, where they comprise 14-15 percent.

Elderly Persons

Across the Caribbean, women live longer than men with a longer life expectancy of five years. The most notable feature is that elderly women outnumber elderly men. As indicated in Table 3, women and men over 65 years represent 7 and 6 per cent respectively of their region's population. In some of the smaller countries the difference between the sexes is greater. In Barbados for example, the proportion of females aged 65 years and over were 13 percent for women and 10 percent for men. For Antigua and Barbuda and Grenada, the proportion was 9 percent for women and 6 percent for men. For 2000/2001, Montserrat has the highest proportion of older persons (16 percent for women and 17 percent for men), despite the post -1995 out-migration resulting from the volcanic eruption. The latter is particularly important because of population ageing. Most Caribbean countries have completed their demographic transition and have increasingly larger numbers of persons aged 60 years and over. ECLAC data show that in the Caribbean the ageing index increased from 21.2 in 1975 to 41.1 in 2000 and is expected to reach 87.8 in 2025. Additionally, in 2000, for every 6.5 economically active persons (15-59 years) there was one elderly person (over 60 years).) The trend is that there will be a larger portion of the population over 65 years and they will be living to their 80s in countries least affected by the HIV/AIDS pandemic. The relevance of this data is the extent to which the elderly should be factored into cell phone usage and markets.

Migration Patterns

The Caribbean is a high migration region, with extensive usage of telephones linked to relatives abroad and to remittances. Migration is also an important demographic indicator of technology exposure and this is particularly relevant to the Caribbean.

External Migration

There is formal as well as informal migration and the patterns of each are relevant to the research on cellular phone usage. Migration has continued to be an important population issue for Caribbean countries over centuries. As a result of historical experiences, the Caribbean has links to several continents: Africa, Europe, Asia including China, and North America. Successive waves of migration especially to North America and Europe have also resulted in strong telecommunications linkages as families try to maintain contact with each other.

Internal Migration

In recent decades most Caribbean countries have experienced rapid urbanization, resulting from massive rural-urban migration. Uneven social planning has also meant variable access to health, education and social services and entertainment between rural and urban communities. As people move between rural and urban centres, their need for cellular phones is increased to maintain communication.

Uneven access to telephone landlines also means that in new and emerging residential communities, the cellular phone is the only means of communication.

The growth of inner city communities, squatter settlements associated with high levels of crime, violence, and social unrest also increase use of cellular phones across most population groups and individuals try to maintain personal security and increased communication with friends and family.

Education

Education is an important marker of income and social standing in Caribbean societies. Higher levels of education may well reflect greater access to more high-end telephony tools such as PDAs while lower education levels may reflect the rural and inner city poor and lower levels of technology access. Basic education is widespread in the Caribbean and only Belize and St Lucia had 10% of their populations with no education. However, while most adults have been exposed to education and schooling, functional literacy remains a major concern and is not restricted to the 25 years and over age groups. Most adults have achieved only a Primary education and only Belize and the Bahamas had moved the majority of their adult population beyond the primary education level. The Bahamas has 15% of females and 14% of males with university education. Barbados has 4% women and 6% men having attained university education and another 60% for both sexes having attained secondary education. Countries with the highest proportions of the population with primary or no education were: Belize, Dominica, Grenada, St Lucia and St Vincent and the Grenadines averaging 75% or more.

Guyana, Jamaica, Montserrat and Trinidad and Tobago had proportions well over 60% and those with approximately 50% were Antigua and Barbuda, and St Kitts and Nevis. Sex differentials in educational attainment among the population aged 25 years and over were not significant for 1990/1991 which was the latest available data.

Gender Issues

Among the key features of the Caribbean gender profile are a larger female than male population. There is also variable life expectancy in most Caribbean countries for males and females. Average life expectancy for males is 70 years and for females, 75 years. This higher life expectancy for females, results in a larger number of older females than older males over 65 years. Older women have a longer life expectancy averaging five years more than males in most countries. There is also a growing population of persons

living beyond 100 years, especially in Dominica and Belize. Women over 60 years are more likely to be economically poor than their male cohort, because of their lower levels of participation in the formal labour market than males and because they tend to be concentrated in low-wage service occupations which are usually not pensionable and more women than men are in part-time work because of their domestic responsibilities. Older females are however more likely to be living with family while older males may live alone or in homes for the elderly.

Gender and Poverty

Poverty affects both women and men but women experience higher levels of poverty despite more of them achieving higher levels of education when compared to men. This occurs even among middle income professional women who are also likely to be paid less than their male counterparts because their wage is seen as a supplemental wage rather than a family wage.

Poverty among older women is also more likely because their ascribed gender roles make them likely to live in larger families that are usually single female headed households. Women's ascribed social roles are as primary caregivers for children, the sick and the elderly. The emerging HIV/AIDS pandemic also presents challenges for older women who are increasingly responsible for children orphaned by HIV/AIDS as well as caring for females and males infected with the disease.

Marriage and Cohabitation

Marriage and Cohabitation Patterns among Caribbean families are also relevant for understanding cell phone usage. These patterns are characterised by low levels of marriage for both men and women and marriage much later in life. The majority of men and women never marry (over 40% for most countries). Widowhood is twice as common for women as for men. Instead, common law unions are the preferred choice for co-habitation.

Fertility

Fertility patterns are also important. Teenage pregnancy is still high but is decreasing. In Jamaica for example, 87% of teenage pregnancies are reportedly unplanned. The number of births to women in their early twenties is high, but is also declining and there is a shift to childrearing at an older age. On average women have 2.5 children. What are the dynamic variables of mobile telephone usage among teenagers and young adults, and how does the mobile phone factor in dating and interpersonal communication among young people in the Caribbean?

Gender and Health

The health profile of Caribbean men and women is also relevant for understanding cell phone usage. Both sexes commonly experience lifestyle diseases such as obesity, hypertension, diabetes, and cancers that are expensive to treat. HIV/AIDS infection is a major concern and the highest rate of HIV infection is among young females 15- 29 years.

High risk sexual behaviour especially among Caribbean males is associated with unprotected sex with multiple partners. Gender inequality contributes to patterns of interpersonal relations characterised by older males with younger dependent females. Gender inequality increases the risk of women and girls being infected with HIV/AIDS as many are economically dependent on men. They do not have equal power with men to negotiate sexual intercourse, and safe sex, which leaves them at risk. Rates of gender based violence are also high with women and girls being the main victims of rape, incest, sexual assault and sexual harassment.

Gender inequality in women's participation in the highest level of decision-making persists in all Caribbean countries. Although women comprise 50% of the population in most countries, there are only 12-13% of women representatives (at best) in parliament. Almost all Caribbean heads of state, parliamentarians, judges and owners of major businesses are male.

Gender and Education

Education can influence access to and use of cell phones. In the Caribbean, there is universal and equal enrolment of girls and boys at primary level. However, enrolment at secondary level was much lower for boys and differed widely across countries. Enrolment in secondary school ranged from 87% in the Bahamas to 45% in Suriname in the 1990s. Rates for attendance, repetition and completion also reflect gender differences. Females tend to drop out because of pregnancy while males drop out for economic reasons, and frustration with the school curriculum among other factors.

Despite gender equality in enrolment at the primary level of education, more girls complete secondary education and go on to pursue tertiary education. Research also points to females being more likely to use education as a vehicle for employment and upward mobility than males. Males, give priority to seeking employment and earning an income, some from activities that do not require education but provide higher levels of remuneration than jobs in the formal labour sector. This results in a higher concentration of males in entertainment, popular music, sports and drug trafficking.

Gender and Employment

Caribbean women have a fairly high rate of economic activity compared to countries in Central and South America, western Asia and North Africa (UN 2000a) Women's economic activity is lower than men's but is increasing as can be seen from Table 4. More than half the women aged 15 years and over were economically active in only six of ten countries for which estimates were available in 2000. The labour force activity rate for men is more than 70% in those countries except Suriname (62% male participation). In Belize and Guyana, women's labour force participation is less than half that of men's.

Table 4: Labour force participation rate for the population aged 15 years and over 0- latest available year

Countries	Females	Males
Antigua and Barbuda	-	-
Bahamas	68	80
Barbados	62	75
Belize	37	79
Dominica	60	75
Grenada	55	76
Guyana	40	85
Jamaica	57	73
Montserrat	-	-
St Kitts and Nevis	-	-
St Lucia	63	76
St. Vincent and the Grenadines	-	-
Suriname	34	62
Trinidad and Tobago	46	75

Unemployment

- There is an almost equal representation of young women and young men in the labour market
- Young women are worse off than male counterparts in job searches
- Adult unemployment is higher among women relative to men aged 15 years and over. The rates ranged from 10-23% and were generally 1.5 to 2 times higher for females.
- Women stay unemployed for longer periods than men (over one year-average 9 % for females vs 3% for males)
- Women with low education were exposed to higher levels of unemployment
- University education was advantageous to both women and men in seeking employment.
- There is a high dependence of women on paid employment. In all countries, fewer than 5% of employed women were employers, while 5% (Barbados) to 34% (Jamaica) of employed were own account workers. For men, 3-7% were employers and 7-34% were own account workers
- Self employment is increasing for women and men

- High concentration of women in service-oriented and clerical (support-giving) occupations
- Male occupations provide fewer jobs for women (agriculture, forestry, fisheries, craft and related workers, plant and machine operators while these categories form 55% to 65% of the employed.

Sectoral distribution of employment

- Services are a major sector of employment for both men and men but have high concentrations of women (60%) of employed women.
- Women have some advantage over men in some traditionally male occupations (legislators, senior officials and managers, professionals and technicians and associate professionals. In some countries they account for 50% though for most it is between 30 and 48% of all employed in 2000.

Hours of Work

- Long working hours in the labour market (40hour work week) are less common among employed women than men
- Part-time work is more common among employed women than employed men (5% of both worked part-time).

Income from work

- More of women's earnings at the lower end of distribution
- Gender gap in earnings is not entirely due to differentials in working hours between women and men. Reasons: unequal wages –women in St Lucia earned 36% -91% of what men earned hourly. In general women's hourly earning do not equal that of men in any other sectors except for health and social work where women earn about 30% more than men on a monthly basis and 36% more per hour.
- Gaps in earning persist within occupational groups

BOX ONE: SUMMARY OF KEY DEMOGRAPHIC FEATURES OF THE ENGLISH AND DUTCH-SPEAKING CARIBBEAN

- Migration is slowing population growth
- Women are facing population decrease
- Five countries experienced a population decrease since the 1990/1991 census with a disproportionate loss of women relative to men (due to migration)
- Women only slightly outnumber men in most countries (101:100) except in Belize and Trinidad and Tobago where the numbers are almost equal.
- There are slightly more boys than girls under 15 years in all countries of the Region and overall there has been a decline in the under 15 age cohort because of declining fertility.
- Youth Population: aged 15-24 years has remained stable. They comprise 17-20% of the female population and 17-21 percent of the males in all countries except in Barbados where they comprise 14-15% respectively of females and males in 2000/2001.

Mobile Telephony Trends

Global Trends

Mobile phones were initially status indicators for the business elite but with the wireless explosion that began in 2000 the ownership of mobile phones have now dramatically increased in all social and demographic groups. Specifically in the Latin America the penetration of cellular connections was 43% and is expected to grow to 53% by 2009 (ZDNet Research 2005). With this wireless explosion the mobile phone is now the most widely used Information Communication Technology worldwide (Nordli and Sørensen). Women have now begun to be part of the demographic and have even surpassed men in ownership of mobile phones. In 2003 the worldwide usage of mobile phones was split by gender as 44.7% (male) to 55.3% female (Rice and Katz 2003).

There is some differentiation in terms of uses for mobile phones between men and women. These will be explored later.

Rice and Katz (2003) also consider age in their statistics indicating in the US that 47.8% of mobile users in 2003 were younger than 40 years and 52.2% were greater than or equal to 40 years old. Nordli and Sørensen's findings are that teenagers make use of the mobile phone as a tool of social organization.

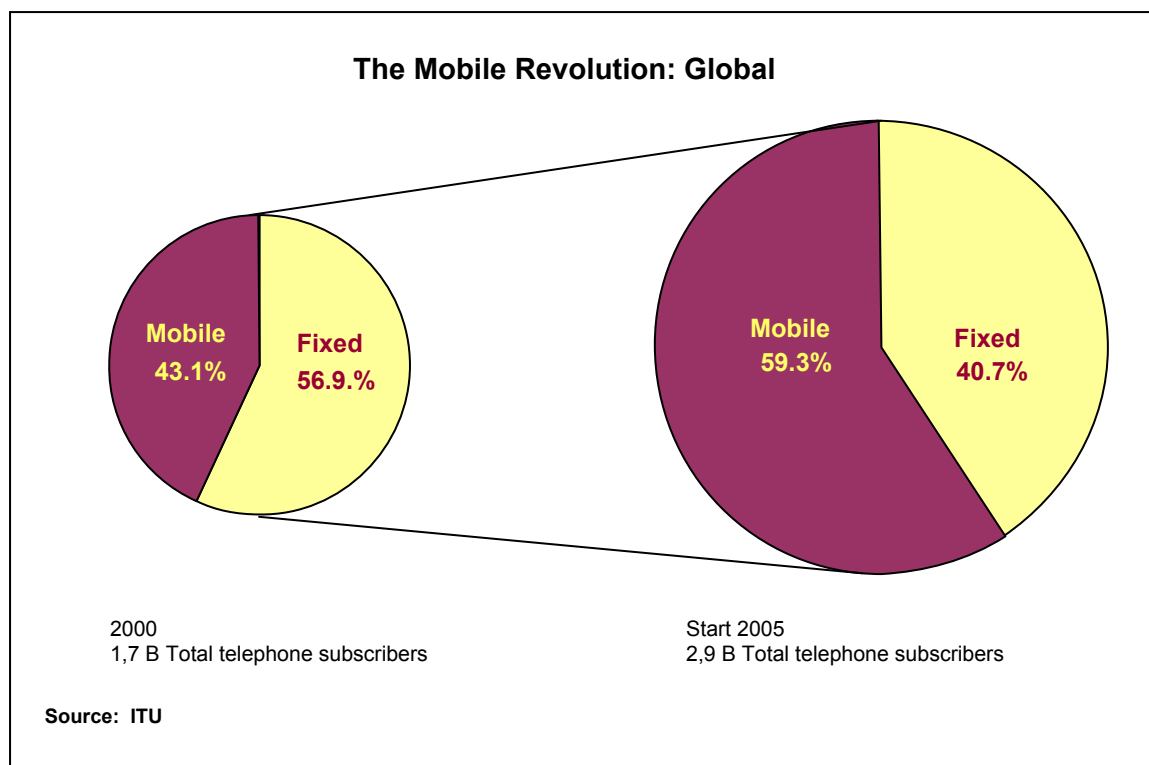
Mobile Broadband

The third generation (3G) mobile phone, which is now in circulation, is already introducing new, high-tech capabilities. Nokia recently launched its first mass-market phone to support VoIP, also called Internet Telephony, a move that will drive down costs for mobile voice calls. Other manufacturers, such as Motorola, are working on similar handsets that will make Internet telephony more accessible to mobile consumers. It is expected that the Caribbean market will soon benefit in a more extensive manner from these innovations. Additionally, the rise of expensive high-end portable communication devices such as the 'Blackberry' suggests that our mobile future is no longer just about mobile voice telephony but about mobile multifunction information and communication devices with broadband capacity and Internet access. (Dunn 2006)

Fixed-to-Mobile Substitution

According to the ITU, in the year 2000, close to 57% of total global telephone subscribers were on fixed lines. By the end of last year, this number had gone down to less than 41%, a significant drop of close to 16%. It means that globally, mobile subscribers currently represent close to 60% of total phone users around the world.

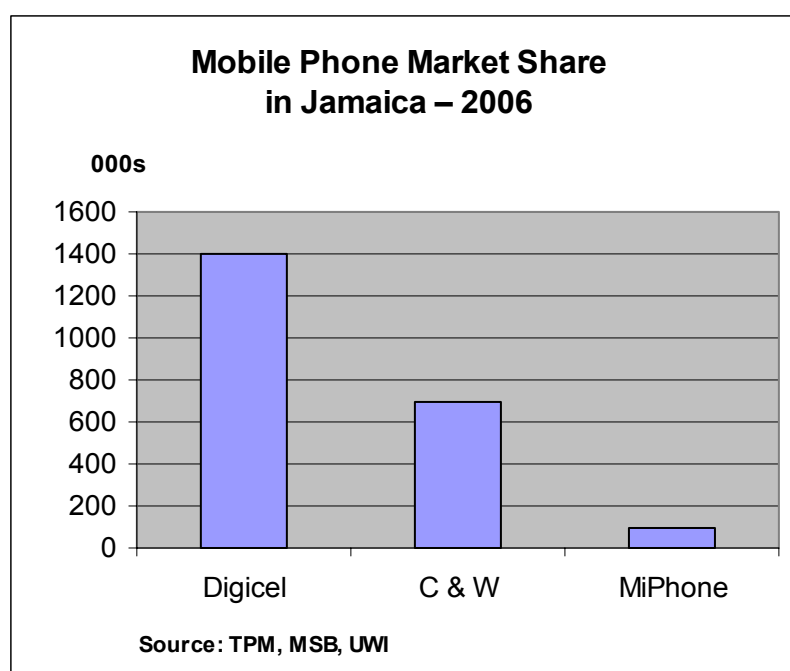
Chart 2



A similar pattern is emerging in the Caribbean. In Jamaica, for example, there has been a 15% decrease in the number of fixed line customers over the last three years. The number of local mobile phone subscribers has been increasing rapidly and now stands at over 2.1 million. (See Chart 3)

One of the trends in Jamaica is that homeowners are no longer keeping their landlines while acquiring mobile phones. Increasingly landline owners are abandoning their fixed lines (some with high unpaid bills) and are acquiring or keeping only cell phones for use both at home, in their small business operations as well as while commuting. The telecom demographics and the usage patterns are already changing as a result of individuals in the household having personal mobiles at home as opposed to the former reliance on a domestic landline.

Chart 3



It is expected that this trend of fixed-to-mobile substitution will continue in the years to come, although at a reduced pace as landline providers offer incentives to users to return to or retain wireline connections.

ITU Mobile Telephony data for the Americas in 2004 indicate that mobile subscribers represented 67 per cent of total mobile subscribers in the Caribbean (see Chart 4). The Caribbean was the region in the Americas with one of the highest mobile proportions, second only to Central America. This could suggest an indication of a greater rate of fixed-to-mobile substitution in the Caribbean and Central America.

Chart 4

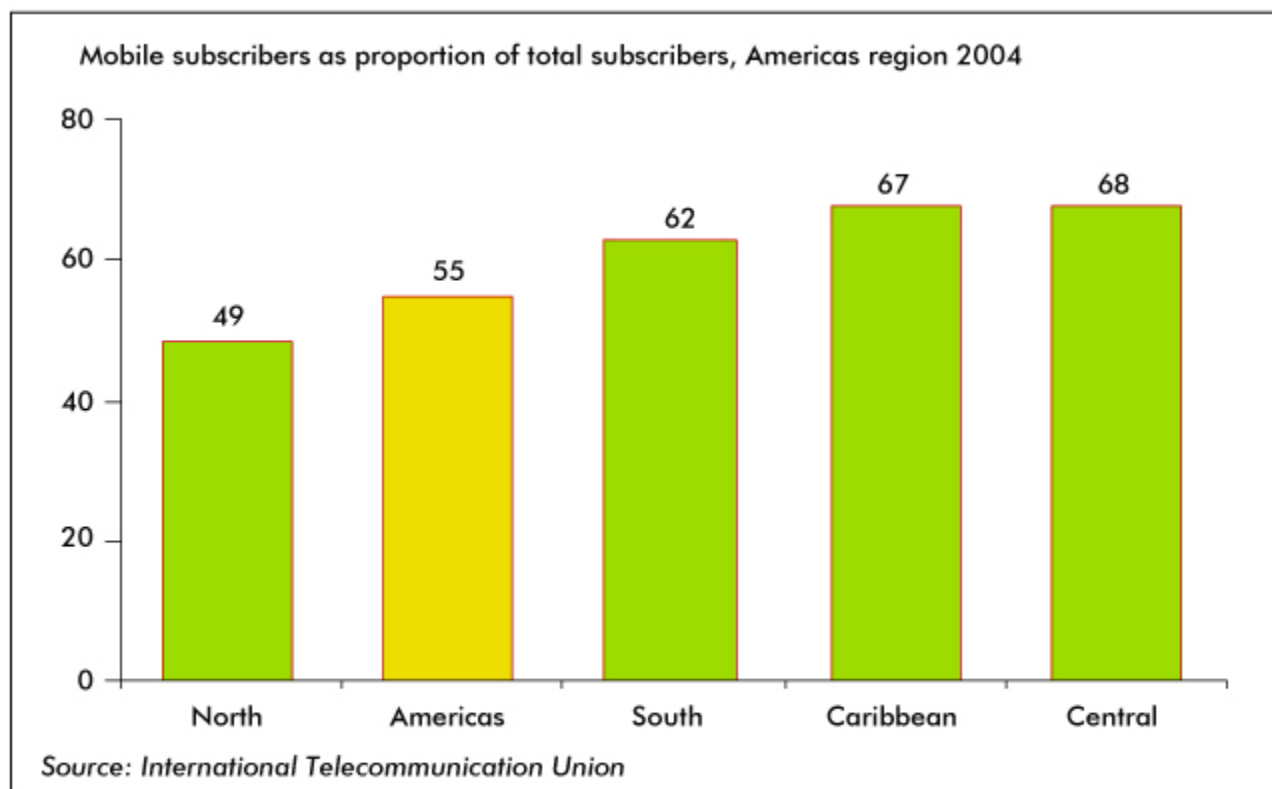
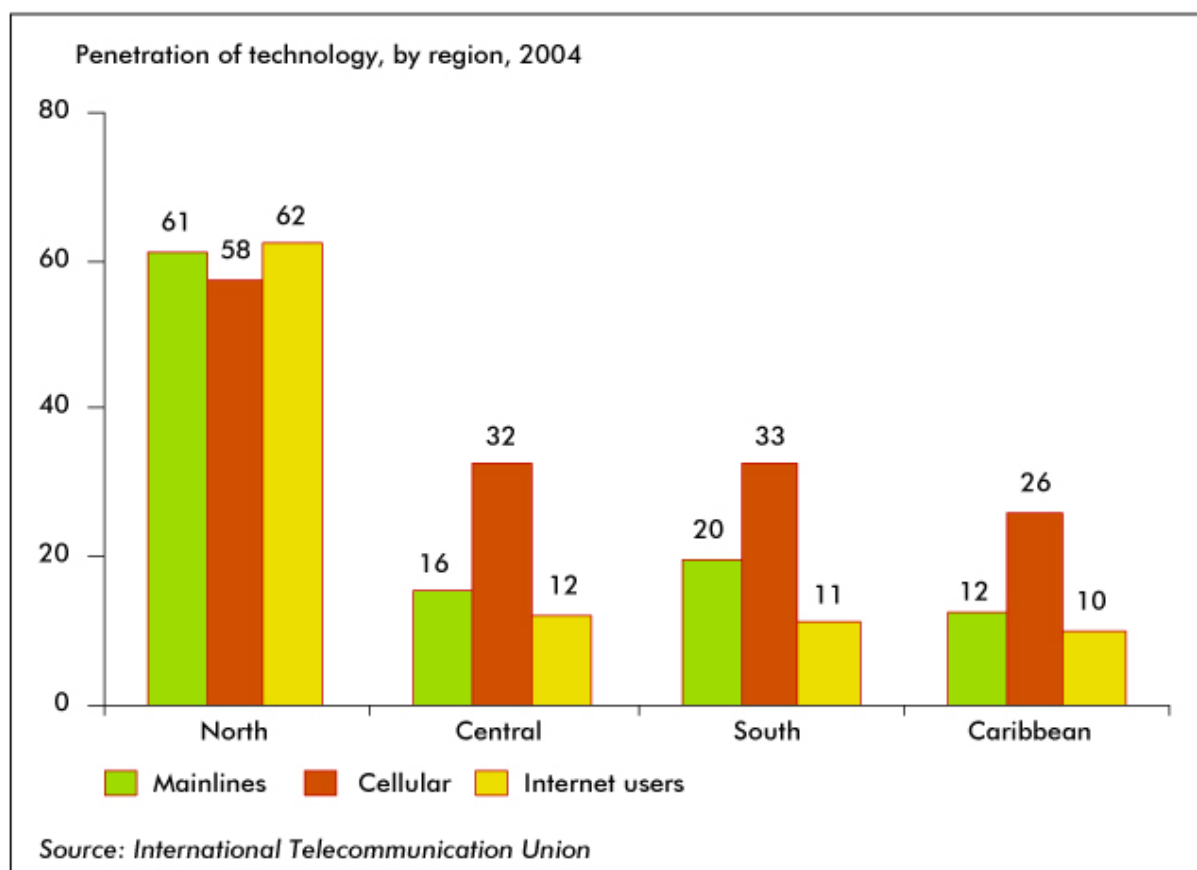


Chart 5



Further findings from the ITU show the level of ICT penetration in the Americas. As Chart 5 suggests mobile penetration is way ahead of Internet and landline penetration in all areas including the Caribbean. In North America, however, is more balanced among the three indicators of technology and also possess the highest penetration of fixed line, mobile and internet. The Caribbean, on the contrary, shows the lowest level of penetration among in all areas with 26 per cent penetration of mobile phone and a dismal 10 per cent penetration of internet.

Mobile Telephony In The Caribbean

Data on the usage of mobile telephony across a number of variables exist at an international level and more specifically for developed countries. Much of this data have been generated by international agencies (ECLAC 2005) and in quite a number of cases, privately commissioned market trends agencies.

As a result, the research data tend to focus on issues of mobile telephone penetration versus land line services. The fairly commercial nature of this research trend places the focus on the rate and extent of mobile penetration rather than on the questions about the end user, their action and rationale for such action.

There are only a few studies in the region on cell phone use. In Trinidad and Tobago, one research project has been proposed by David Dolly entitled “The Use of Mobile Cell Phones among a Select Group of Female and Male Farmers in Trinidad and Tobago.”⁹ However there is no indication if this research is underway.

With the exception of a study of Jamaica (ISRG 2006) no other data have been retrieved for the Caribbean Region. This is surprising given the rapid and voluminous uptake of mobile telephony in Jamaica over all other Caribbean islands. The ISRG findings (2006) state that the “impact of cell phones [in Jamaica] are dramatic”. The report states that before 2001, cell phones were used primarily by middle and upper class citizens, but with the advent of a liberalized telecommunications sector there is an average of three cell phones in every Jamaican household. That translates into over two million subscribers in a population of 2.6 million. A May 2006 review of broadband and consumer E-commerce in Jamaica¹⁰, stated that

“Mobile penetration in Jamaica exceeds that of the rest of the Caribbean and even North America, with the International Telecommunications Union (ITU) world telecommunications index for 2005 indicating a mobile penetration rate of 82.2 per cent, according to the technology minister.” (2006)

Whilst the trend experienced in Jamaica can almost be deemed extreme, similar phenomena have been documented for the Latin American region:

⁹ See: http://www.apcwomen.org/genardis/genardis_project.shtml?cmd%5B734%5D=i-734-5080ceba0c29c7e906e34de7d189933c

¹⁰ See: <http://www.internetworldstats.com/car/jm.htm>

Chile, Columbia and Mexico (Bagchi 2003) to name a few. Yet again, research has been severely limited to penetration rather than socio-culturally based analysis.

BOX TWO: ORANGE VALLEY PHONE USE CASE STUDY

Some summary findings of research based on Jamaican cell usage in the rural area of Orange Valley, near the border of Trelawny and St. James, and the municipality of Portmore in St. Catherine (ISRG Op. Cit.) include the following findings:

1. Cell phones are used for the management of remoteness and the creation of new social networks. Remoteness in this context refers to both the distance of the local community and that of the Diaspora. It is recorded that calls are on average 19 seconds long, and are most times used to keep dialogue open until “there is a reason for sustained contact”. The analysis showed that more than half of the household income was generated through social contacts – facilitated and maintained through cell phone usage.
2. Cell phones are used for health and welfare insurance. These activities ranged from anonymous calls to the police, for ambulance services or a way of reaching out in times of intense social or psychological pressures frequently experienced by low income earners.
3. Cell phones were regarded as detrimental to students as they provide a distraction in the classroom.
4. Cell phones are owned and used equally among men and women. In the case of men, its usage has analogous to hanging out on the corner,
5. Cell phones were rarely used to help obtain jobs or develop entrepreneurial activities.

Data are available for usage across gender, age and socio-economic status for developed countries (Castells et al 2004) and may provide excellent benchmarking opportunities for comparative work. Significant work has also been done for European and Asian users for a wide range of variables (See Appendix A for Bibliographic Guide). The nature of the research findings for developed countries is expected to be vastly different from any findings for emerging economies as it is argued that for the former, mobile telephones are used as complementary gadgetry to land lines whereas for the latter, it is a widely used as substitution good. (Bagchi 2004)

Table 5 below is an overview of several ICT indicators in the Caribbean as provided by the UNDP's 2005 Human Development Report. The data are less useful because of gaps and time lag since they were first collected. However, they give a historical trend indicator.

Table 5: Telephone and Internet Usage in the Caribbean, 2003

Countries	Mainline Per 1,000 persons (2003)	Cell phones Per 1,000 persons (2003)	Internet Per 1,000 persons (2003)
Antigua and Barbuda	253 (1990)	-	-
Bahamas	415	367	265
Barbados	493	519	371
Belize	113	205	-
Cuba	64	3	9
Dominica	164 (1990)	-	-
Dominican Republic	115	272	102
Grenada	290	376	169
Guyana	-	-	-
Haiti	17	38	18
Jamaica	-	680	-
Montserrat	-	-	-
St Kitts and Nevis	-	-	-
St Lucia	129 (1990)	-	-
St. Vincent and the Grenadines	273	529	-
Suriname	152	320	44
Trinidad and Tobago	141 (1990)	399	-
Latin America & Caribbean	165	239	-
OECD	494	644	403
Middle Income	180	224	77
Low Income	32	24	14
World	184	226	120

Source: Human Development Report 2005:262-265, UNDP.

Issues And Trends In Mobile Telephony In The Caribbean: Preliminary Indications

As a preliminary research a pilot focus group was convened with five participants. Two of the respondents were from Trinidad, one male and one female. There were two Jamaicans, one male and one female as well as a female Jamaican national who had been living in Britain for a number of years. The male moderator (Jamaican) was also involved in the discussion. The discussion raised many issues of differential usage and uses between men and women and age groups in particular. All the respondents had a mobile phone and all but one had a landline at home. Below are some preliminary findings from the discussion.

Gender Differences

In terms of gender, women were more avid and interested users of mobile phones. Males used their mobile phones in a more minimalist way. One female respondent noted that single women were more likely to be heavy mobile users as it is a type of security as it represents a link to your social contacts. As stated all three women present who were all unmarried were heavy mobile users, one even described her mobile *phones* as her 'lifeline'.

Only one respondent (male) used his mobile primarily for business while the others used it primarily for personal reasons. Otherwise, men said that their reason for getting a mobile phone was because of the people that want to keep in touch with them. The men of the group made short calls and used the phone's other features including the camera feature.

Age Differences

Most respondents cited multiple uses of the phone including calling, texting and other features such as the camera, games and alarm clock. Older respondents (above forty years old) were more likely to cite fewer uses and sought the assistance of their children or younger associates in more complex usages.

Some respondents (above thirty years old) were hesitant to try a new type of phone because of having to re-learn the features and buttons. Respondents reported that older persons in their family (60+) were less likely to adapt to the technology. In fact, one respondent related a story about his aunt, about 93, who was able to adapt to recharging a portable land phone but not a cell phone. The impression persists, for many older folks that mobiles are complicated, small and 'not for me'.

The limited uptake among older persons can be attributed to the level of instruction in some manuals and that is obtained through customer care. It may be inhibiting to older persons as it does not really break it down for the new user. One respondent stated how amazed she is that 'there is a whole other youth generation that doesn't need the instructions'.

Differences Between Countries

There was some evidence of differential usage and uses among the two countries represented. In terms of the uses, both Trinidadian respondents were reserved users of the technology, stating they preferred to use the landline instead of the cell phone when there is opportunity to do so. This was in spite of their familiarity with technology and working in the field of telecommunications.

Two of the Jamaican respondents cited "substitution" of cell phones for landlines through the use of phone calls and texting as a reason for heavy cell phone use.

An interesting issue that was raised was that mobile competition in Trinidad did not bring about the reduction in prices as was seen in Jamaica. This was mainly because instead of making a choice between the two consumers carried one phone from each network. It was posited that this was perhaps caused by the fact that the competition in Jamaica was far more aggressive than in Trinidad.

Rural / Urban Differences

It was noted that there is some difference in uses for rural and urban dwellers. Rural dwellers use cell phones more to keep in touch and maintain link. For urban people, it was also for contact but also about 'the look' as mobile phones is a type of status indicator.

Mobile Trends

Among the mobile trends that emerged were the following:

- Mobile Phone Theft which is a growing phenomenon in the region, especially among the young
- Use of mobile phones by both men and women while driving was prevalent (with and without hands free devices) and its implications
- Cell phones as status indicators, eg. The Razr phenomenon.
- Mobile ringtones were in use as status indicators making the cell phone more and more customized to the personality of the owner
- Change in the look and sound of the environment because of the mobile explosion.
- Use of camera phones increasing for ease in showing friends and relatives images of weddings and other major events
- Greater access among rural areas and for persons who had no landline.

- Increased dependence on mobile phones: Most respondents felt attached to their cell phone as if there was some relationship.
- Increased concern about health risks such as radiation and cell phone waste disposal.

Proposed Field Research Strategy

Objectives

The follow-up empirical study is to be conducted in selected Caribbean countries reflecting variations in size and ethnic backgrounds. Accordingly the study would cover Jamaica, Trinidad and Tobago and St. Lucia. A follow-up study would be conducted in the Spanish and French speaking region.

Methods

The study would draw on the demographic and preliminary data available in this paper, to provide the basis for a triangulated approach using both qualitative and quantitative tools and methods.

Target Group

A questionnaire survey would be conducted among respondents in the following age groups:

- 12-24
- 25-35
- 36-55 and
- over 55

The survey will also target women and men in rural and urban settings. The qualitative data would be suggested by a series of focus group sessions and specialized interviews to add depth and detail to the study.

Research Questions

The broad research questions to be covered are:

- What is the demographic profile of mobile phone users in terms of age, sex, education and income?
- What are the main uses of mobile telephony among persons of each age group? Who uses it: Why, How, When and Where?
- How do uses of mobile telephony differ between men and women?
- How do uses of mobile telephony differ between rural and urban dwellers?
- How does marital status affect mobile phone usage among men? Among women?
- What are the perceived benefits of having a mobile phone? Does this differ between age groups and gender, rural / urban location?
- What are the emerging trends in mobile phone usage?
- What is the preferred payment methods used by both sexes and across age groups: pre-paid or post paid? Why?
- What is the average length of a call for persons in each group?
- What is the average amount of money spent on a cell phone by sex and age?
- Does the monthly average of outgoing and incoming calls and text messages vary by sex and age?
- What are the dominant ways of obtaining a cell phone by gender and age: Purchased by respondent? Received as a gift? Other?
- Do men and women equally use the cell phone for social networking?
- Does mobile phone use change with age?
- Does the age of ownership of the first cell phone differ for males and females?

Output

The research results would be compiled using tables, charts and analytical text as well as case study narratives and country profiles.

Recommendations For Further Research

There are a number of further research areas that may be explored that do not fall within the scope of this research project. The following is a list of these areas for consideration.

1. An in-depth case study or studies, modeled on work previously done by the Information Society Research Group (ISRG) on Jamaica and which may provide the basis for comparative work.
2. A comparative study against benchmarks in developed nations, with a view to analyzing convergent or divergent patterns of mobile usage in the LAC region.
3. An in-depth analysis a specific use of mobile telephony. For example, much work has been done internationally on the SMS application in cell phone use. (Sun 2004; Eldridge and Grinter 2001) An approach such as this may best be able to identify the mobile service needs of the poor, as is the focus of the research sponsors.

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