

EASTERN CARIBBEAN TELECOMMUNICATIONS AUTHORITY (ECTEL)



**Use of Information and Communication Technology (ICT)
by Small and Medium Enterprises in the ECTEL Member States**

ACKNOWLEDGEMENTS

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EXECUTIVE SUMMARY

The ECTEL Directorate conducted a survey of businesses, with a focus on small and medium enterprises (SMEs), in the ECTEL Member States, to determine the extent to which businesses have benefitted from the liberalisation process.

Five hundred and four (504) businesses were surveyed across the ECTEL Member States; 95 in Dominica, 91 in Grenada, 82 in St. Kitts and Nevis, 141 in Saint Lucia and 95 in St. Vincent and the Grenadines.

With the assistance of the Central Statistics Offices in the Member States, face-to-face interviews were conducted with IT Managers or General Managers. Interviews were conducted using a structured questionnaire and the interview length was approximately 20 minutes. The field work was conducted over the period August to October 2008.

Fixed Line Service

Findings revealed that the majority of firms, 97.4 per cent have fixed line service, and for 53.9 per cent of firms more than 75 per cent of staff have access to fixed line service at their work stations. In spite of the presence of cable operators providing fixed service in Dominica and St. Kitts and Nevis, Cable & Wireless commands between 97.8 and 100 per cent market share in the provision of fixed voice service. The rates for services remain an issue, with less than 10 per cent of respondents indicating that the rates for fixed services were low. The rates for fixed to mobile calling is also a source of concern, and as a result most firms, 56.2 per cent, restrict or do not allow fixed to mobile calling. However, even with the dissatisfaction with rates, 83.4 per cent of firms indicated that it is very unlikely that they will give up fixed line service.

Mobile Service

Mobile service is less popular than fixed service with 72.5 per cent of respondents claiming to have mobile phone service. Of the firms without service, the majority, 88.3 percent do not intend to subscribe to mobile service mainly because it was seen as too costly. Of the firms with mobile service, though 57.2 per cent had post-paid service, the majority, 59 per cent was not aware that corporate mobile plans were available. Cable & Wireless was the main provider of mobile service for businesses, with a 69.6

per cent market share. Most respondents rated the price for mobile calls as high or very high.

International Service

Among the firms interviewed, fixed line was the most popular means of making international calls, used by 67.1 per cent of respondents, followed by Voice over IP service used by 14.3 per cent of businesses. Firms were asked to rate the price of international calls using various telecoms services. Voice over IP calls were viewed as being priced right by 41 per cent of respondents, while the majority of respondents viewed the rates all other methods of calling as high or very high.

Computers and Internet Access

Of the ninety-one per cent of respondents who had computers, 81.4 per cent had a local area network and 89.6 per cent had Internet access. The majority of firms with Internet access, 70.5 per cent, had ADSL high speed Internet access, making Cable & Wireless the main provider of Internet access to businesses. Forty per cent of respondents indicated that more than 80 per cent of their employees had access to the Internet, though only 22 per cent said that more than 80 per cent of employees used the Internet as part of their job.

Almost all firms with Internet access, 95.8 per cent, used email. The main uses of email by businesses were to contact supplies (41.5 per cent) and to communicate with customers (39.2 per cent).

Less than 50 per cent of respondents with Internet access had a company website. Company websites were used mainly for marketing and advertising and to provide information on the company; only 20 per cent of firms indicated that their website was used to process customer transactions. For companies that did not transact business on the Internet, the main reasons given were products not suited for Internet (20%), security and privacy concerns (18%), preference for face-to-face transactions (20%) and lack of customer demand for online service (16%). However, a majority of firms indicated that they benefitted from using the Internet.

Attitude toward ICTs

The majority of firms interviewed, 88.9 per cent, indicated that ICTs were important to their business, with 36.6 per cent stating that ICTs were indispensable. However, only 27.2 per cent of respondents had specialised staff dedicated to ICT. More than 70 per cent of respondents indicated that

ICTs had a positive impact on the way they conducted business including working with suppliers and enabling staff to work more efficiently.

When asked how important it would be to keep their fixed number should company change service provider, 86.9 per cent of respondents said it would be very important. When asked a similar question in relation to mobile phone number, only 53.1 per cent of respondents said it was very important, and an additional 18.9 per cent indicated that it would be important.

Awareness of Regulators

A majority of firms, 76.3 per cent of respondents, were aware of ECTEL and 62 per cent were aware of the NTRCs. However only 23 per cent were aware that ECTEL conducted public consultations, and a mere 3.3 per cent indicated that they had submitted comments to ECTEL in response to a consultation. The main reason for limited participation was lack of awareness. Less than 10 per cent indicated that they had visited ECTEL's website.

Satisfaction with ICTs

Most respondents were generally satisfied with ICTs. Just over 66 per cent were satisfied with fixed service, 61.8 per cent were satisfied with mobile service and 62.2 per cent indicated satisfaction with high speed Internet access. The main cause of dissatisfaction with voice services was cost, while slow speed was the cause for concern with high speed Internet access.

Investment and Expenditure on ICTs

A majority of businesses stated that telecommunication and ICTs are very important. However, in terms of investment in ICTs only 40 per cent of businesses had spent more than \$10,000 on ICTs in the past four years. Just under half of respondents claimed that monthly expenditure on ICTs accounted for less than 10 per cent of total monthly expenditure.

1. INTRODUCTION

1.1 Introduction

The information revolution is constantly changing the way in which modern businesses operate. In particular, Information and Communications Technologies (ICTs), offer new opportunities to businesses for improved customer service, the delivery of high quality products and services, improved staff efficiency and enables the instantaneous and efficient exchange of large amounts of information, which is a necessary input for businesses. The Eastern Caribbean Telecommunications Authority (ECTEL) conducted a study to examine the impact of liberalisation of the telecommunications sector on businesses with a focus on small and medium sized enterprises (SMEs). The study focussed on use of ICTs, attitudes towards the use of ICTs and perceptions of impact of the use of ICTs on businesses. The field work for the survey was undertaken with the aid of the Central Statistics Offices in the ECTEL States of Dominica, Grenada, St. Kitts and Nevis, Saint Lucia and St. Vincent and the Grenadines. The Central Statistics Offices managed the field work in their countries and contributed to the sample design.

1.2 Background and Objectives

The telecommunications sector in the ECTEL States was liberalised in 2001 with the passage of the Telecommunications Acts. One of the main objectives of liberalisation was to introduce pro-competition reforms in the telecommunications sector, lower prices of telecommunications services and increase the supply of informatics-related skills in the ECTEL Member States. Residential and business consumers, service providers and governments of the ECTEL States were expected to reap significant rewards from liberalisation.

The primary driver of liberalisation was the high cost of telecommunications services. This hindered the competitiveness of enterprises by increasing the cost of doing business and limiting their ability to capture the economic benefits of ICTs. The cost of telecommunications stifled innovation and restricted access to new technologies and services. As a result of liberalization, business consumers were expected to gain from reduced

Introduction

prices, which would allow for increased use of information technology and provide affordable access to local, regional and international markets.

In order to ascertain whether businesses have indeed benefitted from the liberalisation of the telecommunications sector, the study was designed to capture, from the standpoint of businesses, their level of usage of ICTs and awareness of how ICTs can improve their overall output and performance. The objectives of the survey were therefore to:

- get an overall picture of how and why businesses use ICTs;
- understand the factors that affect the use of ICTs by businesses;
- gain an understanding of attitudes towards the use of ICTs and perceptions of impact of use to ICTs on businesses;
- identify any barriers to use of ICTs; and
- identify policy or regulatory issues that impact business' ability to benefit from the use of ICTs.

1.3 Sampling

Five hundred and four (504) businesses were surveyed across the ECTEL Member States. With the assistance of the Central Statistics Offices in the Member States, face-to-face interviews were conducted with IT Managers or General Managers where the firm had no specific person assigned to IT. Interviews were conducted using a structured questionnaire, and the interview length was approximately 20 minutes. The field work for the survey across the Member States was conducted over the period August to November 2008.

The sample was a purposive sample and designed to include the main economic sectors in the ECTEL States. The sample profile by economic sector, size of business and age of business is presented below.

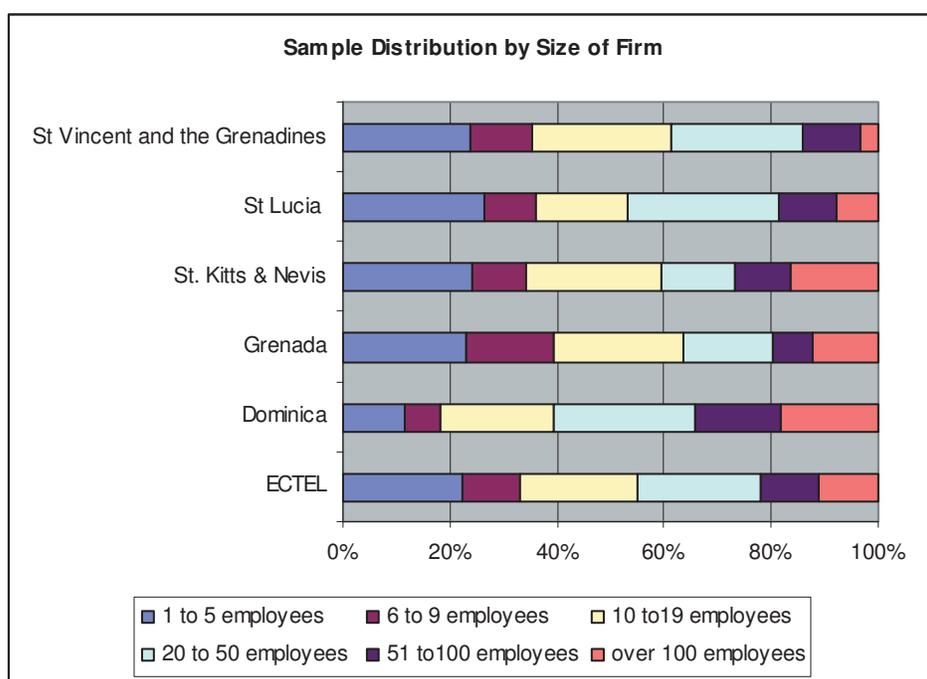
(a) Sample Distribution by Economic Sector

The main economic sectors included were Agriculture, Forestry, Fishing and Mining, Construction, Manufacturing, Transport, Wholesale and Retail, Information and Communication, Accommodation and Food and Service Activities and Professional and Technical Services.

Industry Group/Sector	Sample Proportion					Sample Total
	Dominica	Grenada	St Kitts and Nevis	Saint Lucia	St Vincent and the Grenadines	ECTEL
Agriculture, Forestry, Fishing and Mining and Quarrying	4.2%	5.5%	1.2%	5.7%	4.2%	22
Manufacturing	6.3%	6.6%	19.5%	12.8%	17.9%	63
Construction	7.4%	9.9%	6.1%	4.3%	5.3%	32
Wholesale and Retail Trade	11.6%	4.4%	11.0%	14.9%	13.7%	58
Transport and Storage	1.1%	6.6%	3.7%	0.7%	7.4%	18
Information and Communication	5.3%	8.8%	4.9%	2.1%	7.4%	27
Accommodation and Food Service Activities	11.6%	13.2%	11.0%	19.9%	12.6%	72
Professional, Scientific and Technical, Administrative and Support Services	15.8%	9.9%	11.0%	9.9%	8.4%	55
Other	36.8%	35.2%	31.7%	29.8%	23.2%	157
Sample Total	95	91	82	141	95	504

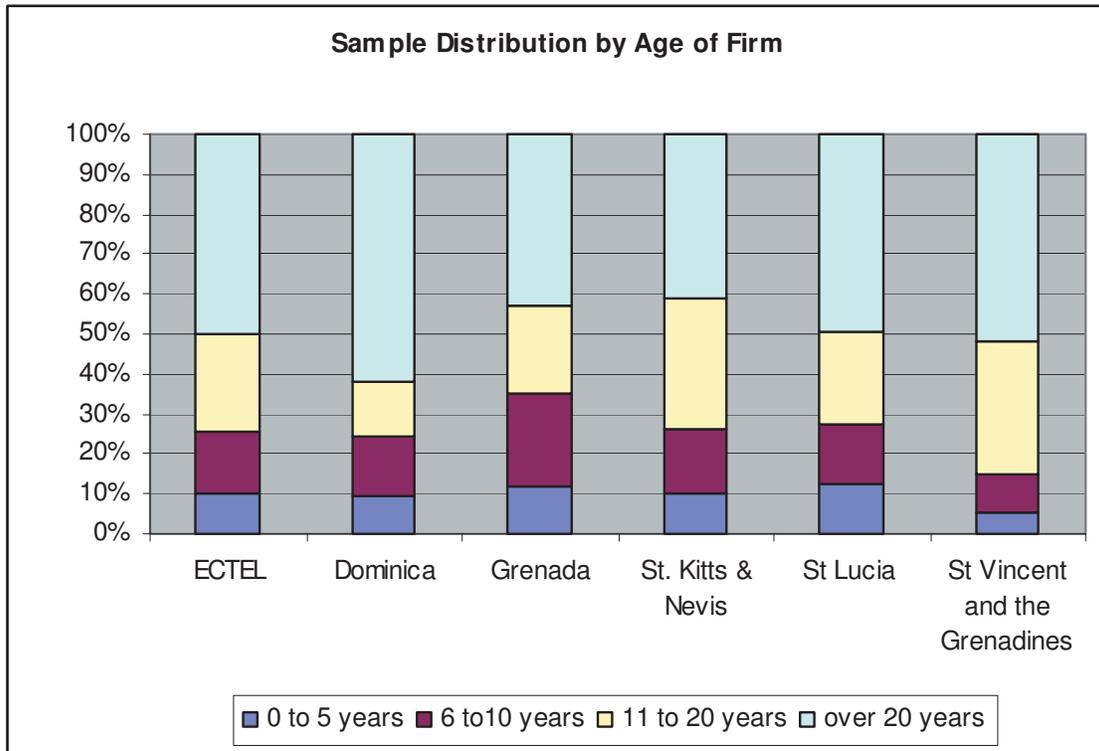
(b) Sample distribution by Size of firm

Number of employees was used as an indicator for the size of the business. Businesses with 10 or less employees were viewed as small, businesses with 11 to 50 employees were viewed as medium size and businesses with more than 50 employees were categorized as large.



(c) Sample Distribution by Age of Firm

The majority of the businesses surveyed (74.4 per cent) were in operation for more than 10 years and just under 10 per cent were relatively new or had been in operation for less than five years.



2. USE OF ICTs BY SMEs IN THE ECTEL STATES

2.1 Profile of ECTEL States

The telecommunications sector in the ECTEL States was estimated to have contributed approximately 10.8 per cent to GDP for the period ended March 2008, and was characterised as follows:

- Cable & Wireless was the main fixed line provider. Fixed line service was also provided by Marpin Telecoms and Broadcasting, The Cable and Caribbean Cable Communications.
- Cable & Wireless and Digicel were the major mobile providers in all ECTEL States, with Orange and UTS-CariGlobe also providing mobile service in Dominica and St. Kitts and Nevis respectively.
- Internet service was provided by Cable & Wireless, Marpin Telecoms and Broadcasting, Karib Cable, The Cable and Caribbean Cable Communications.
- Fixed line penetration had stabilized at approximately 28 per cent.
- Growth in mobile penetration slowed as average penetration reached 115 per cent.
- There was significant room for expansion in the Internet market with average penetration at 12 per cent.
- Total revenue for telecommunication operators was estimated at \$747 million with voice service still the main source of revenue for the sector.
- Total investment in telecommunications was estimated at \$177 million.

2.2 ICT Adoption in the ECTEL States

Businesses in the ECTEL Member States have access to a wide variety of ICTs. Predictably, the most popular services used by businesses were fixed voice. The survey revealed an almost universal use of fixed line service by businesses in the ECTEL States. Ninety-seven per cent of respondents used fixed line service. The proportion of smaller businesses (95 per cent) with fixed line service was only marginally less than larger businesses (99 per cent). Next in line was the use of computers (91 per cent) and Internet access (90 per cent). Just under three-quarters of respondents indicated that they had mobile phone service. Smaller businesses were less likely to

have mobile service than larger businesses – 62 per cent compared to 90 per cent.

Fax service, well established, was used by 83 per cent of respondents. Larger businesses were more likely to use that service (96 per cent compared to 66 per cent for smaller businesses). An estimated 86 per cent of business (96 per cent of businesses with Internet access) indicated that they used email service.

In contrast to the widespread use of basic ICTs, use of advanced services was relatively low in the ECTEL States. Less than half of the businesses surveyed had a company website with only half of these companies using their website for e-commerce transactions. In terms of advanced mobile services, 51 per cent used SMS, mainly as an alternative to calling, and 14 per cent used mobile data services including Blackberry service. Teleconferencing is used by 24 per cent of respondents with a mere 2 per cent using video conferencing. Figure 1 shows relative use of ICTs by businesses.

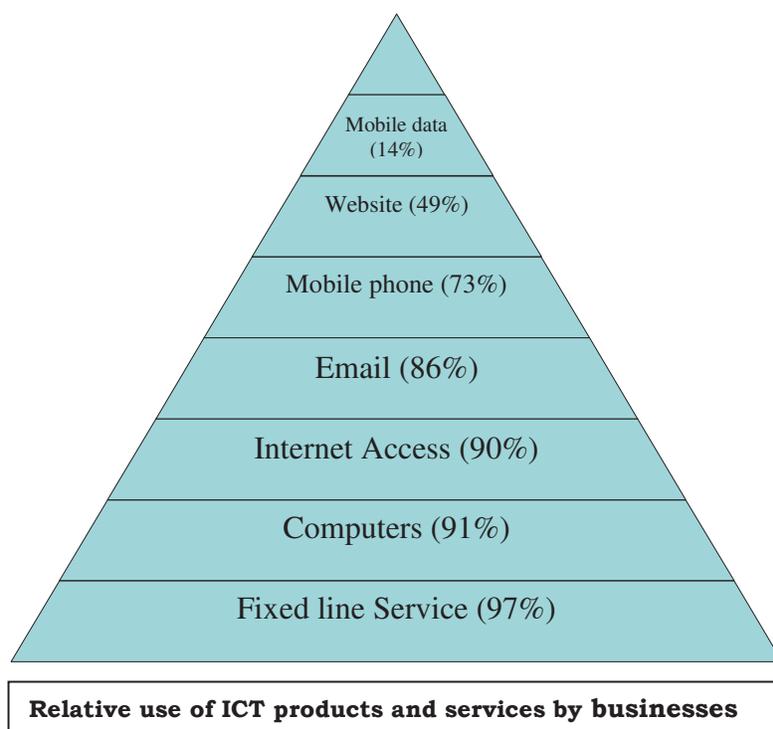


Figure 1

2.2.1 Use of Fixed Line Voice Service

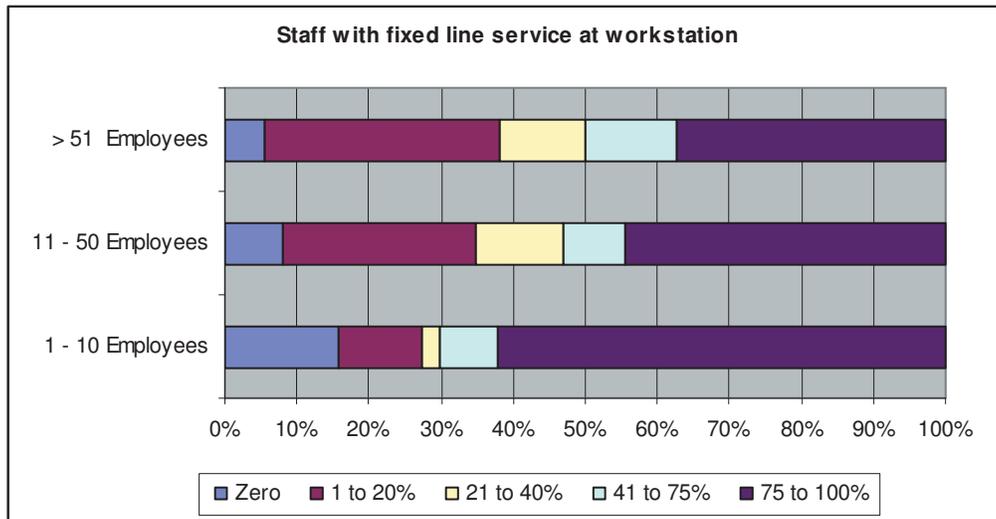
Fixed line service was used by 97 per cent of businesses surveyed. This was not surprising as fixed line voice service is the most well established ICT. Roughly 30 per cent of respondents had one phone line, 25 per cent had two lines and 45 per cent had three or more lines. Not unexpectedly, large businesses (more than 50 employees) were more likely to have multiple lines (73 per cent) while small businesses more often reported having just one line (50 per cent). Cable & Wireless was the fixed line provider for 99 per cent of respondents. This was due to the fact that it has been the dominant fixed line operator in all the ECTEL States.

The agriculture (42%), construction (47%) and accommodations and food services (37%) sectors tended to have one fixed line. On the other hand, a larger proportion (43%) of wholesale and retail businesses by the nature of their wider geographic scope had more than three fixed lines.

Fax service, another well established service, was used by 83 per cent of businesses. However only two-thirds of small businesses used fax service as compared to 96 per cent of large businesses. It may be that small businesses find the newer options such as email more cost effective and practical.

Staff had ready access to the fixed line as 54 per cent of businesses indicated that more than 75 per cent of staff had access to the fixed line service at their workstation. The percentage of staff with access to the fixed line was an above average 62 per cent for small businesses but fell to 37 per cent for larger businesses (Chart 2.1). Across the economic sectors, staff access was relatively constant with the noted exception of the food service and accommodation sector with one-third of respondents indicating that more than 75 per cent of staff had access to the fixed line service at their workstation. Businesses in St. Kitts and Nevis recorded the highest proportion of staff with fixed line access (68 per cent indicated that more than 75 per cent of staff had access) while Dominica had the least businesses, 44 per cent, providing access to more than 75 per cent of staff.

Chart 2.1



Ninety-five per cent of respondents claimed that they used at least one value added service. Across the ECTEL States the most popular value added service used by 43 per cent of respondents was call waiting. This was followed by voice mail (37 per cent), caller ID (35 per cent) and call forwarding (34 per cent). The pattern of use of these services was fairly consistent across the ECTEL States, but businesses in St. Kitts and Nevis seemed to be better informed on value added services and recorded high levels of use of these services; 61 per cent used call waiting, 53 per cent used caller forwarding, 43 per cent had voice mail and 39 percent used caller ID. On the other hand, St. Vincent and the Grenadines had below average usage of value added services; 27 per cent used call waiting, and just about 20 per cent indicated using call waiting, voicemail or caller ID. However in terms of business size, the proportion of large businesses using value added services was only marginally greater than for small businesses.

The respondents were given an opportunity to comment on the pricing of alternative fixed line calling services since liberalisation. The results indicated that the rates for fixed services remain an issue for businesses, because while 40 per cent felt that fixed-to-fixed calls were priced right, the majority, 52 per cent, claimed that rates for fixed to fixed calling was high or very high. The rates

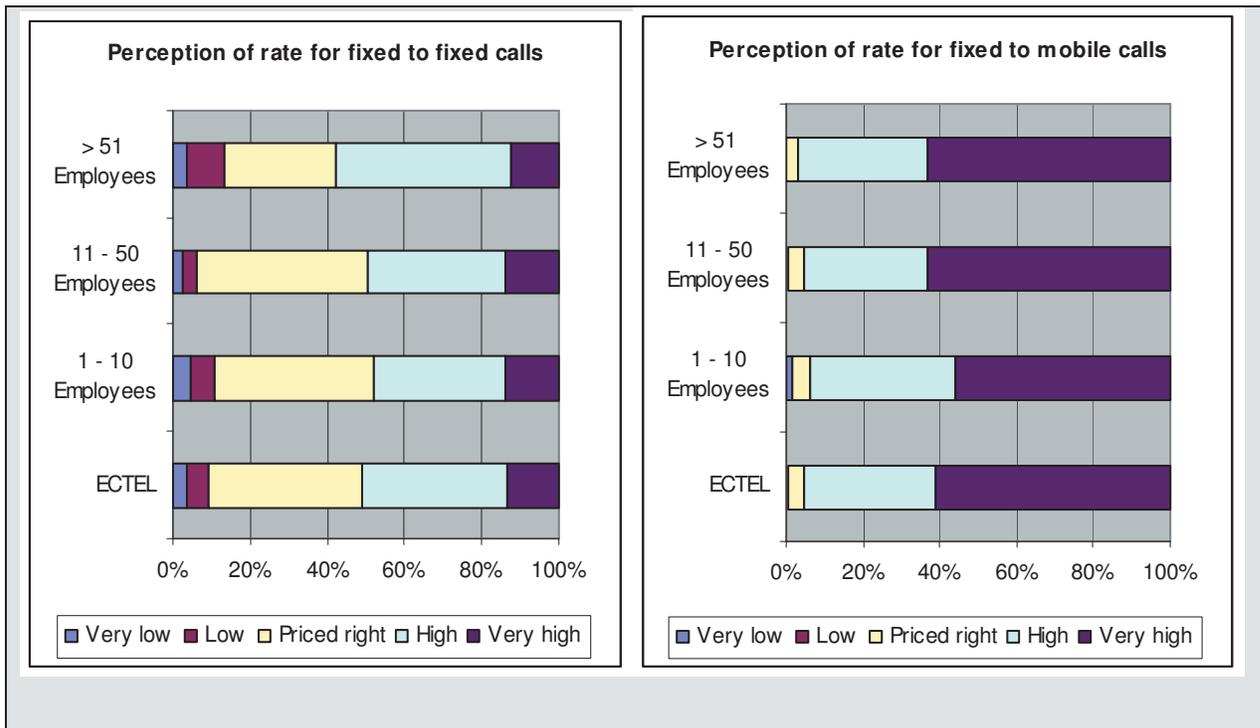
The attitudes toward pricing varied across the states. Grenada had the most, 51%, firms indicating that the fixed to fixed calling was priced right and Dominica had the lowest proportion, 32%. The percentage of businesses that believed the rates for fixed to mobile was high or very high ranged from 95% in Saint Lucia to 98% in St. Vincent and the Grenadines.

for fixed-to-mobile calling was viewed even more unfavourably with 95 per cent of businesses indicating that the rate for fixed-to-mobile calls was high including 61 per cent stating that the rate was very high.

Consistent with the view that fixed-to-mobile rates are very high, just under 60 per cent of businesses either blocked or restricted fixed to mobile calling. Businesses in St. Kitts and Nevis and Saint Lucia had the greatest tendency to restrict fixed-to-mobile calling, with 62 per cent of respondents reporting that they blocked or restricted fixed-to-mobile calls. Businesses in St. Vincent and the Grenadines and Dominica had the least restrictions; 52 per cent of the businesses allowed fixed-to-mobile calls.

Chart 2.2 (a)

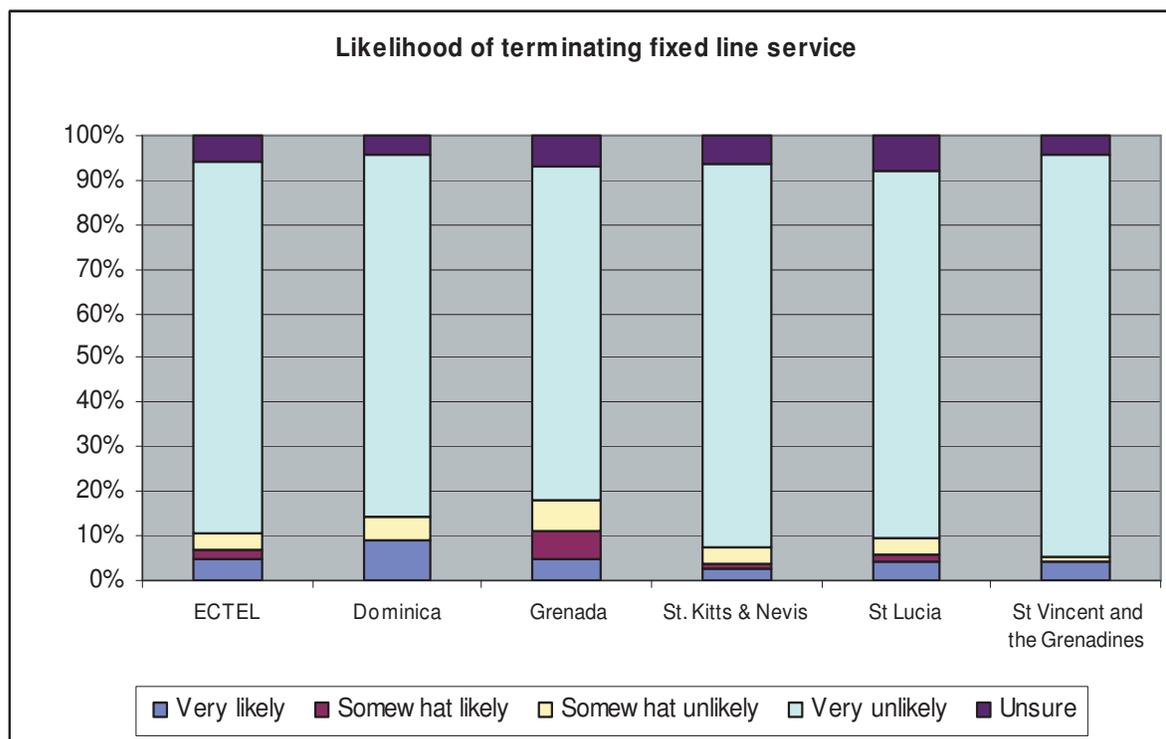
Chart 2.2 (b)



Notwithstanding pricing concerns, 83 per cent of the firms regarded the fixed line as essential, and reported that they were very unlikely to terminate the service (Chart 2.3). Businesses in St. Vincent and the Grenadines were the least likely to terminate service (91 per cent) while Grenada had the smallest proportion of businesses indicating they were very unlikely to terminate the service (75 per cent). Of the firms who were likely

to terminate fixed line service, 49 per cent found the fixed line service to be too costly, 13 per cent had grievances over lack of choice of service provider and 20 per cent were concerned with poor quality of service.

Chart 2.3



2.2.2 Mobile service

Mobile telephone services were slightly less popular than the fixed line, with 73 per cent of the businesses reporting that they had a mobile phone. Saint Lucia recorded the highest proportion of businesses with mobile phone service (77 per cent) and St Vincent and the Grenadines had the lowest proportion at 58 per cent.

The distribution of mobile phone users by sector revealed that Information and Communication and Construction had the highest level of subscription to mobile phones at 85 per cent and 84 per cent respectively. The Accommodation and Food Service sector had the lowest subscription (60 per cent) to mobile phone service. Access to mobile

Among firms with mobile phones 57% had postpaid plans while 22% had prepaid and 21% had both prepaid and postpaid. A greater proportion of small businesses, 42% had pre-paid service.

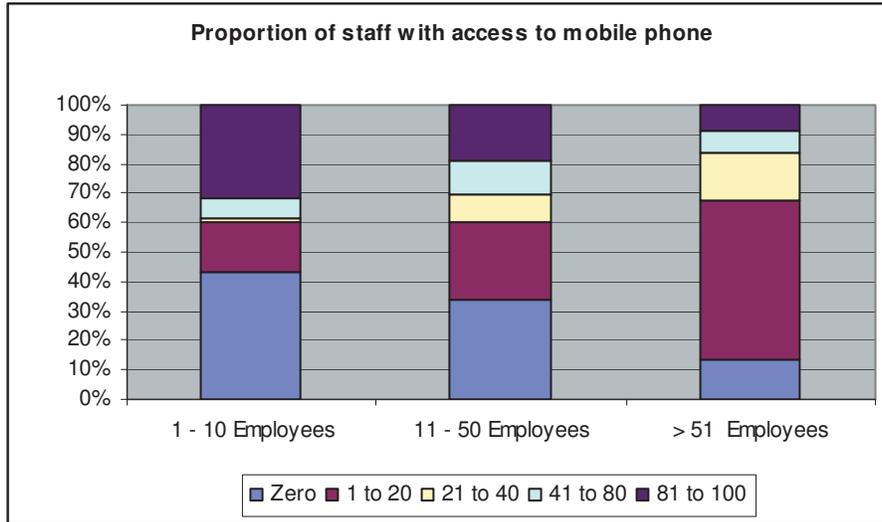
phones increased positively with the size of business; 62 per cent of businesses with 10 or less employees reported that they had mobile phone service compared to 90 per cent for businesses with more than 50 employees. The majority of businesses with no mobile phone service, 97 per cent, had no service in the past and 88 per cent did not plan to subscribe to the service, primarily because it was regarded as too costly.

Digicel was the service provider for 30 per cent of mobile subscribers while Cable & Wireless served the other 70 per cent. Most businesses (61 per cent) had only one mobile service provider. Twenty-nine per cent of businesses used multiple mobile phone providers to take advantage of cheaper calls on the same network. Eight per cent considered having multiple mobile phone service as a contingency in the event that one provider's network went down. Only two per cent used more than one provider to take advantage of better rates for international calls.

There was restricted accessibility to mobile phones on the job. Most respondents, 62 per cent, allowed less than 20 per cent of staff mobile phone access and 21 per cent of the businesses provided access to more than 80 per cent of staff. In Saint Lucia and St. Kitts and Nevis, the highest proportion of businesses, one-third, provided mobile phone access to more than 80 per cent of staff. Dominica was at the opposite end with only 17 per cent of businesses providing access to more than 80 per cent of staff. Staff of smaller firms had greater access to mobile phones than staff of larger firms; one third of businesses with 10 or less employees said that more than 80 per cent of staff had access to mobile phone service as against 9 per cent of businesses with more than 50 employees (Chart 2.4).

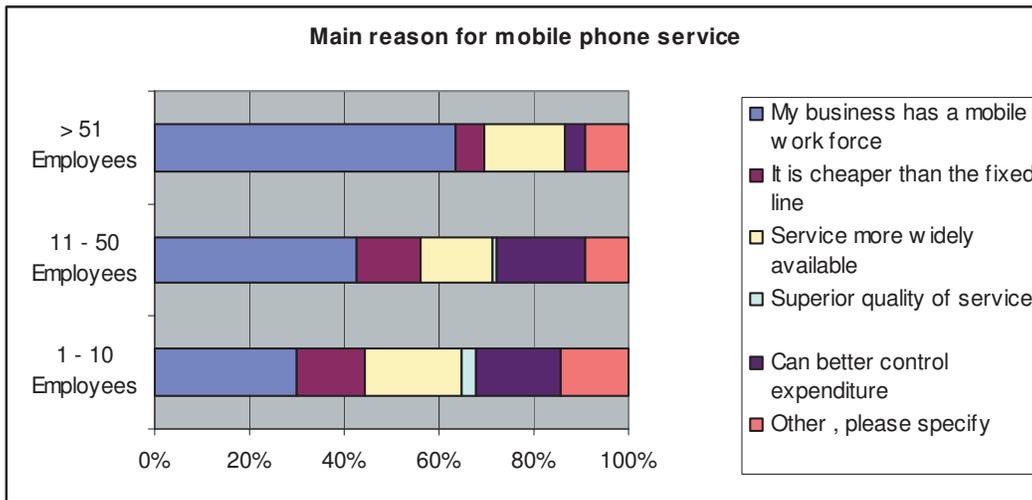
When the data was compared by industry, not surprisingly, for the Transportation sector, an above average 57% of businesses indicated that more than 80% of staff had access while in the Food Service and Accommodation sector less than 12% of businesses provided mobile phone access to more than 80% of staff.

Chart 2.4



The main reason given by respondents for choosing mobile phone service was that mobile phones were practical with a mobile workforce. This response was consistent across all the ECTEL States, economic sectors and business size. Across all ECTEL states 45 per cent of respondents used a mobile phone because they had a mobile workforce, 15 per cent noted that the mobile service was useful in controlling expenditure, 12 per cent believed that there were cost savings in using mobile phones as they felt the service was much cheaper for their business than fixed line service and 17 per cent used mobile phone service because it was more widely available.

Chart 2.5



The use of corporate mobile plans, targetted at business consumers, was very limited. In the ECTEL States, 59 per cent of businesses did not use a corporate plan. Businesses with less than 10 employees were the least likely to use such plans. A lack of knowledge of available plans was the principal reason for such low usage, stated by 59 per cent of businesses, though roughly one third indicated that the plans were unsuitable to their business. These results were fairly consistent across member states, industry and size of business.

More businesses in St Kitts and Nevis used corporate plans (55%) while St. Vincent and the Grenadines had the smallest proportion of users at 24%.

Business perception of the rates for mobile calling may be a contributing factor to the relatively modest demand for mobile service. For the most part businesses perceived the rate for all mobile calls including calls on the same network as high or very high. Mobile to mobile calls within the same network was the main type of mobile call made by 45 per cent of respondents. However, the traffic levels may be constrained given that 38 per cent of the respondents thought that the price of on-net calls was high and 14 per cent considered the rates to be very high. The dissatisfaction with rates was stronger for mobile to mobile calls to other networks, which was the main type of mobile call made by 33 per cent of the respondents. Forty-three per cent of respondents felt that these off-net rates were high, and an additional 49 per cent stated that the rates were very high.

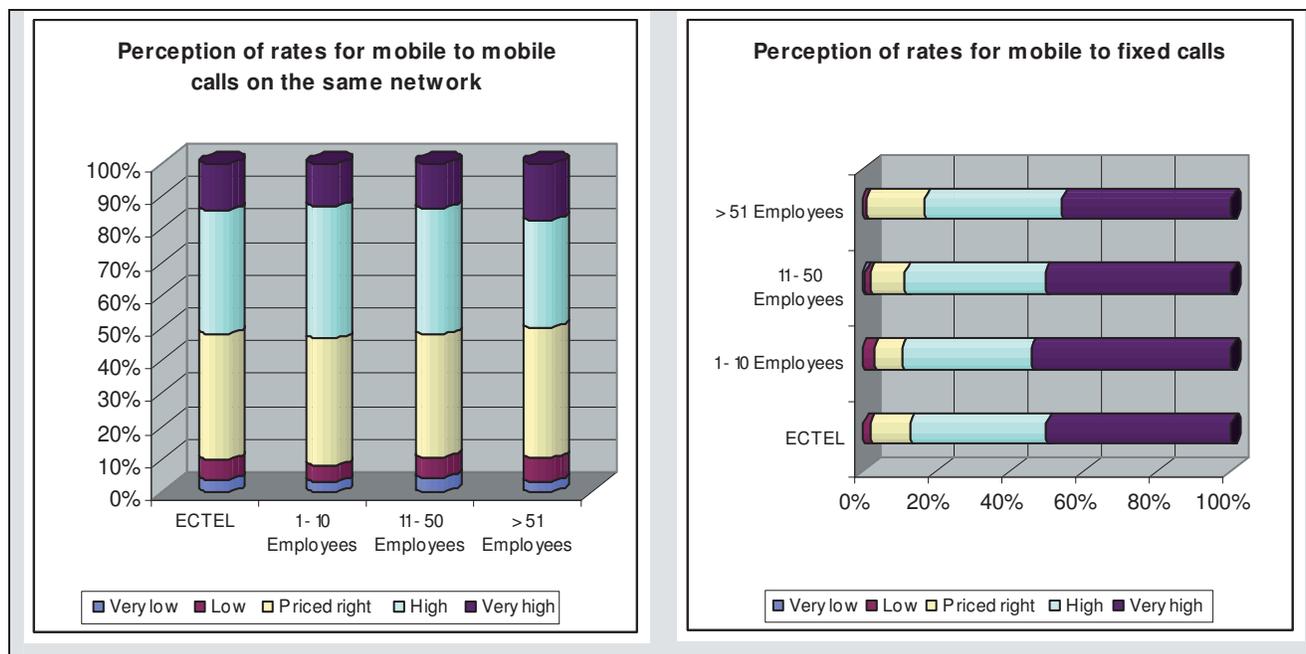
Perception of rates and usage patterns for mobile-to-fixed calls were similar across the ECTEL States. However, businesses in Dominica expressed the greatest dissatisfaction with rates for on-net mobile calls (73%); more businesses in St. Kitts and Nevis were dissatisfied with off-net mobile rates (96%), and businesses in St. Vincent and the Grenadines were most unhappy with fixed-to-mobile calling rates (96%).

Mobile-to-fixed calls were the least popular type of mobile calls made by respondents. Roughly 20 per cent of respondents claimed that mobile-to-fixed calls were the most common mobile calls made. Forty-five per cent of respondents indicated that on-net mobile calls were most commonly used mobile call and 33 per cent said that most of their mobile calls were off-net

calls. Concurrent with the limited use of fixed-to-mobile calls, the level of dissatisfaction with the rate for this type of call was the greatest; 37 per cent of the mobile subscribers indicated that the price for mobile to fixed calls

was high and an even higher proportion, 50 per cent stated that the mobile to fixed calling rate was very high (Chart 2.6).

Chart 2.6



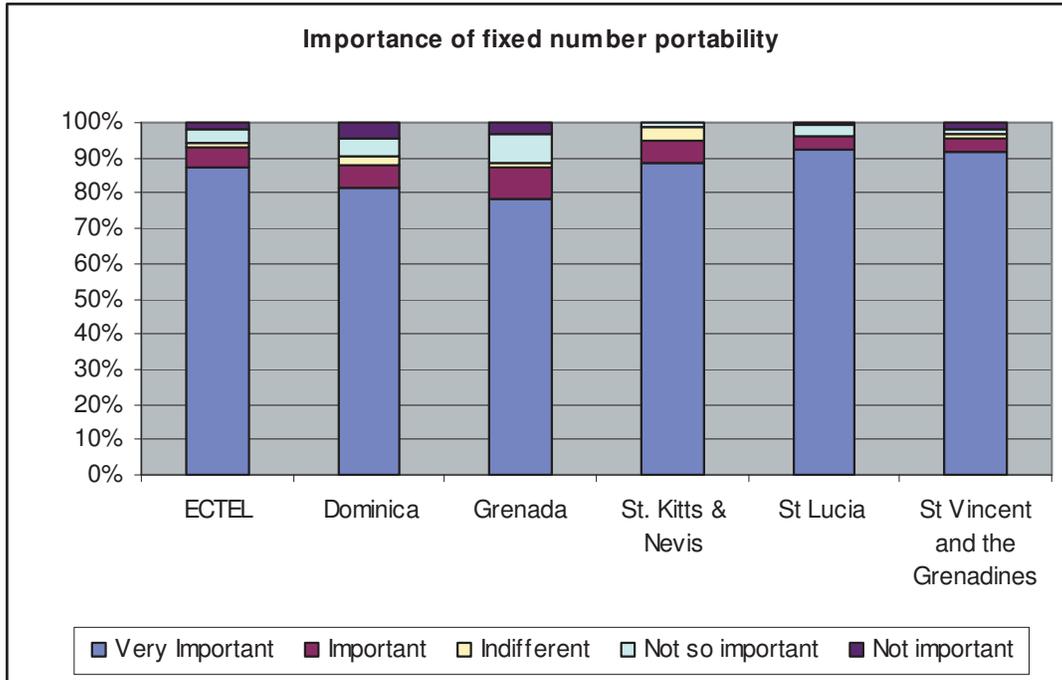
2.2.3 Importance of Number Portability

Number portability is the ability to keep the same telephone number when switching from one provider to another. In the absence of number portability, users of telecommunications services face significant hurdles to switching providers including switching costs associated with informing people of their new number and changing of business cards. For business consumers the barriers also include costs associated with changing of signs, marketing literature and other printed material, as well as missing valuable calls from people who do not have the new number. Therefore the option of keeping the same telephone number if switching telecommunications service provider was crucial to a significant number of businesses surveyed.

A significant number of respondents, 87 per cent, said that it would be very important to keep their fixed line number if they switched provider. This proportion ranged from a low of 78 per cent in Grenada to highs of 92 per cent in Saint Lucia and St. Vincent and the Grenadines (Chart 2.7). Across economic sectors, the Transport sector recorded a high of 94 per cent of respondents indicating that keeping the fixed line was important, while in

the Information and Communications sector 66 per cent of businesses indicated that keeping the fixed line number was very important. It may be that businesses in that sector are less likely to switch providers.

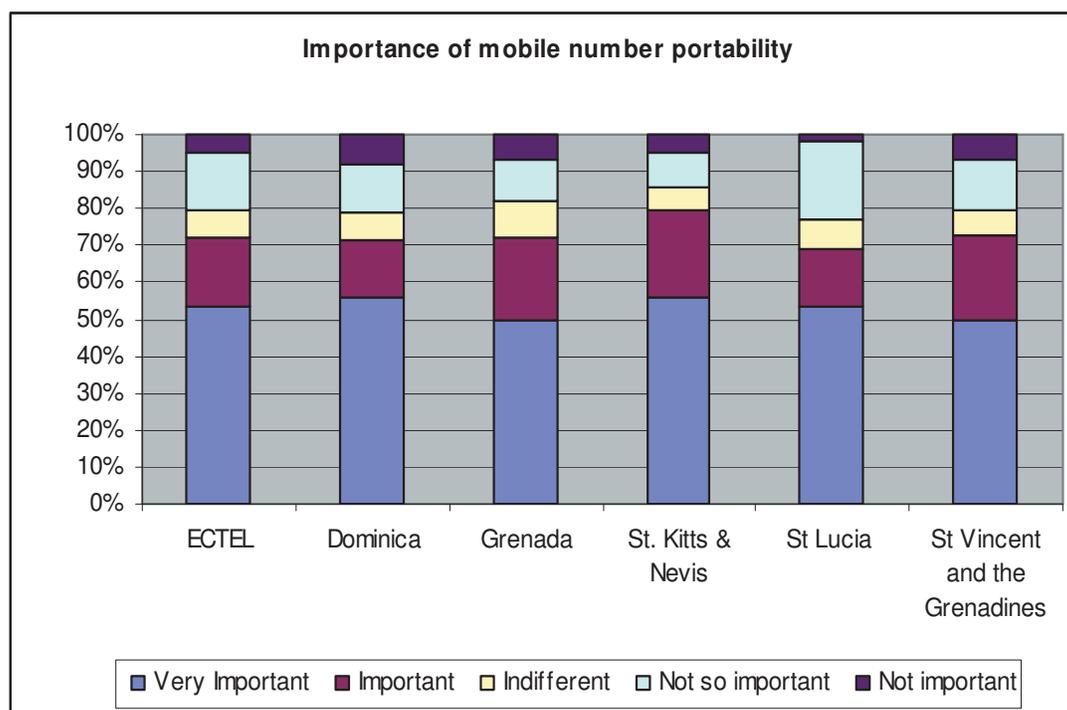
Chart 2.7



The importance attached to mobile number portability was substantially, less with 53 per cent of respondents indicating that it was very important to keep their number. Again this percentage was consistent across ECTEL States with Grenada recording the low of 49 per cent and Dominica the high of 56 per cent (Chart 2.8). Across economic sectors, again the transportation sector attached greater importance to mobile number portability (71 per cent found it very important).

Unfortunately, number portability is not yet available to consumers in the ECTEL States which may have influenced the seemingly high number of respondents, 88 per cent, who indicated that they had not changed mobile providers in the past two years.

Chart 2.8



2.2.4 International Service

Businesses across the ECTEL States had a preference for using the fixed line for international calling. On average, 96 per cent of businesses made international calls and most of them, 67 per cent, used the fixed line for international calls. This was followed by Voice over IP calling used by 14 per cent of respondents. International calling using a mobile phone was a distant second; only 10 per cent of respondents used mobile phones as the main channel for international calling (Chart 2.9, (a)).

The preference for the fixed line for international calling was almost uniform across the ECTEL States ranging from 73 per cent of businesses in Dominica to 61 per cent in St. Kitts and Nevis. When the size of the business was considered, businesses with more than 50 employees exhibited a slightly greater tendency to use the fixed line for international calling, 74 per cent used this channel versus 61 per cent for businesses with 10 or less employees.

Although businesses displayed a preference for the fixed line for international calling, this was not reflected in their perception of the rates for international calling. With the exception of Voice over IP calling,

respondents generally viewed the rates for international calling, including calling from a fixed line, as high or very high.

Almost 80 per cent of businesses rated calls from the fixed line or mobile phone as high or very high. There were no significant variation in this result across Member States or based on the size of the businesses (Chart 2.9, (b)). Even so, businesses still used fixed lines 6:1 over mobile phones for international calling. Given that respondents' perception of rates for fixed and mobile international calling were quite similar, there may be factors other than cost influencing the choice of fixed line for international calling.

The majority of respondents, 40 per cent, indicated that the rates for international calling using Voice over IP service were priced right and another 37 per cent thought rates were low or very low (16 per cent). Nonetheless, only 14 per cent of businesses used Voice over IP as the main channel for international calling.

Box 2.1: Proportion of businesses using Voice over IP service for international calls

ECTEL	Dominica	Grenada	St Kitts and Nevis	Saint Lucia	St Vincent and the Grenadines
14%	13%	9%	24%	9%	21%

The limited use of Voice over IP calling is consistent with the survey finding that businesses are not always aware of advanced technology, and even when they were aware of such technology they might not always take advantage of these new advances (20 per cent did not think it was important to have the latest technology and 14 per cent were unsure).

Chart 2.9 (a)

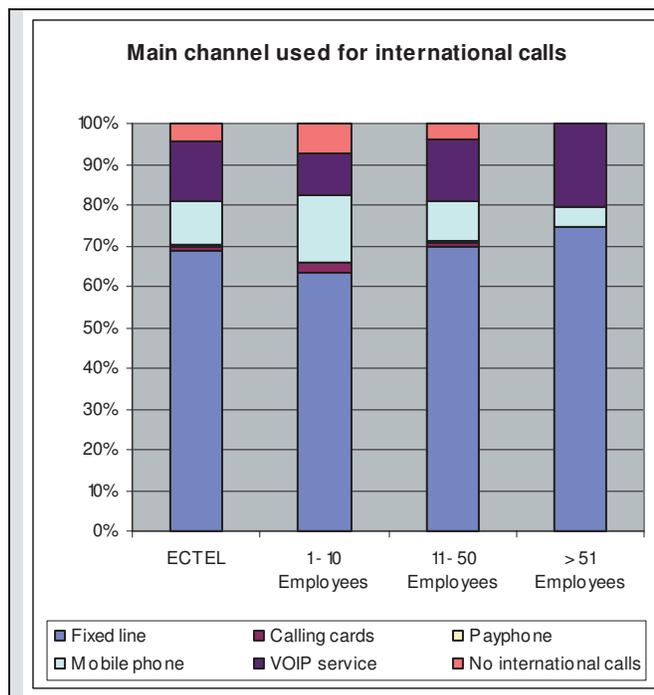
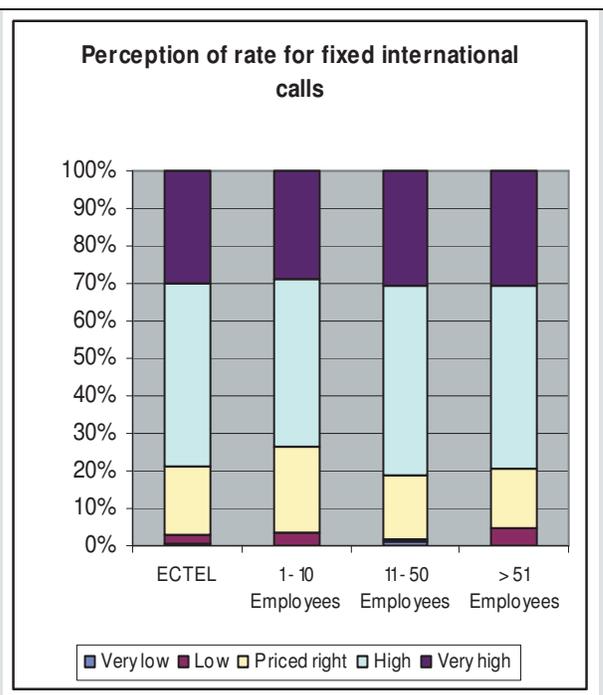


Chart 2.9 (b)



2.2.5 Computer Use and Internet Access

Computer use and access to the Internet appeared to be integral to the functioning of a large number of businesses as at least 91 per cent of the businesses surveyed has at least one computer and 90 per cent had Internet access. For businesses without Internet access, a significant 81 per cent did not intend to subscribe within the year. The main reasons cited were that the Internet could be accessed elsewhere (31 per cent), business was not likely to use it (24 per cent) and business was not interested in Internet access (20 per cent). These were the consistent reasons given across all Member States. However, when the reason for no Internet access was examined by industry there were some noted exceptions. For half of businesses in the agriculture or construction sectors the main reason given was that Internet access was too costly, while for professional services, the possibility of employee abuse was the deterrent.

Among the businesses with computers, 81 per cent had a local area network (LAN) or computer network, and on average, 37 per cent indicated that over 80 per cent of their employees used a computer to do their job. The

percentage of employees using a computer was higher for smaller businesses; 45 per cent of small businesses indicated that more than 80 per cent of staff used a computer as compared to 27 per cent for larger businesses (Chart 2.10, (a) and within the Transport (56 per cent), Information and Communications (67 per cent) and Professional Service (66 per cent) sectors.

Box 2.2: Computer use by Member State

- Grenada and Saint Lucia had the lowest incidence of computer use
- St Kitts and Nevis had the highest proportion of businesses where more than 80% of staff used a computer

	ECTEL	Dominica	Grenada	St Kitts and Nevis	Saint Lucia	St Vincent and the Grenadines
Businesses with computer	91%	98%	87%	93%	86%	94%
Businesses with more than 80% of staff use computer	37%	30%	42%	46%	29%	37%

While many businesses had Internet access (90 per cent), the use of Internet by employees to facilitate their work was much less widespread, as roughly 60 per cent of businesses said that less than 40 per cent of staff used the Internet for work. This relatively low usage was consistent across the ECTEL States. Larger businesses (more than 50 employees) recorded slightly lower Internet usage by staff with 70 per cent indicating that less than 40 per cent of staff used the Internet for work (Chart 2.10, (b)).

Box 2.3: Internet use by Member State

- Grenada and Saint Lucia had the lowest incidence of internet access
- St Kitts and Nevis had the highest proportion of businesses where more than 80% of staff used internet access

	ECTEL	Dominica	Grenada	St Kitts and Nevis	Saint Lucia	St Vincent and the Grenadines
Businesses with Internet access	90%	96%	85%	93%	86%	91%
Businesses with more than 80% of staff using Internet access	22%	15%	26%	29%	14%	23%

Chart 2.10 (a)

Chart 2.10 (b)

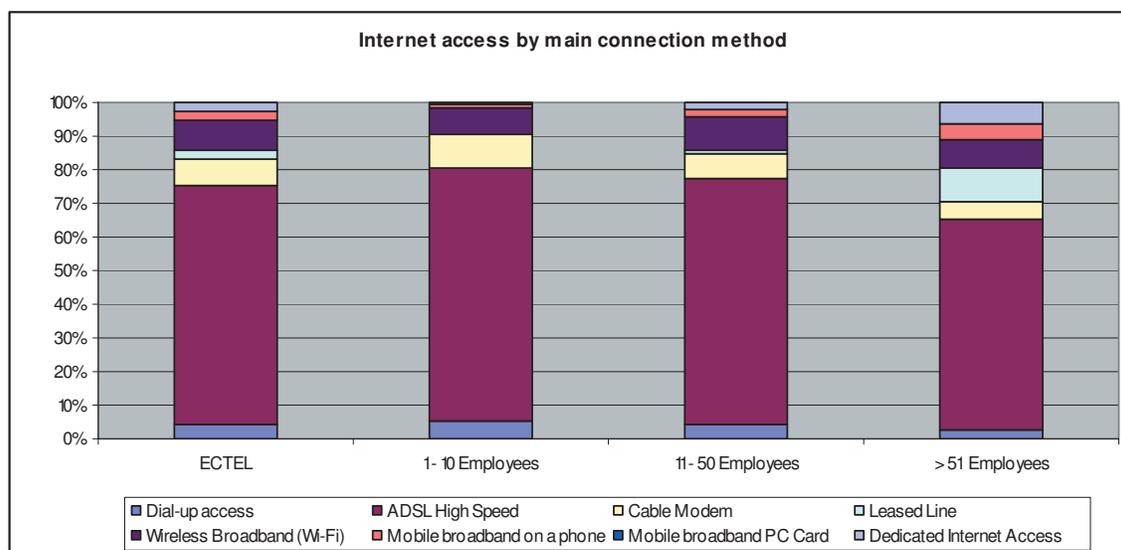


As was the case with mobile service, the majority of businesses, 46 per cent, did not use a corporate Internet plan with 20 per cent indicating that they were unaware of such plans. Not surprisingly, the use of corporate Internet plans was more prevalent among larger businesses (more than 50 employees). More than half of larger businesses used corporate plans compared to 22 per cent of smaller businesses.

Across the ECTEL States, Cable & Wireless was the dominant Internet service provider for businesses, providing service to an average 96 per cent of respondents. The slow growth of competitiveness in the Internet service market was reflected in the minimal importance of price in the determination of the choice of service provider. When asked if they had switched Internet service provider in the past two years, responses revealed that more competitive rates and packages was did not prove compelling, only 3 per cent of the respondents give this as the main reason for switching providers. In fact, 92 per cent of the respondents had not switch providers, and 3.2 per cent of the businesses switched Internet service provider due to poor quality of service.

ADSL high speed access is the predominant mode of internet access used by businesses across the ECTEL States (Chart 2.11). On average, 70 per cent of firms used this mode for Internet access. Wireless broadband through WiFi was a distant second used by nine per cent, with eight per cent using cable modems. Only 4.2 per cent of respondents still used dial-up access. The preference for ADSL high speed access was constant across all Member States and ranged from 65 per cent in Grenada to 79 per cent in St. Vincent and the Grenadines. For larger businesses, ADSL use fell to 62 per cent but there were higher incidences of the use of leased circuits (10 per cent) and dedicated Internet access lines (6 per cent).

Chart 2.11



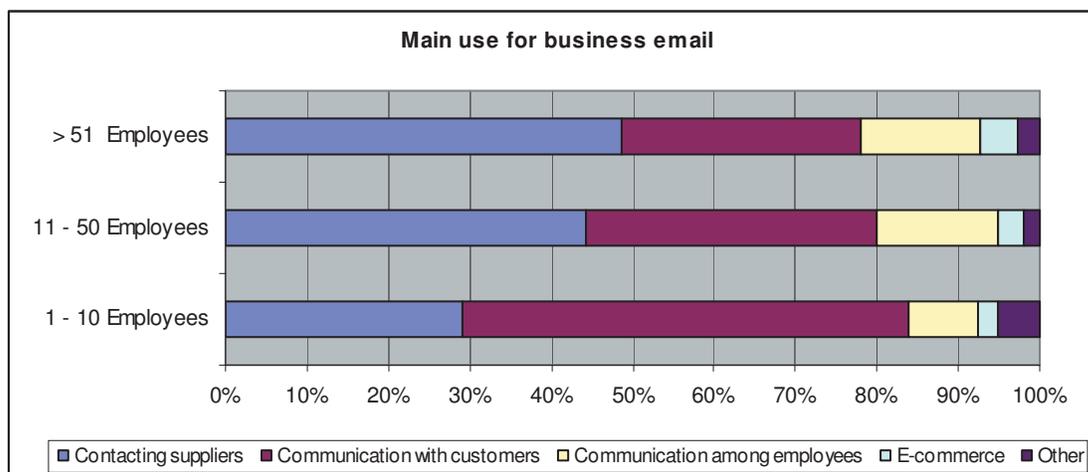
The rapid uptake of broadband was evident with 31 per cent of the firms reporting that they had switched from dial-up to broadband in the past two years while 62 per cent stated that they always had broadband access. The main factors driving the demand for broadband access were speed of the service (62 per cent), the availability of service (18 per cent) and the quality of the service (10 per cent). Given the apparent phasing out of dial-up, respondents with dial-up access were asked to state the main reason for not switching to broadband. Just under one-third stated that dial-up was most suited for their business needs, and 44 per cent were not sufficiently aware of broadband options and prices available.

The proportion of businesses still using dial-up access ranged from 1.4% in St. Kitts and Nevis to 7% in Grenada.

2.2.6 Email use and Web Presence

The survey investigated the use of email and web presence of businesses. Almost all businesses with Internet access, roughly 96 per cent, used email but less than half had a company website. Across the ECTEL States, contacting suppliers (42 per cent), communicating with customers (39 per cent) and communications among employees (13 per cent) were the main uses for email. Smaller businesses (less than 10 employees) were more likely to use email for communicating with customers (55 per cent), while large businesses (more than 50 employees) used email mainly for contacting suppliers (Chart 2.12).

Chart 2.12

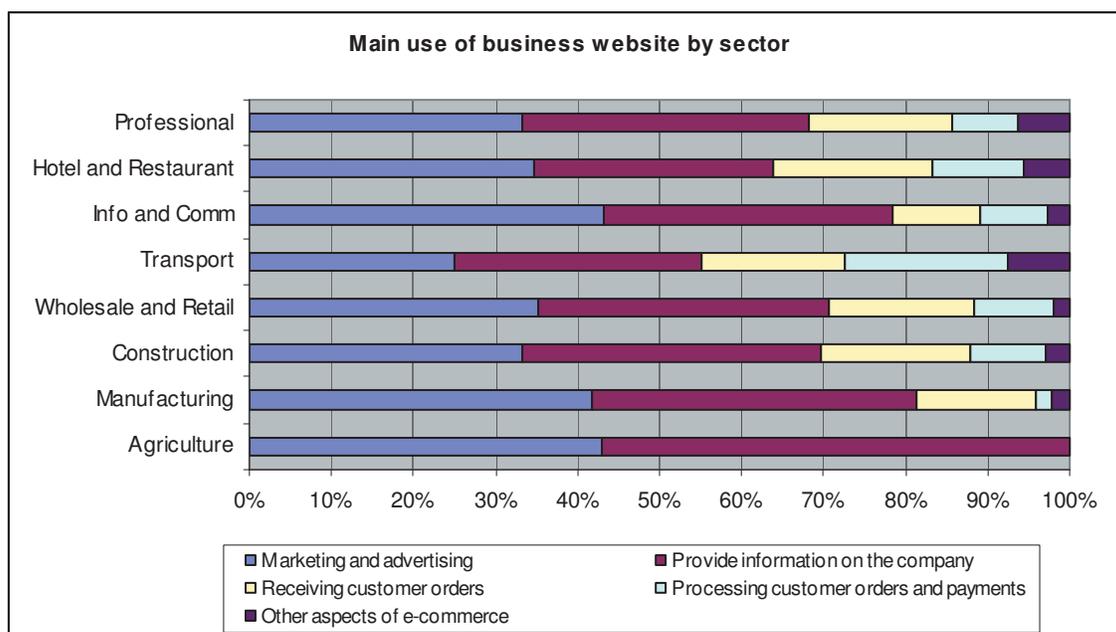


On average, 49 per cent of businesses in the ECTEL States had a company website. St. Kitts and Nevis recorded the highest web presence of 63 per cent and Saint Lucia the lowest at 45 per cent. Survey data revealed that e-commerce was not the principal reason for a company website but rather, websites were used for marketing and advertising (83 per cent) and providing information on the company (86 per cent). Only 32 per cent used their website to receive customer orders and 20 per cent to process customer transactions.

Box 2.4: Proportion of businesses offering online transactions by ECTEL States					
ECTEL	Dominica	Grenada	St Kitts and Nevis	Saint Lucia	St Vincent and the Grenadines
20%	12%	28%	21%	9%	25%

Not unexpectedly, larger businesses were more likely to have a web presence (66 per cent) compared to 38 per cent for smaller businesses. Even so the main use of websites remained fairly consistent across businesses of varying sizes. In terms of economic sectors, transport and information and communications were more likely to have a web presence while agriculture was least likely. However, businesses in the food service and accommodation and transportation sectors were more likely to use their websites for e-commerce activities (Chart 2.13).

Chart 2.13

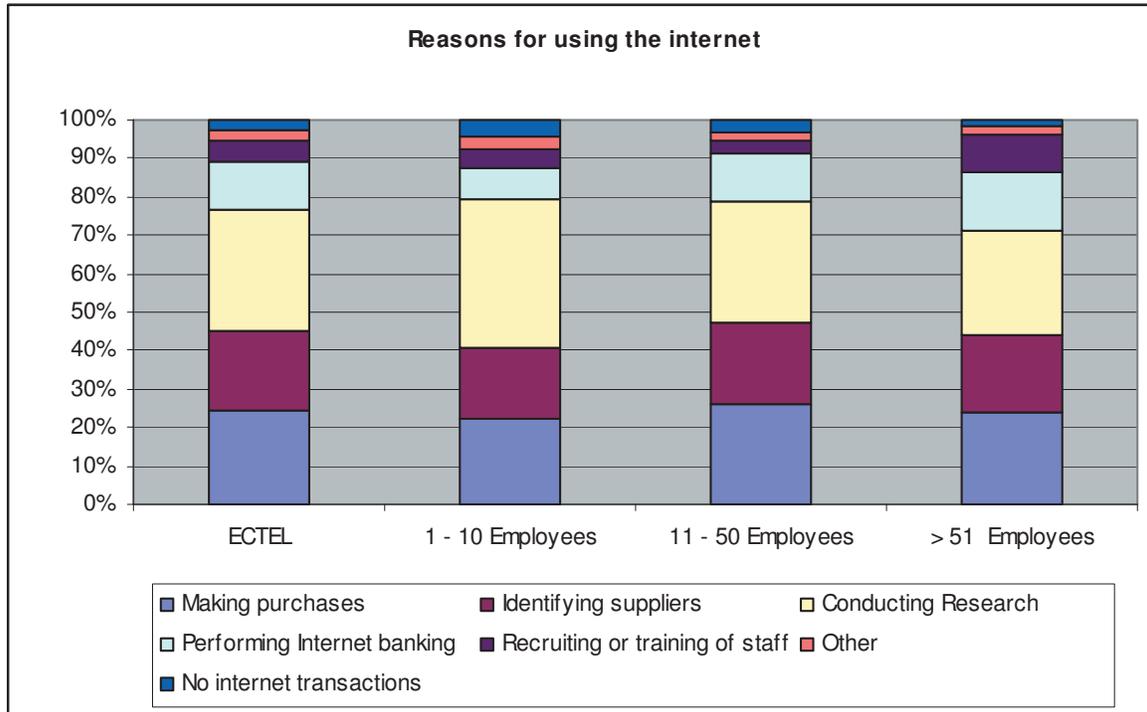


2.2.7 Internet Activities

While relatively few businesses used their website for e-commerce activities, the overwhelming majority of businesses, 93 per cent, indicated that the Internet was used for business transactions of some sort. In particular, across the ECTEL States, making purchases scored highly among the reasons for Internet use by businesses; 57 per cent of respondents used the Internet for purchases (Chart 2.14). Larger businesses (77 per cent) and businesses in the retail and wholesale sector (94 per cent) were more likely to use the Internet for purchases. However the most popular use of the Internet in all ECTEL States was for getting information and conducting research (74 per cent).

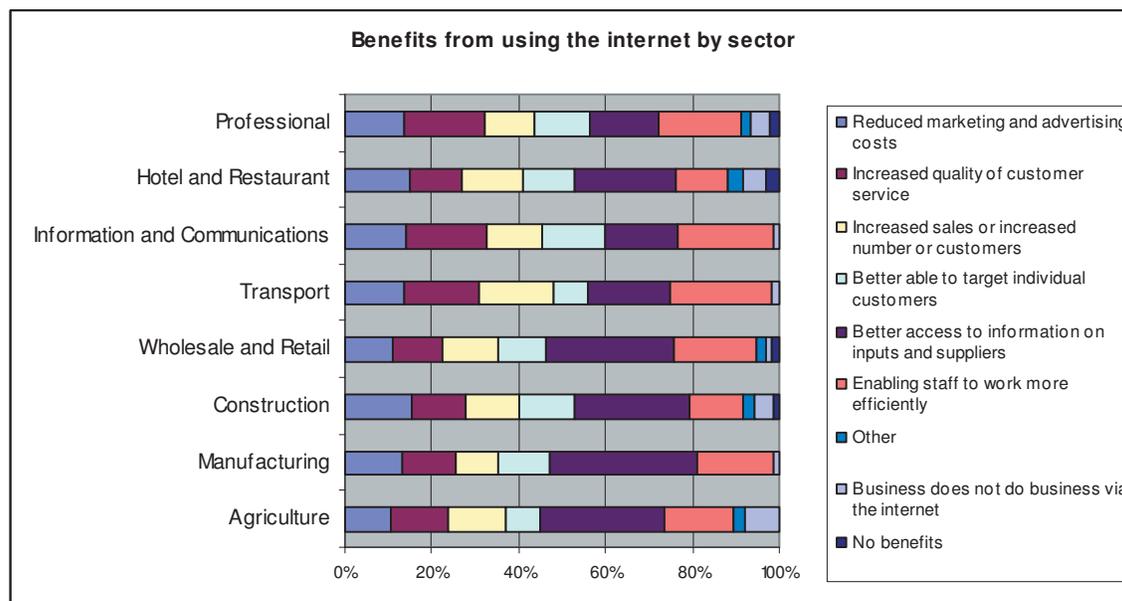
Proportion of businesses using internet for purchases ranged from 50 % in Grenada to 67 % in St. Kitts and Nevis.

Chart 2.14



Respondents were asked to identify the benefits of using the Internet and the principal benefit noted was better access to information on inputs and suppliers, (52 per cent), followed by enabling staff to work more efficiently (40 per cent). These were the most popular responses across all ECTEL States, and for businesses of varying sizes. Businesses in the construction and food services and accommodation sectors ranked reduced marketing and advertising costs above increased staff efficiency. For businesses in the information and communications and professional services sectors, the most important benefits were enabling staff to work more efficiently followed by increased quality of customer service (Chart 2.15).

Chart 2.15

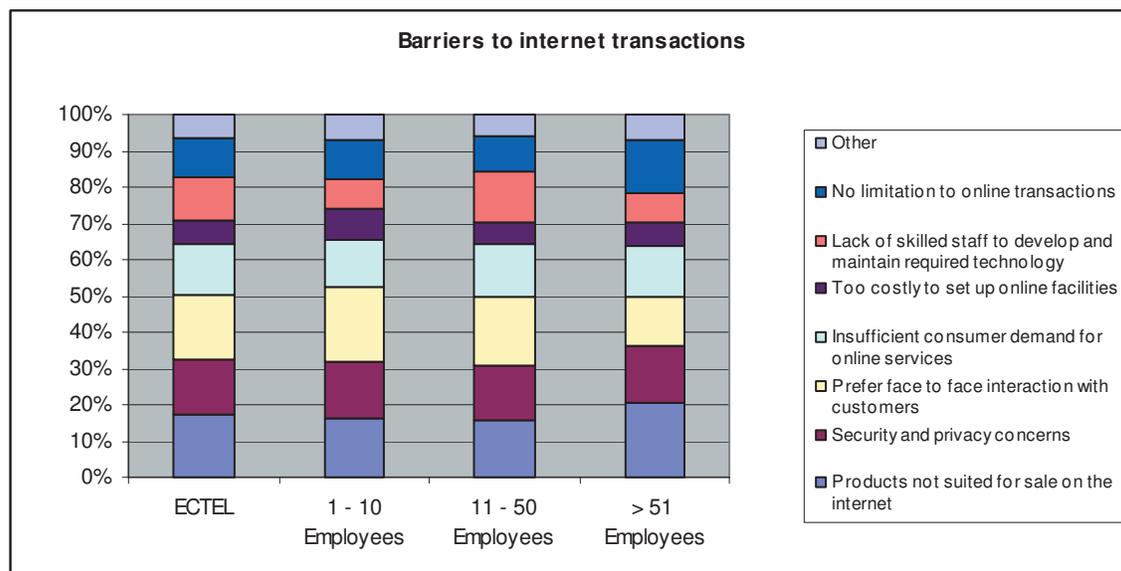


A limited number of businesses did not use the Internet for business transactions. Across the ECTEL States, chief among the reasons given were a preference for face-to-face transactions (20 per cent), product unsuitable for Internet transactions (20 per cent) and concerns with security and privacy (18 per cent). Among small businesses (10 or less employees), the preference for face-to-face transactions took precedence while larger businesses (more than 50 employees) were concerned with suitability of products (Chart 2.16).

Box 2.5: Barriers to internet transactions in ECTEL State

- Unsuitable products was the chief reason limiting internet transactions for businesses in Dominica (26%) and Saint Lucia (21%)
- The preference for face-to-face interaction was the main reason for limited internet transactions the majority of businesses in St Kitts and Nevis (23%) and St Vincent and the Grenadines (33%)
- Insufficient consumer demand was the constraint for most businesses in Grenada (19%)

Chart 2.16



2.2.8 Leased Circuits and Toll Free Numbers

Leased circuits and Toll Free Lines were used by a minority of businesses. Just under 20 per cent of businesses used leased circuits and 8 per cent of businesses said they offered toll free service. Cable & Wireless was the predominant provider of leased circuits. Two-thirds of businesses using leased circuits indicated that they used domestic leased circuits, while 36 per cent used both domestic and international leased circuits. Leased circuits were used primarily for connecting business locations (67 per cent) but also for Internet access and for operating point-of-sale terminals.

Businesses that did not use leased circuits cited a lack of need as the main reason (87 per cent) though 6 per cent indicated that the service was too costly.

2.2.9 Expenditure on ICTs

A majority of respondents claimed that they spent less than 5 per cent of monthly expenditure on ICTs. However expenditure figures should be treated with caution as they were not ascertained from business phone bills or financial statements, but rather were based on the respondents' recall of monthly expenditure on ICTs. In addition, the response rate was relatively

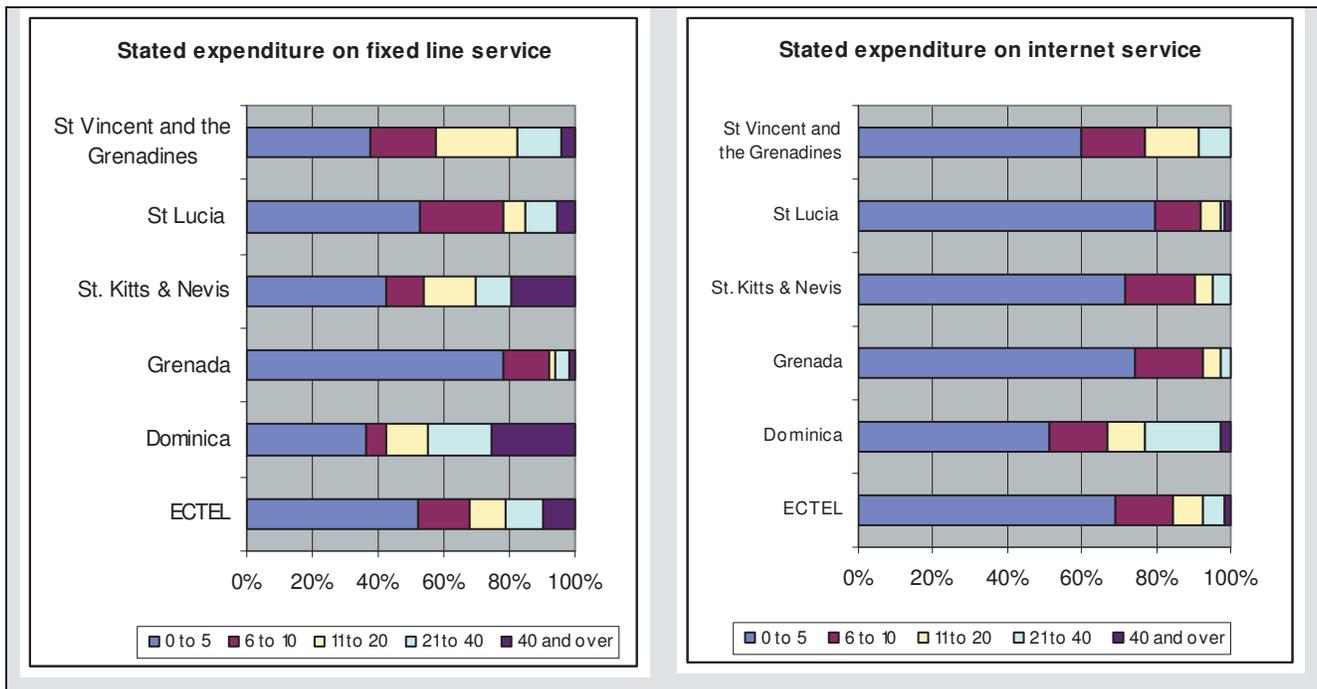
low (roughly 50 per cent of businesses surveyed) therefore results should be viewed as indicative.

Just over half of businesses in the ECTEL States claimed that expenditure on fixed line service was less than 5 per cent of total monthly expenditure (Chart 2.17, (a)). There was little deviation from this mean based on business size; however the proportion was much higher in Grenada at 78 per cent and lowest in Dominica at 36 per cent. For mobile service, 61 per cent of businesses claimed less than 5 per cent of monthly spend. Again businesses in Grenada (81 per cent) and Dominica (34 per cent) represented the maximum and minimum values. Two-thirds also indicated that international calling accounted for less than 5 per cent of monthly spend.

Expenditure on Internet service followed the pattern of voice service. Across the ECTEL States 69 per cent of businesses claimed that Internet service accounted for less than 5 per cent of monthly expenditure (Chart 2.17, (b)). There were little significant variations based on business size and economic sector, with the exception of the transport sector where 50 per cent of those respondents claimed expenditure on Internet at between 6 and 20 per cent.

Chart 2.17 (a)

Chart 2.17 (b)



2.2.10 Attitude towards the use of ICTs

The survey revealed that ICTs have largely been embraced by businesses. However there is a tension between the perceived benefits from the use of ICTs and the investment required to reap these benefits. This is particularly so for SMEs with limited resources both human and financial. The overall attitude towards ICTs can impact on the businesses' overall use of ICTs. In the ECTEL States, the study revealed that, in the main, businesses had a relatively positive attitude towards ICTs and recognise that the use of ICTs can improve operational efficiency and internal and external communications.

Five areas were examined to gauge the attitude of SMEs toward the use of ICTs. These were:

- Perceived importance of ICTs
- Perceived impact of use of ICTs on business
- Perceived benefits from investment in ITCs
- Perceived barriers to use of ICTs
- Satisfaction with ICTs

Perceptions are defined as views which influence decision-making and include beliefs regarding benefits, disadvantages, difficulties and need. Perceptions were measured as the stated beliefs of the respondents.

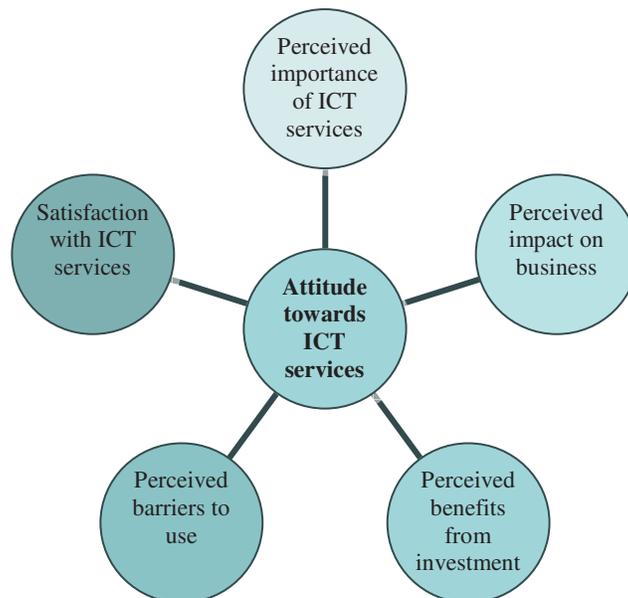


Figure 2

Perceived Importance of ICTs

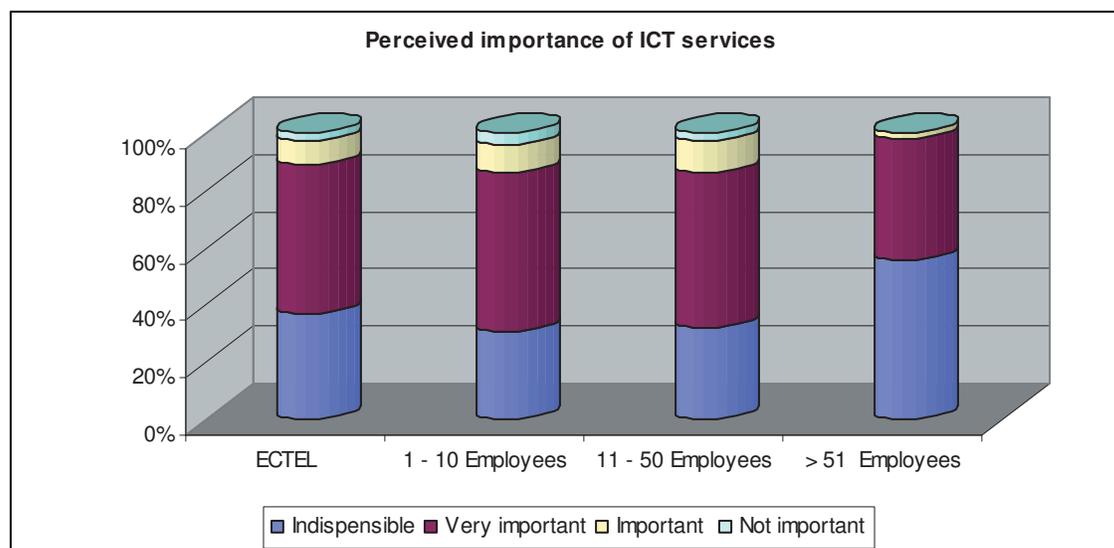
For the most part, it appears that respondents recognised the importance of the use of ICTs to the success of their business. Ninety per cent of respondents believed that the use of ICTs was vital to their success, with 37 per cent stating that ICTs was indispensable, and 53 per cent claiming that it was very important. Larger businesses were more likely to view the use of ICTs as critical; virtually all (99 per cent) indicated that ICTs were very important or indispensable compared to 86 per cent of smaller businesses.

Box 2.6: Proportion of businesses that claim the use of ICTs is indispensable in the ECTEL States

ECTEL	Dominica	Grenada	St Kitts and Nevis	Saint Lucia	St Vincent and the Grenadines
37%	36%	33%	59%	43%	13%

- Businesses in St Kitts and Nevis were far more likely to view ICTs as indispensable
- While fewer businesses in St Vincent claimed that ICTs were indispensable, a relatively high proportion, 77% state that the use of ICT services was very important.

Chart 2.18



However, despite this overwhelming view of the importance of ICTs, most businesses do not have dedicated staff allocated to ICTs for the business. Across the ECTEL States only 27 per cent of respondents claimed to have dedicated personnel for dealing with ICTs. The proportion of dedicated staff

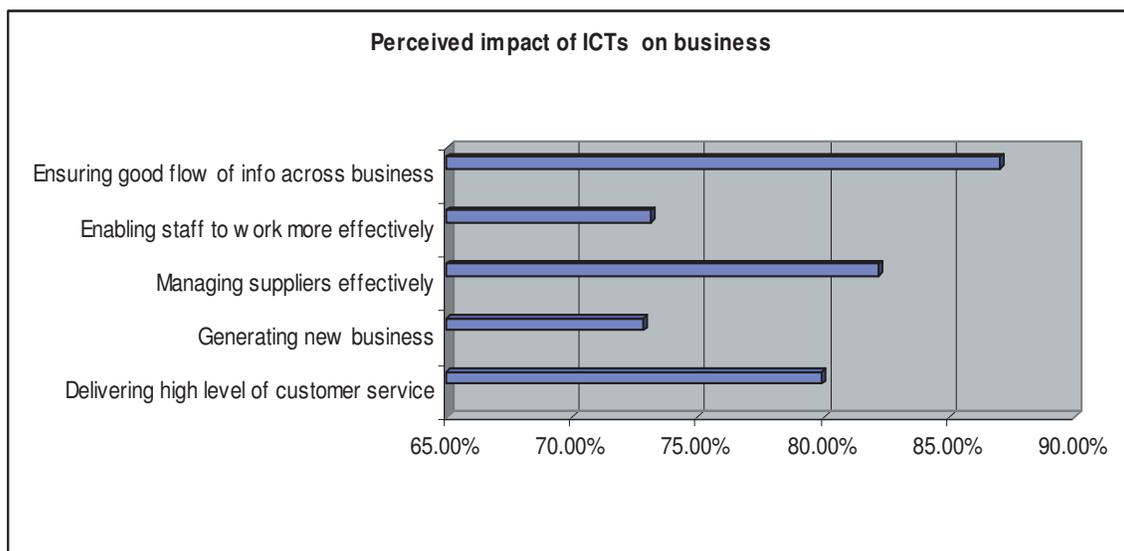
increases in proportion with size of business. Forty-five per cent of large businesses versus 27 per cent of small businesses have dedicated ICT staff.

Perceived Impact of ICTs

In general, respondents viewed the impact of the use of ICTs on their businesses as positive. Respondents perceived ICTs as playing a key role in external communication, internal efficiency, and to a lesser extent, in the generation of new business opportunities. Size of business is generally an important factor influencing the use of ICTs, and not surprisingly, there was generally a positive relationship between business size and perception of the impact of the use of ICTs on the business.

Across the ECTEL States, most businesses viewed the use of ICTs as essential to external communications; 82 per cent felt that the use of ICTs facilitated improved communications with suppliers, and 80 per cent agreed that businesses benefitted through the delivery of high levels of customer service (Chart 2.19). The majority of respondents also perceived the use of ICTs as improving internal efficiencies; 87 per cent thought that information flow across the business was improved and 73 per cent agreed that ICTs enabled staff to work more efficiently. The use of ICTs was also associated with the generation of new business opportunities, albeit by slightly less respondents (73 per cent). Generally, a greater proportion of larger businesses had favourable views of the impact of the use of ICTs while economic sector seemed to have little impact on responses.

Chart 2.19



Perceived Barriers to ICT Adoption

In the main, the businesses surveyed appear to have embraced the use of ICTs; but adoption of advanced ICTs still lags behind the uptake of basic voice and Internet access services. The survey revealed that while 90 per cent of respondents claimed to have Internet access, the percentage with their own

There was also limited use of mobile data services such as SMS (51%) and Blackberry service (14%) and just under one third of respondents used a VOIP calling service.

website was just 49 per cent. Even so, business websites were used mainly to provide information about the company, and rarely used to manage customer relationships. One-third of respondents accepted customer orders online and 20 per cent processed customer orders online. This means that a number of businesses are yet to take advantage of the full potential of the Internet.

Despite the apparent limited use of advanced ICTs, two-thirds of respondents claimed that it is important to get the most advanced technology and 71 per cent disagreed that the potential benefits of the use of ICTs is difficult to understand.

Effective use of ICTs, and the Internet in particular, has the potential to revolutionize businesses operations both in terms of internal efficiencies and external reach. The Internet has dramatically changed the way goods and services are produced and traded, and the way in which businesses interface with consumers and suppliers. Respondents were therefore asked to identify the factors that limited their use of the Internet. Only 12 per cent indicated that there were no limitations or barriers to Internet transactions. Surprisingly, for the majority of businesses, the barriers were not related to cost or human resource constraints; in fact only 13 per cent cited a lack of skilled personnel and 6 per cent stated that cost of setting up online service as impediments. The main barriers identified were a preference for face-to-face transactions (20 per cent), unsuitable products (20 per cent), security and privacy concerns (18 per cent) and insufficient consumer demand (16 per cent).

The lack of confidence and knowledge of ICTs were also identified as potential barriers. Almost two-thirds of the businesses surveyed indicated that they did not know or were unsure if there were any ICTs that would be beneficial to their business but was not being offered at present. Smaller businesses were much more likely to be unsure of potentially beneficial ICTs

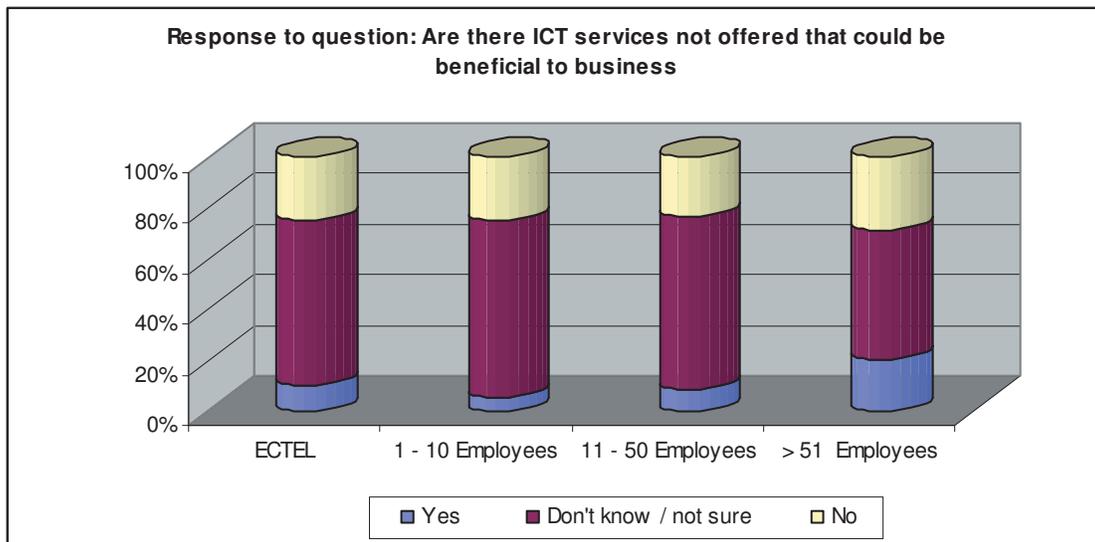
than larger businesses; 70 per cent said they were unsure as against 51 per cent for larger businesses (Chart 2.20). Additionally, 42 per cent of respondents conceded that they were not very knowledgeable about ICT matters and a further 21 per cent were unsure. Almost twice as many smaller businesses (47 per cent) as large businesses (28 per cent), admitted to a limited knowledge of ICT issues.

Box 2.7: Proportion of respondents who stated that they were very knowledgeable on ICT issues

ECTEL	Dominica	Grenada	St Kitts and Nevis	Saint Lucia	St Vincent and the Grenadines
37%	34%	40%	25%	40%	40%

The survey results showed that some of the financial barriers expected were not perceived as obstacles by most respondents; however, there were a number of attitudinal or behavioral barriers to the use of advanced ICTs. Additionally, businesses may not always be aware of the new leading edge technology or may not feel confident in dealing with new technology.

Chart 2.20



Perceived Benefits from ICT Investment

Given the considerable importance placed on ICTs by businesses, the survey explored how firms weighed the benefits of adoption of ICTs vis-à-vis the cost of investing in ICTs. In general, businesses believed that the ICTs would improve their operational efficiency, as well as internal and external communications, as ICTs provide smarter, cheaper and faster ways of doing things. Importantly, businesses also had a positive outlook on investment in ICTs. This is critical as attitude often influences decision-making and in a resource constrained environment, there can be considerable tensions between perceived potential benefits from use of ICTs and investment required to take advantage of these benefits. A business having an overall positive perception of the cost-benefit trade-off in investment in ICTs is essential as it is widely recognised that the use of ICTs is a key driver of growth and productivity both at the business level and throughout the wider economy.

It is therefore encouraging that the majority of businesses (65 per cent) did not consider investment in ICTs to be risky, though 25 per cent were unsure, and a minority 10 per cent indicated that it was indeed risky. Following this trend, 67 per cent of respondents did not view forward planning for ICT needs as difficult, but again 21 per cent were unsure and 12 per cent stated that it was difficult.

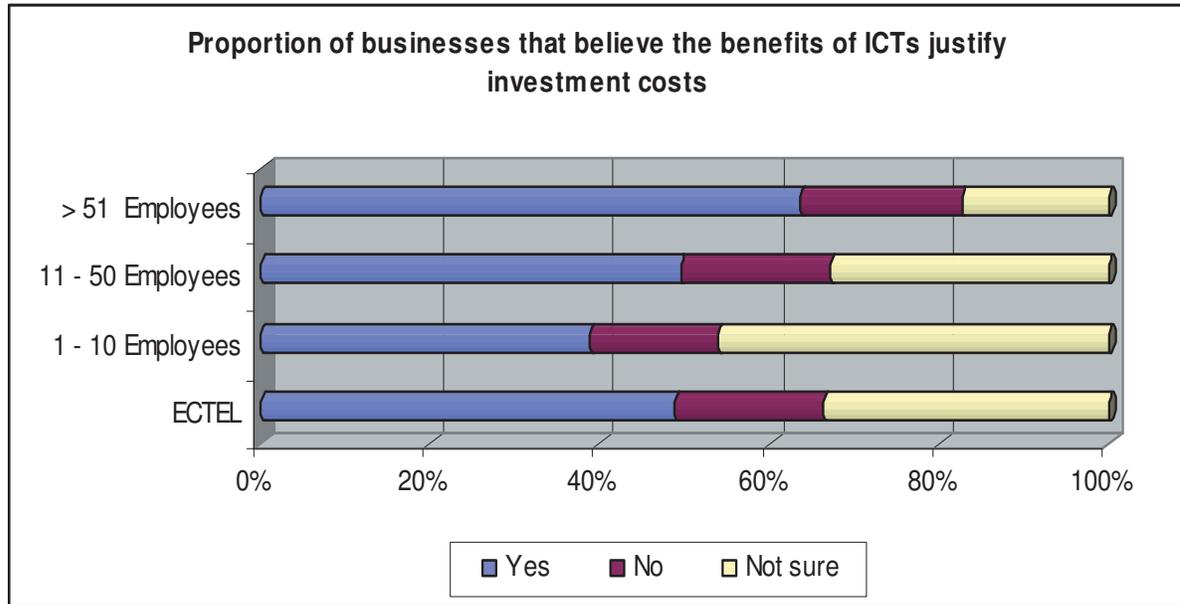
This trend also carried through to the perception of spending on training staff in new technologies. Most respondents (63 per cent) did not agree that the cost of staff training was too much, 20 per cent were unsure and 16 per cent thought that it cost too much to train staff on new technologies.

However, when businesses were asked more directly for their views on whether the benefits justify the cost of investment, the results were much more tempered. Just under half of businesses stated that the benefits of ICTs justify the investment cost, 34 per cent were uncertain and 18 per cent felt that the benefits did not justify the cost (Chart 2.21). Perception of justification of cost of investment in ICT was directly proportional to business size; 39 per cent of small businesses believed that the benefits of ICT use justify investment cost compared to 64 per cent of large businesses. These results point to fact that while business managers do not need to be convinced of the benefits of the ICTs, the natural tendency towards risk

There was very little variation in the country specific responses to the perceived benefits from investment in ICT services. However small businesses were generally less convinced of the benefits of ICT investment.

aversion and lack of knowledge of ICTs impacted on the confidence with which they approached ICT investment. This means that the justification of spending on ICTs presents a significant challenge to managers. This was particularly true for smaller businesses which tend to have greater resource constraints.

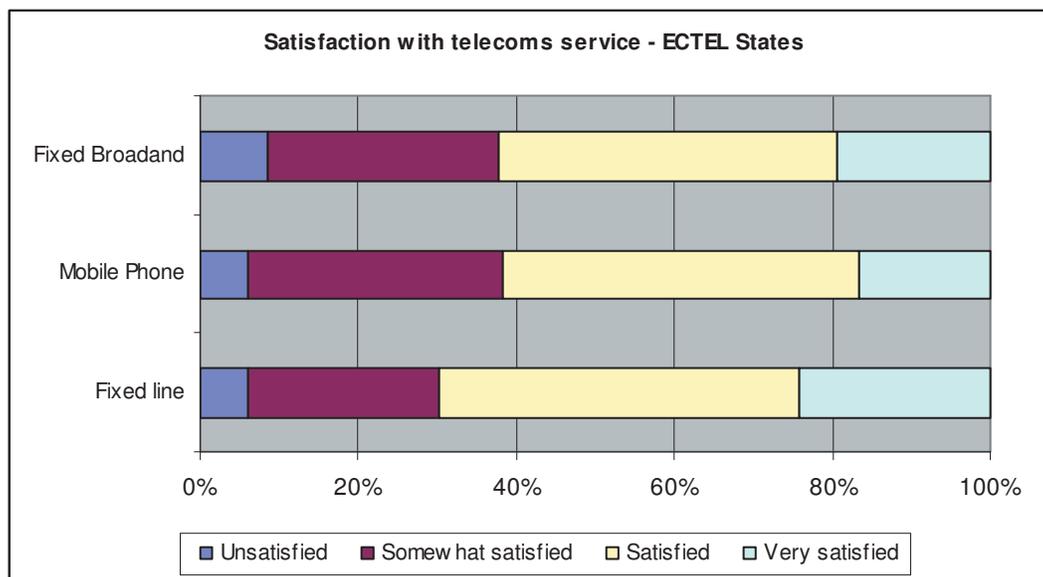
Chart 2.21



Level of Satisfaction with ICTs

The majority of businesses surveyed indicated that they were generally satisfied with some basic ICTs. Respondents were asked to rate their level of satisfaction on a ten-point scale. On average, 66 per cent of businesses across the ECTEL States were satisfied with their fixed line service; this included 23 per cent who were very satisfied (Chart 2.22). The proportion of businesses satisfied with mobile and Internet service was slightly less at 62 per cent in each case. By and large, the level of satisfaction with ICTs increased with the size of business. Economic sector appeared to have little impact on the level of satisfaction reported by businesses.

Chart 2.22



The survey also asked respondents to state the main cause for complaint in relation to ICTs. For fixed line service the most common complaint was that the cost of service was too high (36 per cent of respondents), followed by network problems (14 per cent) and poor customer service in person and on the phone (12 per cent). For the users of mobile phone service, cost was also the main complaint (41 per cent), next in line was unreliability, dropped calls and network problems (21 per cent) and poor service quality or static problems on the line (12 per cent). The lack of speed of access was however the chief cause for dissatisfaction for Internet users (21 per cent). Poor quality of service and high rates were also reported by 12 per cent of respondents.

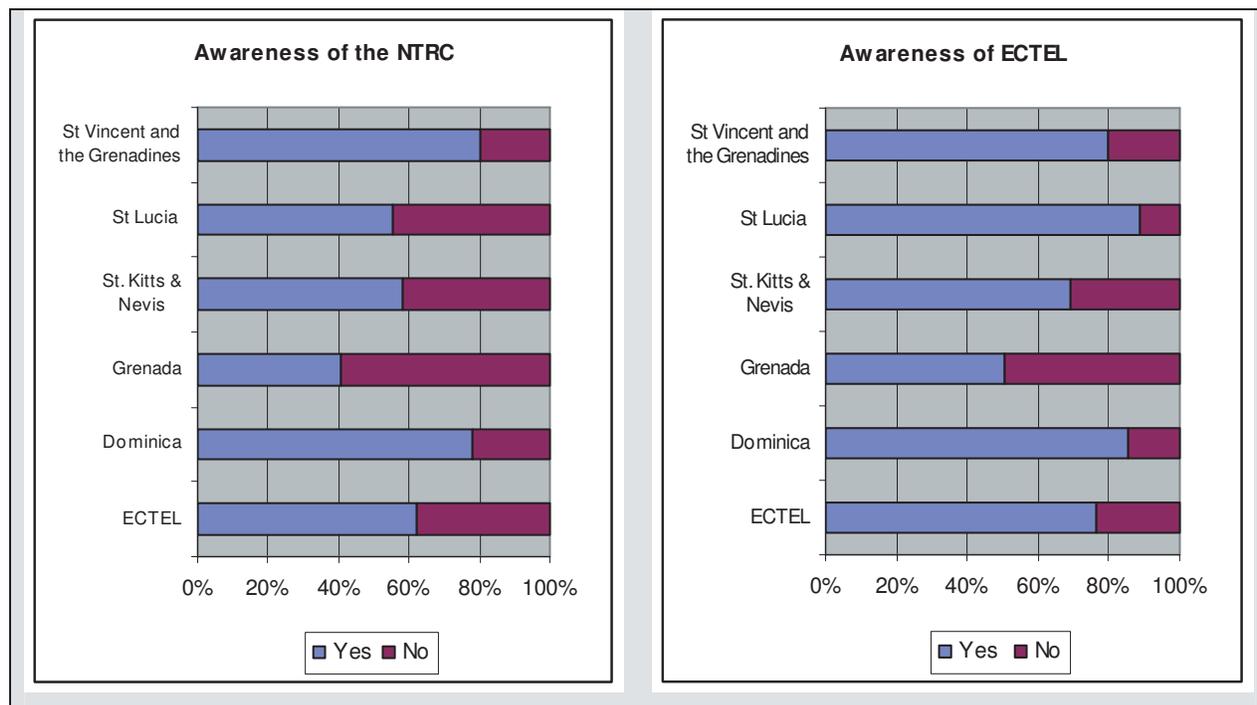
2.3 Awareness of Regulators

The businesses were also surveyed to determine their level of awareness of ECTEL and the National Telecommunications Regulatory Commission (NTRC). A majority of firms, 76.3 per cent, were aware of ECTEL and 62 per cent were aware of the NTRCs.

ECTEL was more widely known in Saint Lucia (87 per cent) and least known in Grenada (51 per cent) (Chart 2.23). Respondents were made aware of ECTEL mainly through the media (78 per cent) and word of mouth (14 per

cent). The NTRC was best known in St. Vincent and the Grenadines (80 per cent) and least well known in Grenada (41 per cent). As with awareness of ECTEL, most respondents were made aware of the NTRC through the media (81 per cent) and word of mouth (11 per cent).

Chart 2.23



While businesses were familiar with ECTEL, only 23 per cent were aware that ECTEL conducted public consultations and a mere 3.3 per cent indicated that they had submitted comments to ECTEL in response to a consultation. The main reason for limited participation was lack of awareness (82 per cent). This is not surprising as less than 10 per cent indicated that they had visited ECTEL's website.

2.4 Policy Implications of Survey Findings

SMEs collectively contribute significantly to the economic growth and development of all economies. The effective use of ICTs is critical for SMEs to increase competitiveness and aid and stimulate growth in an economy. The use of ICTs facilitates growth, improve market access, contribute to income generation, enhance rural productivity and allow for the creation of jobs

In the ECTEL Member States, the gap between potential and actual output can be reduced considerably if there is a drive to increase usage and awareness among small businesses of the importance of ICTs in improving efficiency and effectiveness in their businesses. ICTs can provide access to practical information on matters related to small-sized business accounting and environmental factors affecting their businesses. ICTs can also; facilitate global connectivity; increase access to new markets and provide new sources of competitive advantage to boost economic growth. It is therefore in the interest of regulators and policy makers to identify hindrances to the use of ICTs by SMEs.

Hindrances to use of ICT services are likely to be more prevalent among smaller firms given their inherent lack of access to resources to develop their businesses to their true potential. Policymakers should be interested in creating a strong SME sector that is more integrated into the global and digital economy for job creation, increased public revenue and improved standard of living. Given that small businesses across sectors face similar constraints; in this section there will be a focus on results obtained from the survey in relation to business size, in particular, businesses with ten employees or less.

2.4.1 Summary of Key Findings

The key findings will fall under two main subject areas namely issues related to the level of usage of ICTs and attitudes and major barriers to effective use of ICTs. These findings will reveal to policymakers and regulators the level of effort that will be required to increase use of ICTs and assist in identifying measures that can be taken to eliminate the barriers to further the usage of telecommunications.

(a) Use of ICTs by SMEs

1. Widespread adoption of basic ICTs; limited use of advanced ICTs (Table 2.1):

Table 2.1: ICT adoption by SMEs in the ECTEL States

ICT	Business Size		
	Less than 10 employees	11 – 50 employees	More than 50 employees
Fixed line service	95%	99%	99%
Mobile phone service	62%	72%	90%
Fax service	67%	83%	97%
Computer use	83%	93%	100%
Computer network	71%	79%	97%
Internet access	80%	92%	100%
Email	92%	96%	100%
Mobile data service	12%	19%	31%
Voice over IP	25%	31%	39%
Company website	38%	46%	66%
E-commerce activities	29%	32%	34%

- With the exception of the relatively modest adoption of fax service and mobile voice service by the smallest businesses, well over 80 per cent of SMEs used the most established ICTs such as fixed line service and computers.
- Advanced communications services such as Internet access and email were also widely used by all SMEs.
- Fixed broadband used by 96 per cent of fixed Internet users, however mobile data service use is still in its infancy.
- Sixty seven per cent used fixed line for international calls versus 14 per cent using VoIP.
- More advanced ICTs such as VoIP and company websites were in limited use especially among the smaller businesses.

This pattern of ICT adoption observed in the survey of SMEs in the ECTEL States is largely in line with the progression of ICT adoption identified by Kotelnikov (2007), (Figure 3).

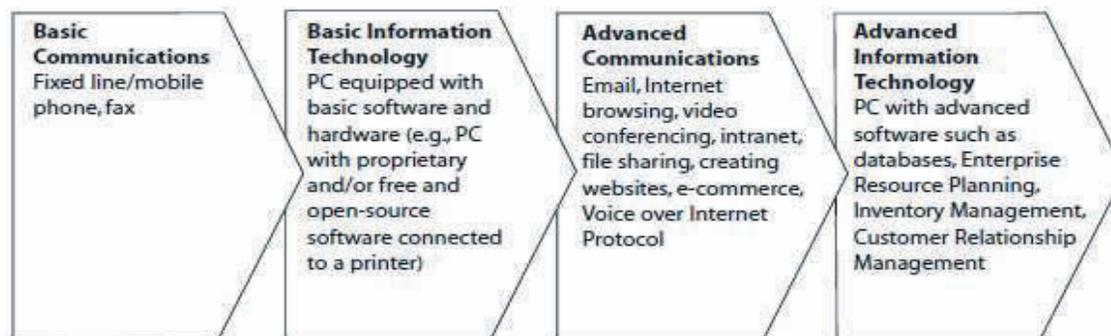


Figure 3: Progression of ICT adoption

Source: *Small and Medium Enterprises and ICT*, Vadim Kotelnikov (2007)

2. **Mixed results on ICT access provided to staff**

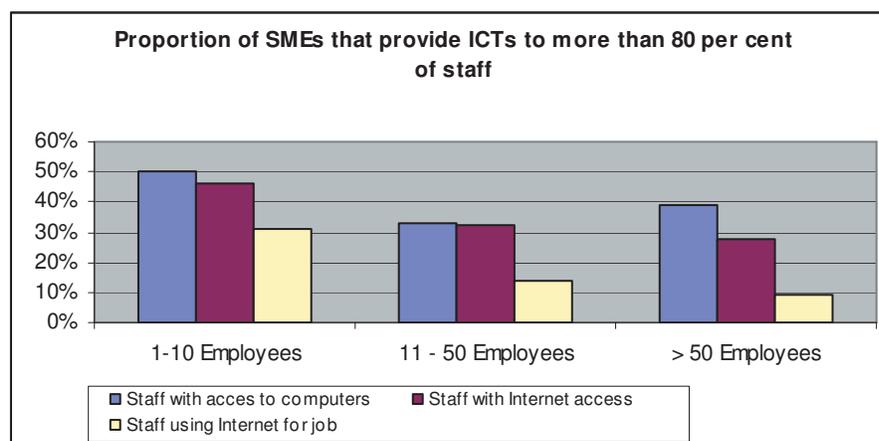
- ◆ Employees have much greater access to fixed voice service than to mobile voice service and smaller businesses provide employees with more access to voice services than larger businesses (Table 2.2)

Table 2.2: Proportion of SMEs that provide access to voice service to more than 80% of staff

Service	≤ 10 employees	11 - 50 employees	≥ 50 employees
Fixed line service	62%	44%	37%
Mobile phone	32%	19%	9%

- ◆ Employees with access to computers or Internet access do not necessarily use them to do their jobs
- ◆ Smaller businesses also provide greater access to computers and Internet access to staff than larger businesses(Chart 2.24)

Chart 2.24



3. **Fixed line number portability was seen as more important than mobile number portability**

- ◆ 87 per cent of SMEs viewed fixed number portability as very important versus 53 per cent for mobile number portability

4. **Mobile phone service was not necessarily seen as a substitute of fixed line service by SMEs**

- ◆ Most businesses had both fixed and mobile service.

- ◆ Eighty per cent of businesses indicated that it was very unlikely that they would terminate the fixed line service within a year.
 - ◆ Most businesses used mobile phone service because they had a mobile workforce, though 12 per cent used it because they thought it was cheaper than fixed service.
5. **Cable & Wireless is still the main provider of basic ICTs to SMEs**
- ◆ Cable & Wireless was the service provider for 99 per cent of users of fixed line service, 70 per cent of mobile phone users and 96 per cent of Internet users
6. **SMEs generally believed the rates for voice services to be high**
- ◆ Fixed-to-fixed rates were viewed as high by 52 per cent of respondents while 95 per cent believed that the rate for fixed-to-mobile calls was high. As a result half of businesses restricted or blocked fixed-to-mobile calls. This is an important result as fixed line calling rates are highly differentiated; fixed-to-fixed rates are currently one-tenth that of fixed-to-mobile rates.
 - ◆ Half of the respondents said that the price for on-net mobile calls was high, however just 41 per cent (17 per cent for the smaller businesses) used a corporate mobile plan which would provide discount calling rates. Most businesses without a corporate plan were not aware of such plans.
 - ◆ Ninety-two per cent indicated that off-net mobile calls were priced high and 87 per cent felt the same for mobile-to- fixed calls. Consequently, almost half of mobile calls were on-net calls.
 - ◆ The rates for international calls, except VoIP calls, were believed to be high.
7. **Smaller businesses are not taking advantage of SMS text messaging**
- ◆ Sixty-two per cent of larger SMEs (businesses with more than 50 employees) use SMS, mainly as an alternative to calling, compared to only 38 per cent of businesses with ten or less employees
8. **SMEs are not using VoIP, the fixed line was still the main channel used for international calls**
- ◆ Sixty seven per cent of respondents used the fixed line for international calls.

- ◆ Among the smallest businesses, 62 per cent used the fixed, 16 per cent used the mobile phone and 10 per cent used VoIP service.
- ◆ For larger businesses, 74 per cent used fixed, 20 per cent used VoIP and only 5 per cent used mobile phone service.
- ◆ It appears that competition in the market for international calls may not have resulted in rates that are more attractive than fixed rates. In addition, limited adoption of VoIP by SMEs has prevented them from benefiting from potential cost savings.

9. **SMEs had a positive attitude towards ICT adoption**

- ◆ ICTs were seen as very important or indispensable by 89 per cent of respondents
- ◆ Most SMEs indicated that ICTs had a positive impact on business.
- ◆ Sixty-five per cent indicated that they did not believe that investing in ICTs was risky
- ◆ Half believed that the benefit of ICT investment justified the cost
- ◆ 34 per cent were unsure.

10. **SMEs were generally satisfied with basic ICTs**

- ◆ More than 60 per cent of respondents were satisfied with fixed, mobile and Internet service.
- ◆ Smaller SMEs were slightly less satisfied than larger SMEs, especially with mobile and Internet services.
- ◆ Main complaints were that the rates for voice services were too high and that broadband speeds were too slow.

(b) Barriers to SME Access and Use of ICTs

Future policy measures to encourage use of ICT services in businesses require the identification of the barriers that hinder or discourage SMEs from realising the full benefits from the use of ICTs. Potential barriers can be endogenous such as the lack of knowledge or limited financial and human resources or exogenous. A study of ICT adoption by SMEs published by the UNDP Asia-Pacific Development Information Program identified a number of barriers to ICT adoption by SMEs; namely the lack of affordable and accessible ICT infrastructure, human capacity, financing and an appropriate legal framework.

Human capacity was identified as one of the biggest obstacles to ICT adoption by SMEs, in particular limited ICT literacy by owners and

Use of ICTs by SMEs in ECTEL States

managers of SMEs. Overall only 37 per cent of respondents said that they were very knowledgeable in ICT issues; among the smaller businesses (10 employees or less) it was marginally less at 31 per cent. This limited ICT literacy was further evidenced by the fact that 66 per cent of SMEs conceded that they were unsure or did not know if there were ICTs that could be beneficial to their business but were not currently offered by service providers. The lack of knowledge of ICTs can be a major constraint to making effective decisions about ICT adoption. Even when businesses have the financial resources available they may have difficulty in choosing the most cost-effective ICT solution due to limited knowledge.

The lack of affordable and accessible ICT infrastructure was not identified as a significant hindrance to ICT use by SMEs in the ECTEL states. Infrastructure based ICTs were widely used by SMEs. However there was some dissatisfaction with the cost of fixed voice service (36 per cent) and mobile phone service (40 per cent). In addition some SMEs expressed concerns about the speed of fixed broadband access (21 per cent). Most of the other barriers identified in the survey were in relation to the use of the Internet for e-business as outline below.

Preference for face-to-face interaction with consumers

This was the most significant barrier to Internet use by businesses in the ECTEL States; overall 20 per cent cited this as the main limiting factor. The preference for face-to-face transactions goes to the heart of how SMEs conduct business. There are always risks associated with changing business strategy, SMEs may find it difficult to move away from their old businesses model and adopt new practices. They may also be worried that they will lose valued customers who may find it difficult to transition to the e-business environment.

Unsuitability of Products

This was the second most common response, stated by 19 per cent of businesses. Business may not see the relevance of the use of the Internet for transactions if they believe that their products and services are not suitable for online trade. The lack of information and knowledge of available ICT solutions may also contribute to this perceived limitation.

Security and Privacy issues

This was of concern to roughly 18 per cent of businesses and the main concern for the construction sector. SMEs may find it difficult to engage in

e-business activities because of undeveloped legal and regulatory systems, in particular as it relates to electronic payments and privacy and security issues.

Insufficient customer demand

Sixteen per cent of respondents noted a lack of customer demand as the hurdle to Internet use. Given the significant investment necessary for e-business SMEs may not be inclined to offer online services if they do not perceive substantial customer interest.

Cost of developing and maintaining e-business system

Surprisingly only 8 per cent of respondents indicated that the cost of setting up and maintaining the e-business system was a barrier to Internet use. The cost of ICT systems have long been seen as a major barrier to ICT adoption. SMEs are often faced with budgetary constraints and e-business solutions were generally targeted at larger firms and were sometimes outside the reach of smaller businesses. The issue of cost may be less pronounced today as more ICT firms are targeting ICT solutions at SMEs as the market for larger firms reach maturity.

Lack of skilled personnel

Thirteen per cent of businesses indicated that the lack of skilled personnel limited Internet use. This does not mean however that there are no issues in relation to the availability of ICT personnel. In fact 41 per cent of respondents had no dedicated ICT staff. It must however be noted that for SMEs, staff often perform multiple functions and ICT services can usually be outsourced.

A number of these barriers were also identified in a 2007 study of barriers to Internet use for business by the United Nation Economic and Social Commission for Asia and the Pacific (UNESCAP).

2.4.2 Policy recommendations to encourage further ICT adoption by SMEs¹.

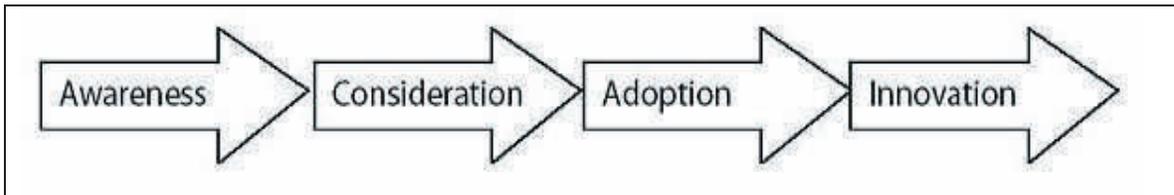
In order to foster an environment for greater and more effective use of ICT, regulators and policymakers must facilitate access to ICTs and foster a more

¹ The information in this section has been drawn from the United Nations ESCAP report, *Internet Use for Business Development: Introductory Set of Training Modules for Policy Makers*, (2007).

competitive ICT sector. High priority areas include the promotion of education and support services for businesses; and the acceleration of harmonization of key policies and regulations related to ICTs. This will create an enabling environment to set up businesses and eliminate barriers to increasing profitability and competitiveness of the SMEs. Long term policies include increasing education opportunities by widening the education curriculum and aggressively adopting and integrating ICTs into all facets of learning from primary through higher education levels and thus enhancing the skills base of the labour force.²

To implement effective programs to encourage ICT adoption, policymakers must understand the stages of ICT adoption (Figure 4) and be mindful of where SMEs are in the decision making process. SMEs generally go through distinct stages in the adoption of ICTs (Kotelnikov, 2007). First SMEs must be made aware of ICTs and their potential benefits. Second, SMEs must consider whether or not to adopt ICTs based on cost and benefit considerations; SMEs will generally adopt an ICT if they are convinced that the benefits outweigh the cost. If SMEs have a positive experience with the ICT adopted they may then move to the stage of using ICTs to innovate in their business operations.

Figure 4: Stages of ICT adoption



Source: *Small and Medium Enterprises and ICT*, Vadim Kotelnikov (2007)

There are a number of recommendations for policy makers to consider when developing policies to encourage further ICT adoption by SMEs in the ECTEL States.

² A Time to Choose: Caribbean Development in the 21st Century), Latin America and the Caribbean

(a) Promotion of ICT literacy and capacity building

Limited ICT literacy is one of the leading barriers to effective use of ICTs and it may be the reason for negative attitudes towards the use of some ICTs. Lack of sufficient knowledge could be the reason for firms believing that their goods and services do not lend themselves to Internet transactions. SMEs without sufficient knowledge will not take advantage of e-business, unless they believe that the benefits will outweigh the costs of establishing and maintaining an e-commerce system. Small businesses may have fears that abandoning their current business model for a modern one may lead to the loss of customers who might be uncomfortable with the new changes.

In addressing this endogenous barrier, policymakers can invest in education in ICTs both at the business level and for the public at large. These could be provided in the form of subsidies to trainees on broad-based ICT courses such as office applications, desktop publishing, workgroup applications and webpage design. Governments can increase training opportunities by coordinating employee capacity building programs with private training initiatives and employ the use of Online and Internet Learning Opportunities (ILO).³ Other measures that governments can undertake include encouraging local content development. Governments can increase information available to SMEs on the benefits and costs of adoption on the use of ICTs through case studies and real world best practices.

(b) Improvement of access to financial resources

The successful integration of telecommunications and ICTs in businesses requires the restructuring of business processes or changes in organizational structures. Small businesses across sectors tend to have financial constraints in meeting the expenses of setting up professional ICT systems and hiring e-business consultants. Policy measures should therefore focused on improving the access of small businesses to financial resources and credit.

³ Draft Model National Policy for Advancing Growth in the ICT Sector in the ECTEL Member States.

(c) Promotion of competition in the provision of ICTs

Fostering competition in the provision of ICT services would be one of the ways to further reduce the costs of ICT services to businesses. Access to more affordable broadband with greater speed will improve online experiences for firms and their clients and will encourage them to use more sophisticated applications and spend more time finding solutions online. The regulator can identify policies and measures aimed at reducing anti-competitive behaviour by market participants. Anti-competitive behaviour serves as a major barrier to entry for potential providers in the markets for ICTs. In the ECTEL States, the development of competition laws in collaboration with the regional competition commission should ensure that all these barriers can be addressed.

(d) Creation of an enabling business environment

The economic environment could be tailored to foster the growth of start-up ICT business ventures and pilot projects, including public-private partnerships. Governments may wish to pursue the increased use of ICT “incubators” and develop research programs that encourage ICT-based SMEs. Governments can work with the businesses to identify areas where legislation, regulations, e-security and other shared ICT matters can assist in accelerating the integration of advanced ICT in business operations.⁴

Governments are encouraged to work with internationally certified and secure business institutions to ensure that policies are supportive of a rapid and efficient upgrade of ICT capabilities especially those that affect consumer opportunities and investor confidence. This will allow for the enabling of secure electronic transactions at all business levels including on-line credit and payment capabilities.⁵

In the ECTEL Member States there is ongoing work on developing legislation to incorporate electronic payment and security issues to address fears and problems with privacy and security concerns. SMEs are at a disadvantage compared to their larger competitors in gaining buyer confidence as the latter would have well known brand names. Online clients are more likely to purchase from a well-known company. Consumers using credit cards are cautious about security protection in providing credit related information, making it imperative for SMEs to install system protection and other

⁴ Draft Model National Policy for Advancing Growth in the ICT Sector in the ECTEL Member States.

⁵ Draft Model National Policy for Advancing Growth in the ICT Sector in the ECTEL Member States.

security measures. Consumers might be uncertain with entering to contracts if there are delivery and guarantee uncertainties.

(e) Development of harmonised e-security policies and programs

There may be legal uncertainties regarding conflicting regulations for cross-border transactions that would deter SMEs from exploring online transactions. SMEs may be at risk of being sued in multiple jurisdictions under various inconsistent laws and the absence of satisfactory dispute resolution mechanisms could be a major barrier.

The ECTEL States would need to develop harmonized e-security policies and programs to improve trust, security, enforce authentication mechanisms, and combat cybercrimes in order to encourage the use of ICTs. Some examples include low-cost online dispute resolution, e-security policies such as Public Key Infrastructure (PKI) and Computer Emergent Response Teams (CERTs). Policy makers would also need to improve technological diffusion and remove market failures by having adequate e-government services and e-procurement programs to build trust and security in online transactions.

(f) Promotion of ICTs for export oriented products and services

There is a need to promote the use of electronic commerce involving Internet based sales of goods and services to increase exports in the economies of the ECTEL Member States. There are potential niche markets for which the countries can develop viable exports based on ICT delivery channels, such as products targeting the Eastern Caribbean diaspora, tourism, data processing and call centres. These activities would be facilitated by the creation of the regulatory environment for e-commerce and electronic financial transactions. There is also a need to promote cooperation in the enhancement of national and regional commercial web portal design and implementation.⁶

Conclusion

There are a number of options available to policy makers to promote ICT adoption by SMEs. Any policy must focus on increasing SMEs awareness of the specific benefits for ICT adoption as SMEs will be reluctant to engage with ICTs unless they believe that the benefits outweigh the cost of investment.

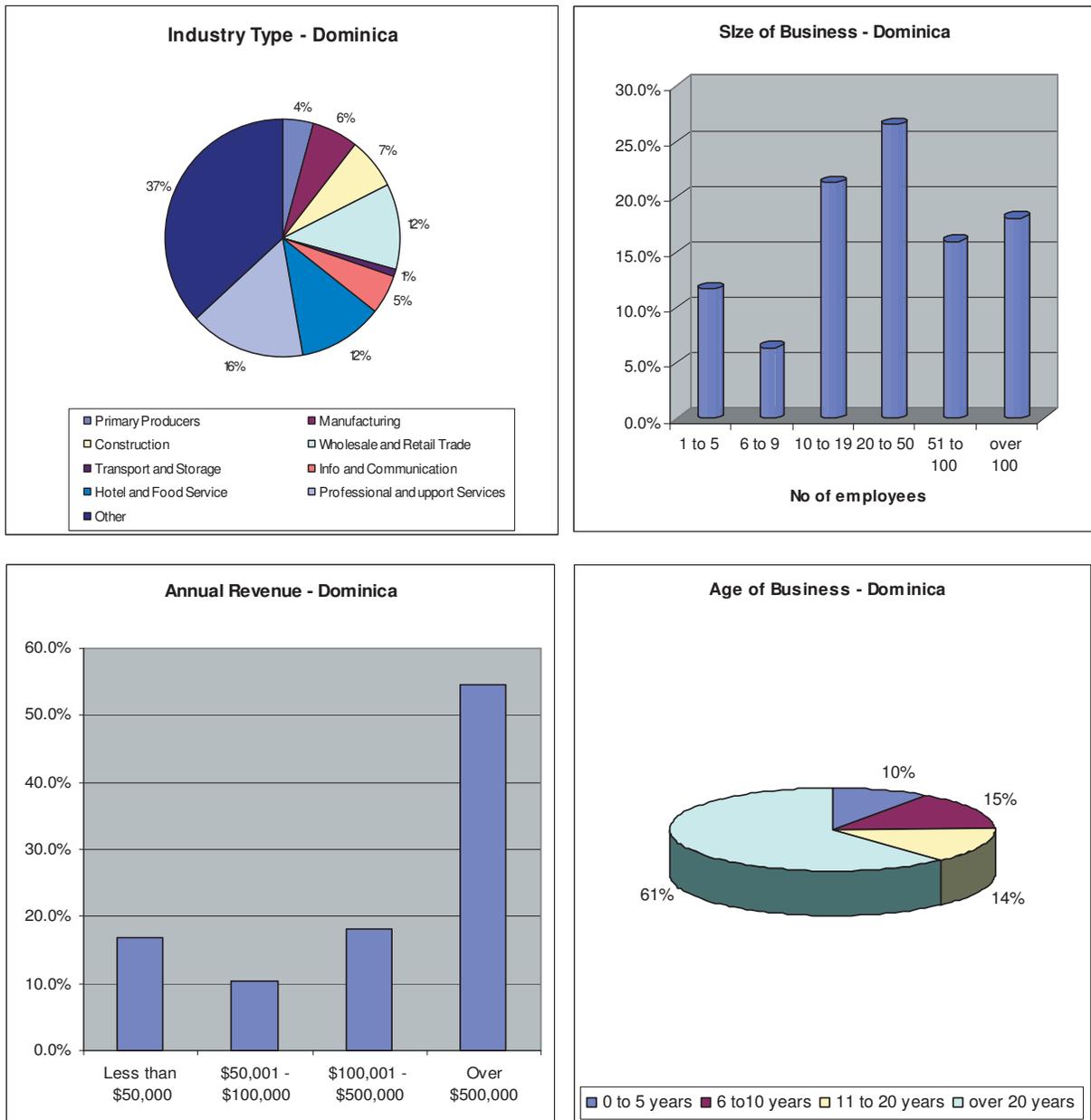
⁶ Draft Model National Policy for Advancing Growth in the ICT Sector in the ECTEL Member States.

3. USE OF ICTs BY SMEs IN DOMINICA

3.1 Respondent Profile

Ninety-five businesses were interviewed in Dominica. Businesses from a wide cross section of industries were targetted with the primary producers (agriculture, fishing and mining) being the largest target group. The majority of firms, 64 per cent, had between 10 and 50 employees. Sixty-one per cent of firms were in business for more than 20 years and just over 50 per cent claimed revenue in excess of \$50,000.

Chart 3.1



3.2 Use of Fixed Line Voice Service

Fixed line service was widely used by businesses. Ninety-six per cent of the businesses that responded to the survey indicated that they had a fixed line phone and 80 per cent also had fax service. Fixed line service was viewed as critical as over 80 per cent of respondents noted that it was very unlikely that they would terminate the service. For a majority of businesses, 54 per cent, more than 75 per cent of staff had access to the fixed line at their workstation, further evidence of the importance of the service to businesses (Chart 3.2, (a)).

Chart 3.2 (a)

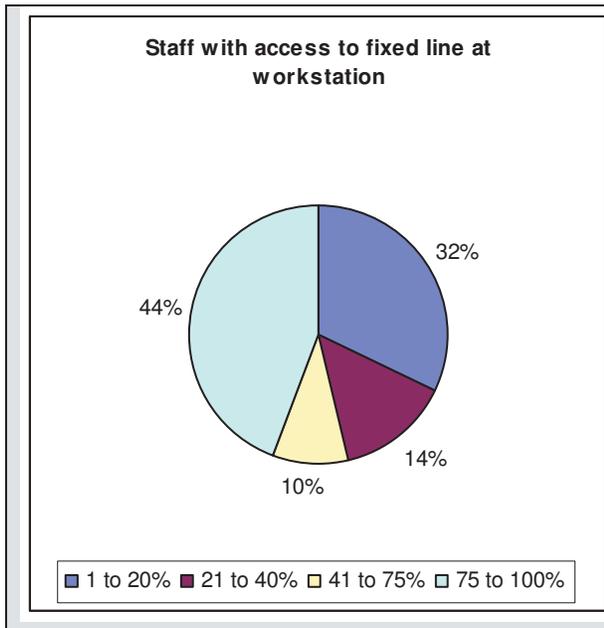
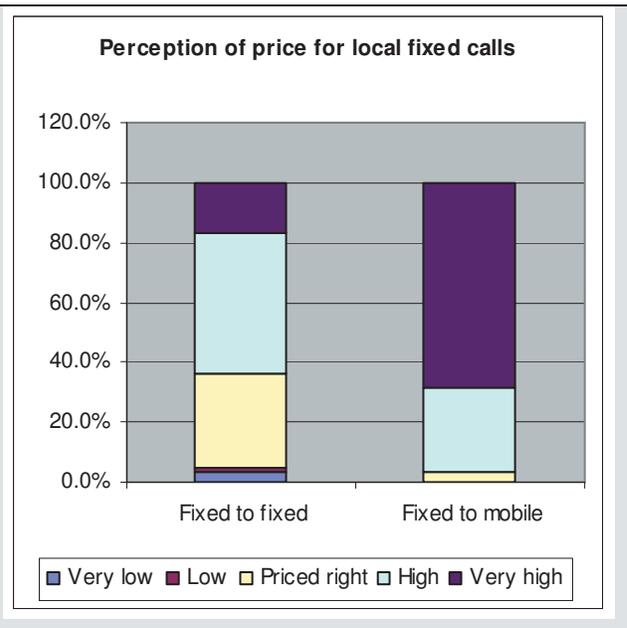


Chart 3.2 (b)



Respondents were asked about the use of value added features on their fixed line. The most popular feature was caller ID used by 43 per cent of respondents, this was followed by call waiting (40 per cent), voice mail (36 per cent) and call forwarding used by 34 per cent of respondents.

Respondents were also asked to rate the price for local fixed-to-fixed and fixed-to-mobile calls. More than six out of ten businesses claimed that rates for fixed-to-fixed calling was high or very high, while more than nine out of ten indicated that fixed-to-mobile calls were high or very high (Chart 3.2, (b)).

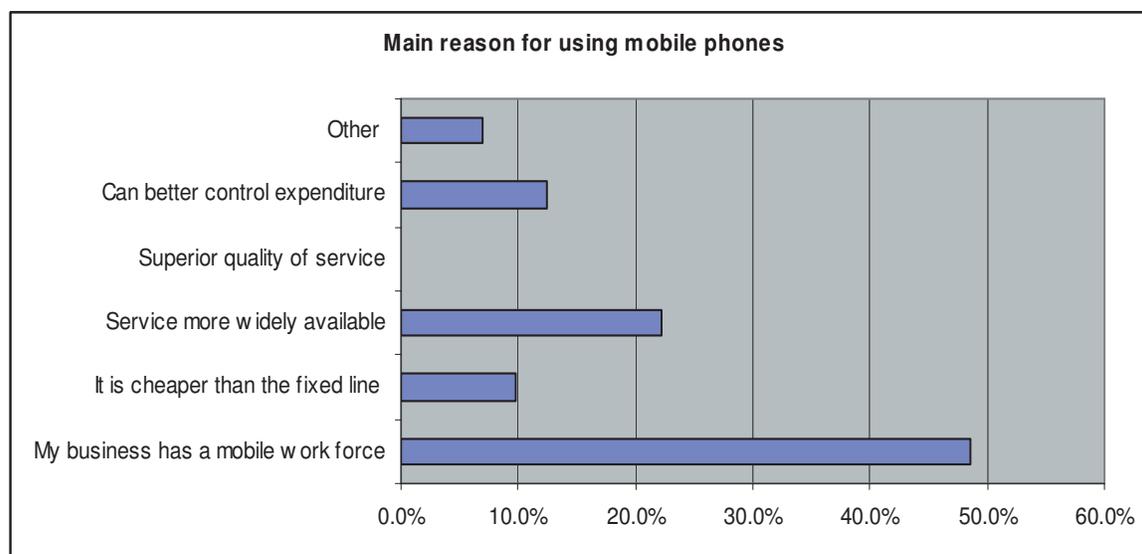
Despite the rating given to fixed-to-mobile calling, more than 50 per cent of businesses said that they had no restrictions on fixed-to-mobile calling while 19 per cent blocked their line to mobile calls and 30 per cent restricted access to mobile phones.

3.3 Use of Mobile Services

Mobile phone service proved to be much less popular with the businesses interviewed than fixed line with three quarters of the respondents indicating that they had mobile phone service. Of the firms with no mobile phone service more than 95 per cent did not have the service in the past and an equal proportion indicated that they had no intention of getting mobile phone service in the future. Just over half of firms with mobile service had a post paid plan with 28 per cent having both prepaid and post paid plans.

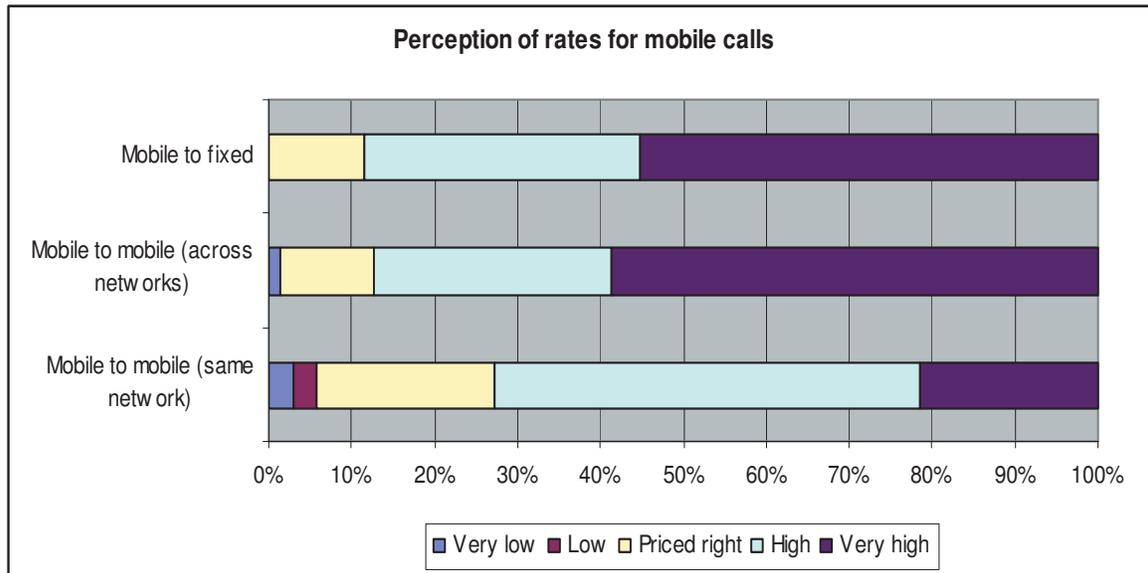
For 49 per cent of businesses the main reason for using mobile service was that the workforce was mobile. This was followed by 22 per cent of businesses using mobile service because it was more widely available, and 13 per cent of using this service as a way to better manage expenses (Chart 3.3). Just under half of the respondents used a corporate mobile plan. Awareness of corporate mobile plans available was low with 58 per cent of firms not using a plan because they were not aware of available plans.

Chart 3.3



Access to mobile phones by staff was limited with only 17 per cent of respondents indicating that more than 80 per cent of staff had access. Cable & Wireless was the main provider of mobile service with a 93 per cent share among respondents. More than 88 per cent of firms indicated that they had not switched providers in the past two years. Most respondents indicated that the price for mobile service was high or very high (Chart 3.4).

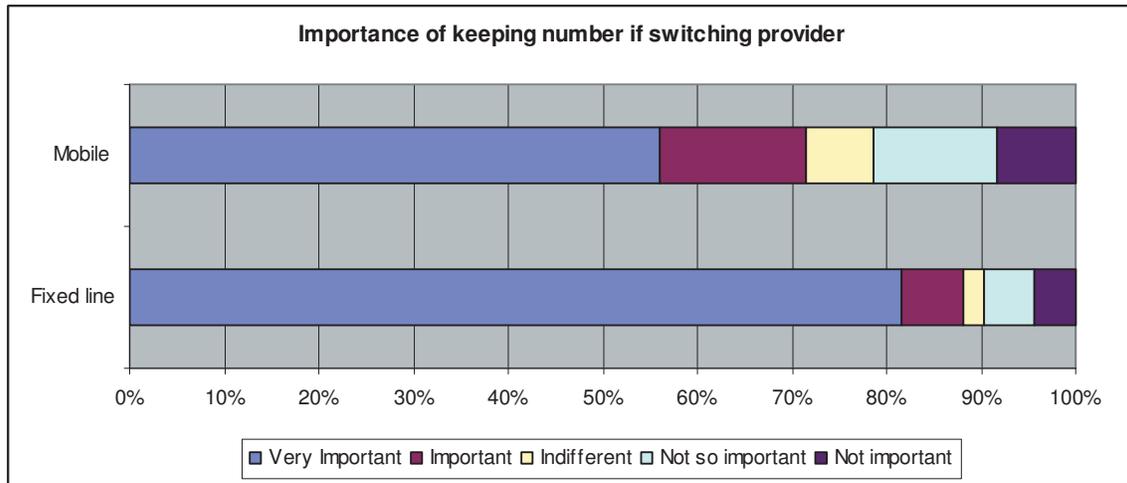
Chart 3.4



3.4 Importance of Number Portability

Fixed number portability was viewed as much more important than mobile number portability by the businesses surveyed. A significant number of firms, 82 per cent, said it would be very important to keep their fixed line number if they switched provider, however for mobile number portability 56 per cent of respondents indicated that it would be very important to keep their mobile number, though a further 16 per cent stated that it would be important to keep the mobile number (Chart 3.4).

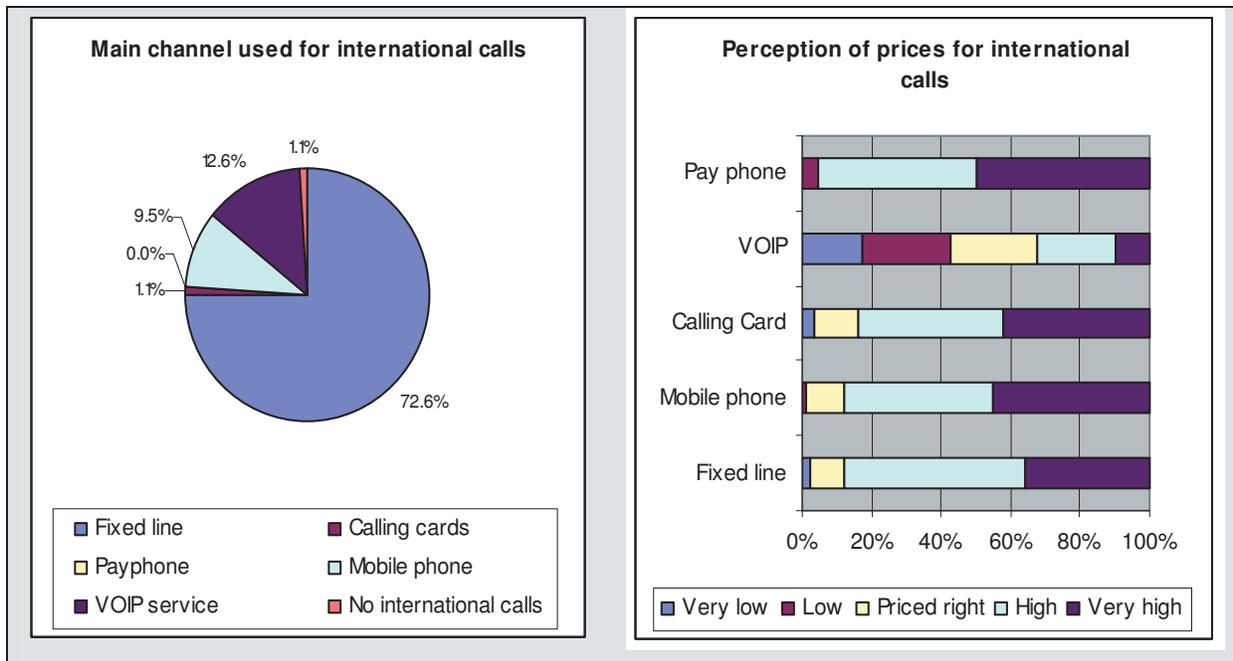
Chart 3.5



3.5 Use of International Service

The fixed line was the most popular means of making international calls. It was used by 73 per cent of respondents. This was followed by VoIP service used by 13 per cent of respondents and mobile phone used by 10 per cent (Chart 3.6, (a)). With the noted exception of VoIP calling, a majority of respondents indicated that the price for international calls was high or very high. Forty-two per cent of respondents viewed the rate for VoIP calling as low or very low (Chart 3.6, (b)).

Chart 3.6



3.6 Use of Computers and Internet Access

Ninety-eight per cent of respondents had computers, of which 89 per cent had a local area network and 96 per cent had Internet access. The majority of firms with Internet access, 70 per cent, had ADSL high speed Internet access, making Cable & Wireless the main provider of Internet access to businesses (Chart 3.7, (a)). While staff generally had Internet access, the use of the Internet as a tool for business was still limited. Just under half of the firms indicated that more than half their staff had access to the Internet, but only 38 per cent indicated that a similar percentage used the Internet as part of their job (Chart 3.7, (b)).

Chart 3.7 (a)

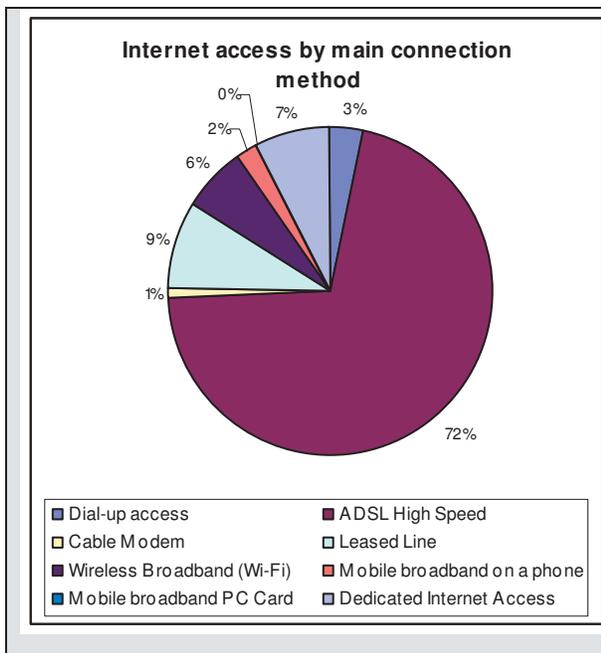
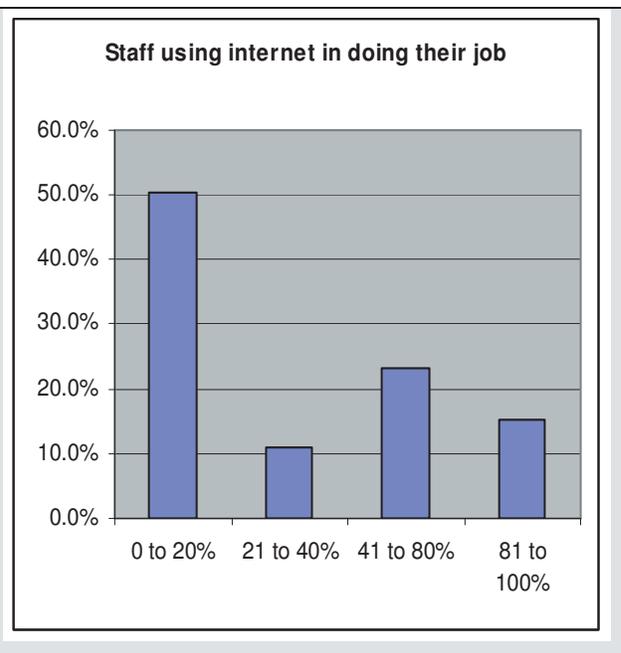


Chart 3.7 (b)



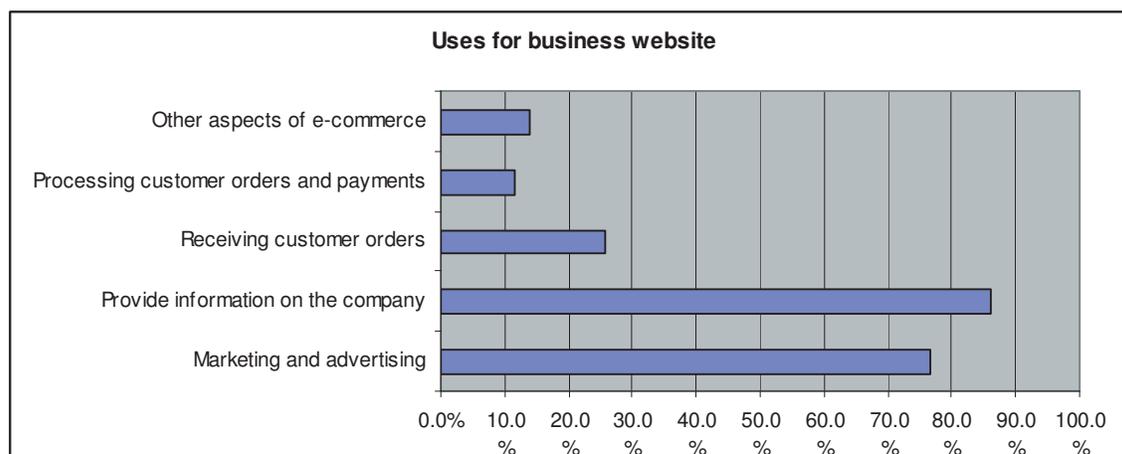
3.7 Email Use and Web Presence

Almost all businesses with Internet access, 97 per cent, used email, with 45 per cent having a corporate email account. Nearly half of the respondents used mail mainly to communicate with customers while a third used email mainly for contacting suppliers.

Having a web presence was not as prevalent as the use of email; as less than 50 per cent of respondents had a company website. E-commerce was not the principal use of company websites. Websites were mainly used for

providing information about the company or for marketing and advertising. Only 11 per cent of firms indicated that their website was used to process customer transactions (Chart 3.8).

Chart 3.8

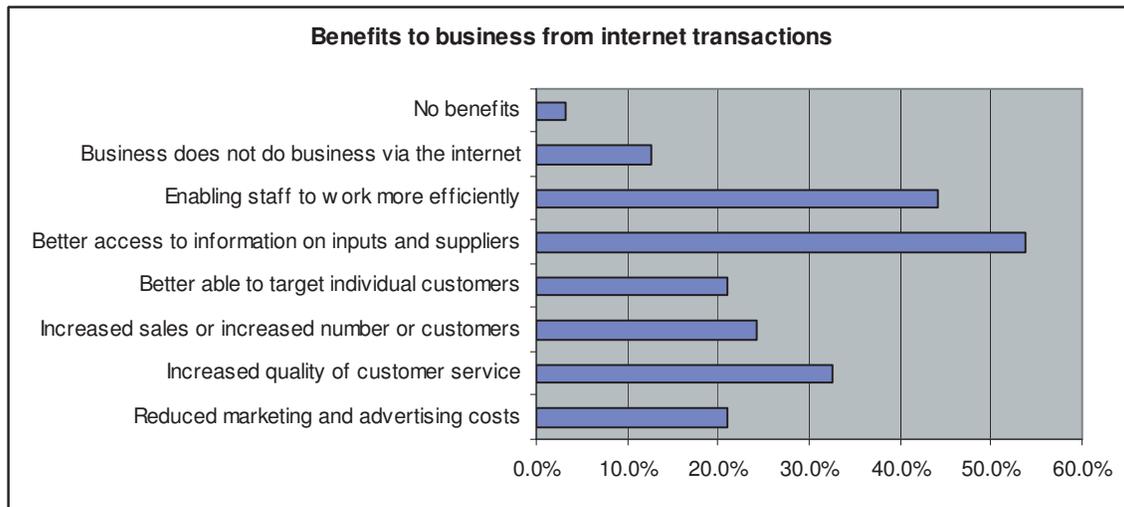


3.8 Internet Transactions

Only 10 per cent of respondents indicated that they do not use the Internet for business. The popular use of the Internet was for getting information and conducting research. However, more than half of the firms used the Internet for making purchases and 44 per cent for indentifying potential suppliers. The most significant benefit to the use of the internet was gaining better access to inputs and suppliers noted by 54 per cent of firms.

For the minority of firms that did not transact business on the Internet the main reasons given were that products were not suited for Internet (26 per cent), security and privacy concerns (18 per cent) and the lack of customer demand for online service (16 per cent). However a majority of firms indicated that they benefitted from using the Internet with 54 per cent claiming better access to information on suppliers and 44 per cent indicating that it allowed staff to work more efficiently (Chart 3.9).

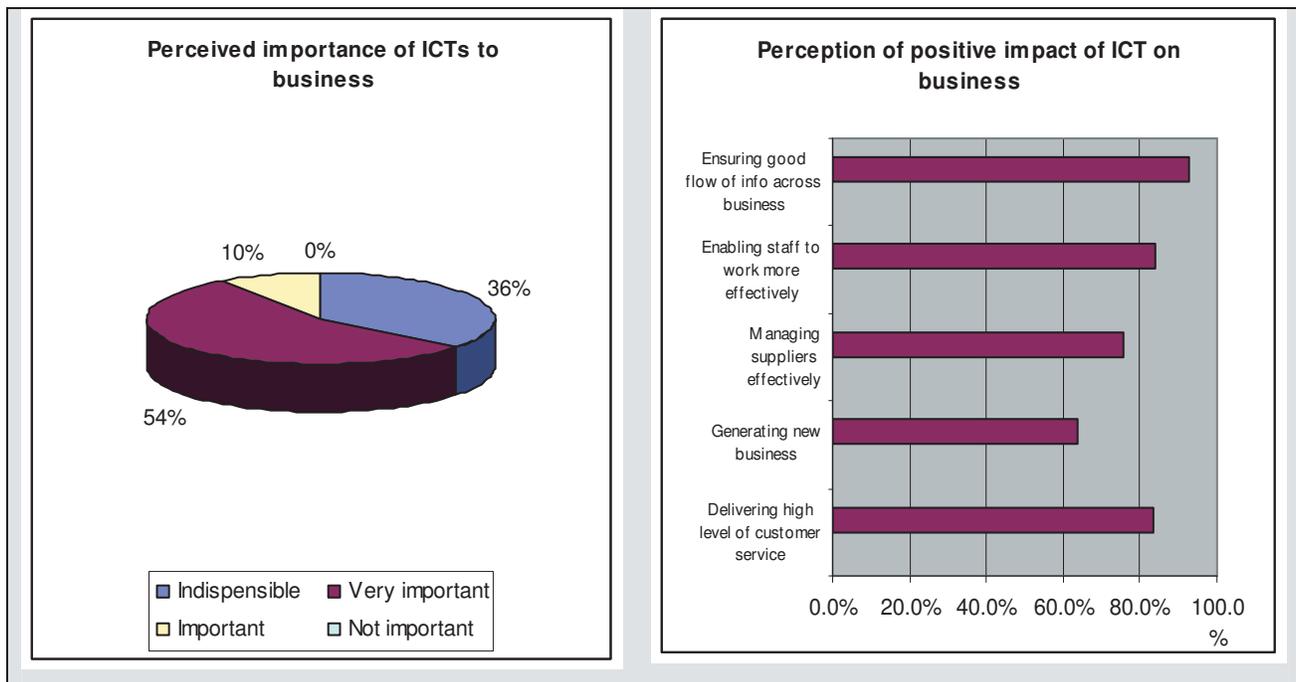
Chart 3.9



3.9 Perceived Importance of ICTs to Business

The majority of firms interviewed, 91 per cent, indicated that ICTs were important to their business, with 36 per cent stating that ICTs were indispensable (Chart 3.10, (a)). The stated importance of ICTs was not necessarily reflected in the level of resources allocated to ICTs. Only 30 per cent of respondents had specialized staff dedicated to ICTs and 21 percent stated that spending of ICT was unplanned (Chart 3.10, (b)).

Chart 3.10



More than 70 per cent of respondents indicated that the ICTs had a positive impact on their business, in areas such as delivery of customer service, working with suppliers, staff efficiency and information flow with the firms. A slightly smaller number, 64 per cent also claimed a positive impact in terms of generation of new business.

3.10 Perceived Barriers to ICT Use

Advanced ICTs and value added services were not used as extensively as basic ICTs. Less than one-third of businesses with fixed line service used teleconferencing and a mere one per cent indicated that they used video conferencing. There was also limited use of advanced mobile services; just over half of mobile users used SMS and roughly 12 per cent used a mobile data as Blackberry or GPRS.

Less than half of Internet users had a company website but only 12 per cent used their website for e-commerce activity including the processing of customer orders. However, 54 per cent of businesses used the Internet for making purchases. Even with the limited use of advanced ICTs, most respondents had an overall positive attitude towards advanced technology with 74 per cent agreeing that it is important to have the most advanced technology.

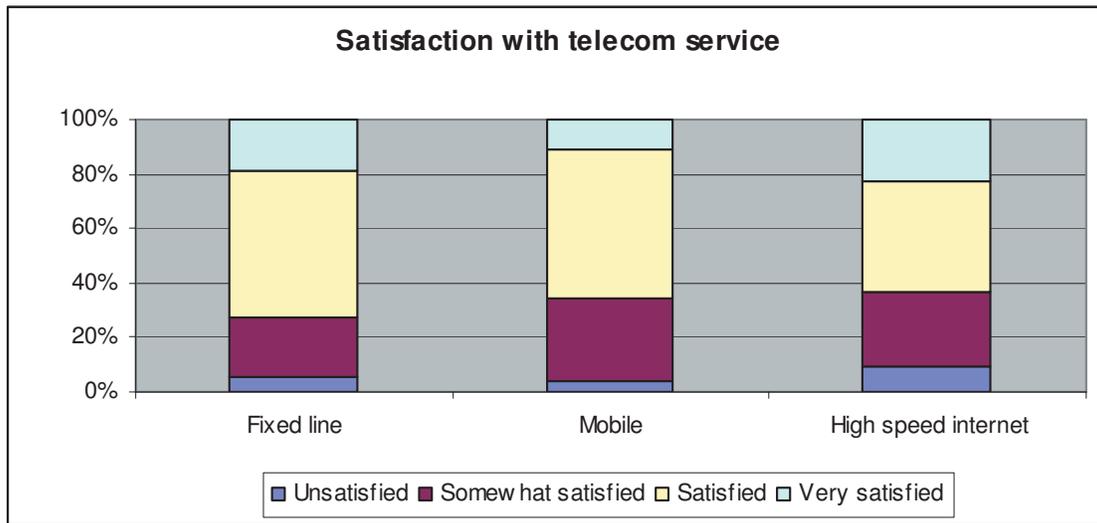
A small number of firms, roughly 5 per cent indicated that regulatory or other requirements hindered their business from using ICTs. However the specific barriers were unclear. Conversely, 88 per cent indicated that no regulatory or other requirements restricted their use of ICTs; 6 per cent were unsure. The most significant barrier to ICT use appears to be the lack of knowledge of ICTs. Half of respondents admitted that they were not knowledgeable about ICTs and a further 14 per cent were unsure. In further support of this lack of knowledge, 58 per cent of respondents indicated that they were unsure of potentially beneficial ICTs not currently offered. This dearth of knowledge could severely impact SME's confidence in both investment and the adoption of ICTs.

3.11 Satisfaction with ICTs

Respondents were asked to rank their level of level of satisfaction with basic ICTs on a ten point scale. The majority of respondents were satisfied with the basic ICTs . Just over 72 per cent were satisfied with their fixed line

service including 19 per cent who were very satisfied. Sixty-five per cent of respondents indicated satisfaction with mobile service and 63 per cent were satisfied with fixed broadband service including 23 percent who were very satisfied (Chart 3.11).

Chart 3.11

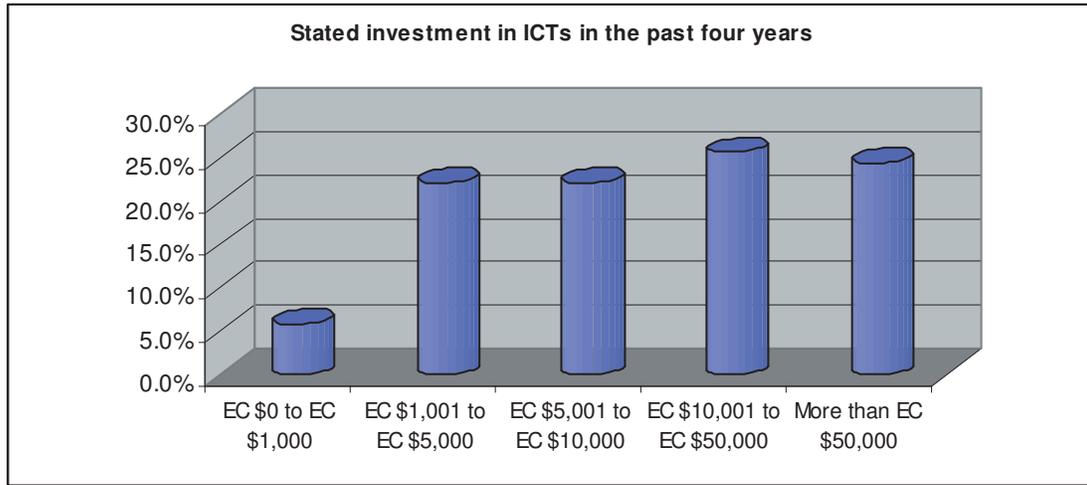


Among the respondents who were not satisfied with basic ICTs the main cause of dissatisfaction with voice services was the cost while network problems was stated as the main cause for concern with high speed Internet access.

3.12 Attitude towards ICT Training and Investment in ICT

A majority of respondents had a favourable attitude toward ICT training for staff, with only 38 per cent indicating that the cost of ICT training was too much. Respondents also had a favourable view toward investment in ICTs. A small minority, 15 per cent felt that the overall benefit of ICT use did not justify investment. Close to 50 per cent of firms claimed to have invested between \$5,000 and \$50,000 in ICTs in the past four years with a further 24 per cent having invested more than \$50,000 (Chart 3.12).

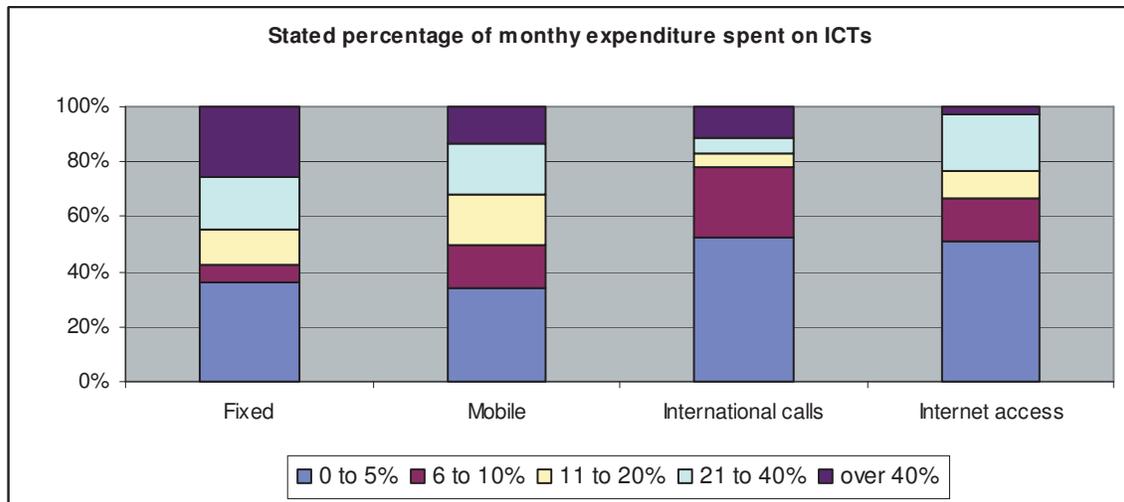
Chart 3.12



3.13 Expenditure on ICTs

For the majority of respondents, expenditure on various ICTs consumed less than 10 per cent of total monthly expenditure. Forty-two per cent reported expenditure on fixed line service at less than 10 per cent of total expenditure, half reported monthly expenditure on mobile at less than 10 per cent of total expenditure, while half reported spending less than 5 per cent on international calls and Internet access (Chart 3.13).

Chart 3.13



4. USE OF ICTS BY SMEs IN GRENADA

4.1 Respondent Profile

In Grenada, a total of ninety-one firms were interviewed. Eighty per cent of respondents had less than 50 employees, 42 per cent indicated that they were in business for more than 20 years, and two-thirds had only one business location. In terms of business activity, 13 per cent were in accommodation and food services, 10 per cent in construction and 10 per cent offered professional or technical services (Chart 4.1).

Chart 4.1



4.2 Use of Fixed Line Voice Service

Fixed line service was used by 98 per cent of respondents, with 35 per cent having only one line and 76 per cent having fax service. This service was viewed as essential as 75 per cent of respondents said that it was very unlikely that they would terminate their fixed line service. For more than 60 per cent of respondents, three-quarters of their staff had access to a fixed line at their workstation, at the other end of the scale 30 percent of respondents indicated that less than 20 per cent of staff had fixed line access (Chart 4.2, (a)). Among the value added service, call waiting, call forwarding and voice mail were the most popular used by respondents.

Respondents had mixed views on the rates for fixed line calling. Half of the firms interviewed indicated that the rate for fixed-to-fixed calling was priced right with a further 13 per cent stating that the rate was low. In contrast, 87 per cent indicated that the rate for fixed-to-mobile calls was high including 27 per cent who thought the rates were very high (Chart 4.2, (b)). Consistent with this view of the fixed-to-mobile calling rate, more than 60 per cent of businesses blocked or restricted fixed-to-mobile calling.

Chart 4.2 (a)

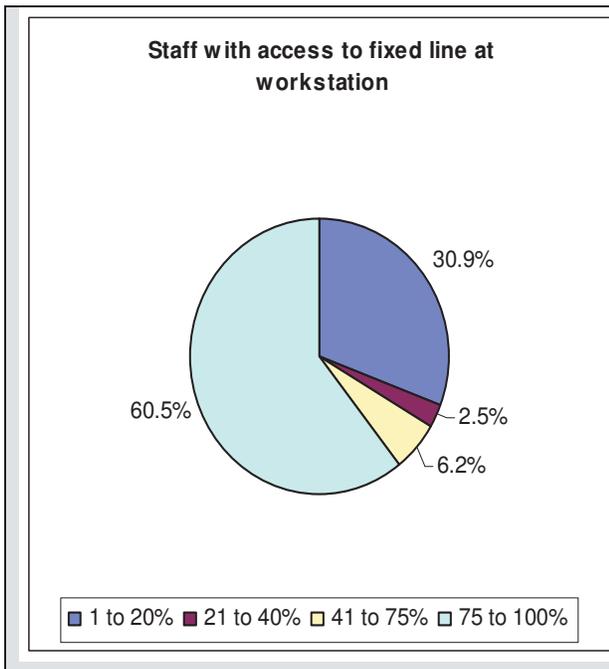
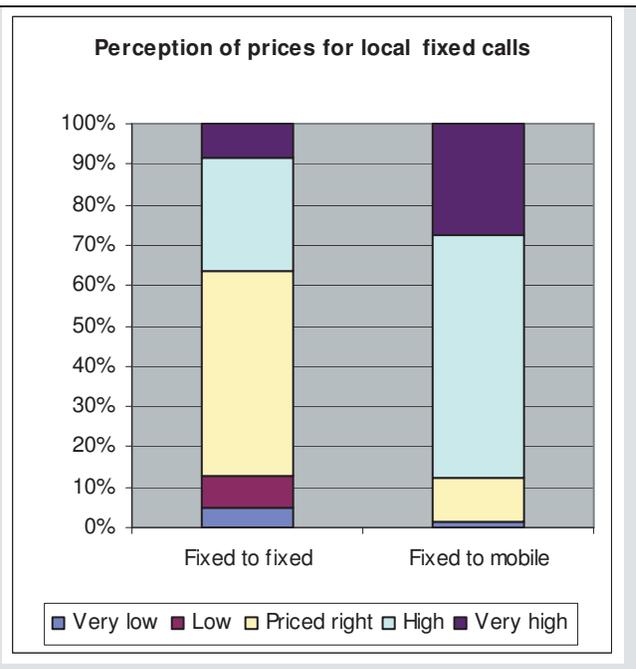


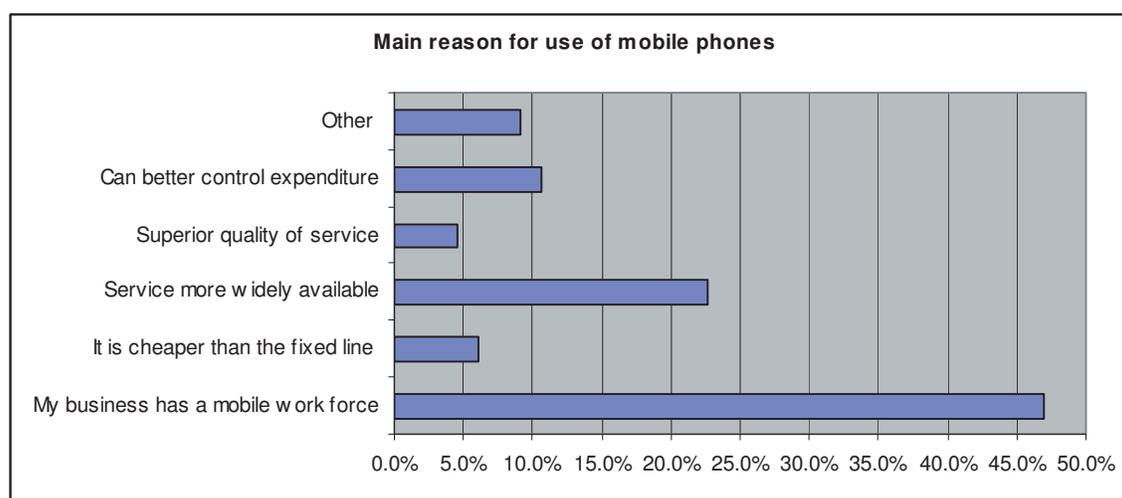
Chart 4.2 (b)



4.3 Use of Mobile Services

Mobile phone service did not enjoy the almost universal adoption as fixed line service, being used by three-quarters of the businesses surveyed. Eighty per cent of the businesses with no mobile phone service had no plans to subscribe for the service, mainly due to cost. Just over half of firms with mobile service had a post paid plan with 20 per cent having both prepaid and post paid plans. A mobile workforce was the main reason given for using mobile service (Chart 4.3).

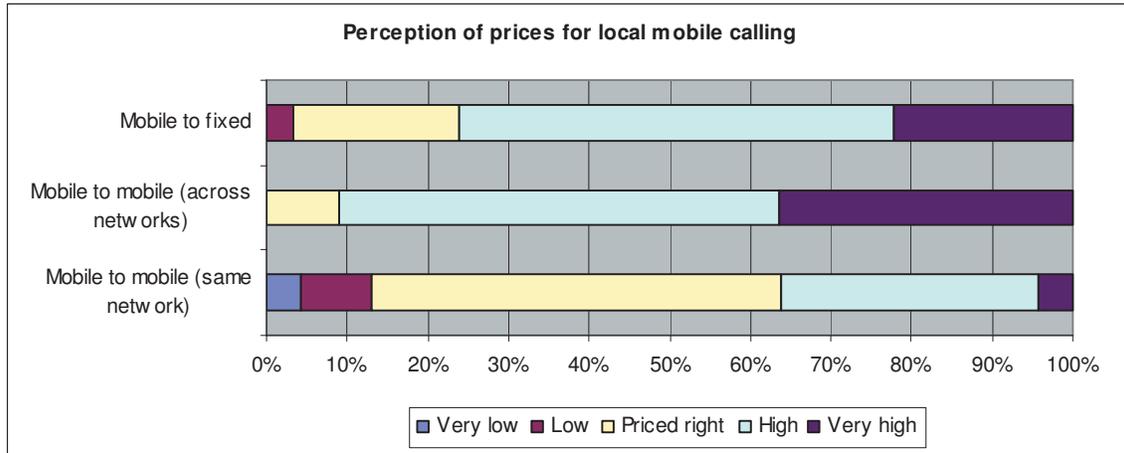
Chart 4.3



Firms appear to limit staff access to mobile phones as for a majority of respondents (47 per cent) less than 20 per cent of staff had access to the company's mobile phone. Among respondents the market for mobile service was split three to one between Cable & Wireless and Digicel, with more than 90 per cent of firms indicating that they had not switched providers in the past two years.

Only 34 per cent of respondents used a corporate mobile plan with 68 per cent indicating that they were not aware of such plans, but 30 per cent indicated that the plans were not suitable to their business. Respondents were generally unhappy with off-net mobile calling rates. Half of the respondents perceived the price for mobile calling on the same network to be priced right but believed that the price for calls across networks and mobile to fixed calls were high or very high (Chart 4.4).

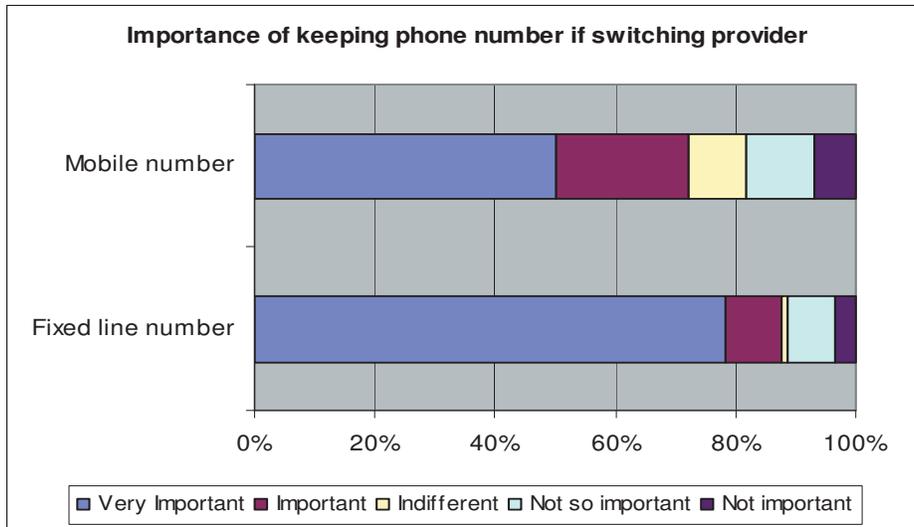
Chart 4.4



4.4 Importance of Number Portability

Keeping their existing phone numbers is critical for businesses, though this is more so for the fixed line number. A significant number of respondents (78 per cent) said it would be very important to keep their fixed line number if they switched provider. In comparison, just under half, thought that it would be very important to keep their mobile number though a further 22 per cent stated that it would be important (Chart 4.5).

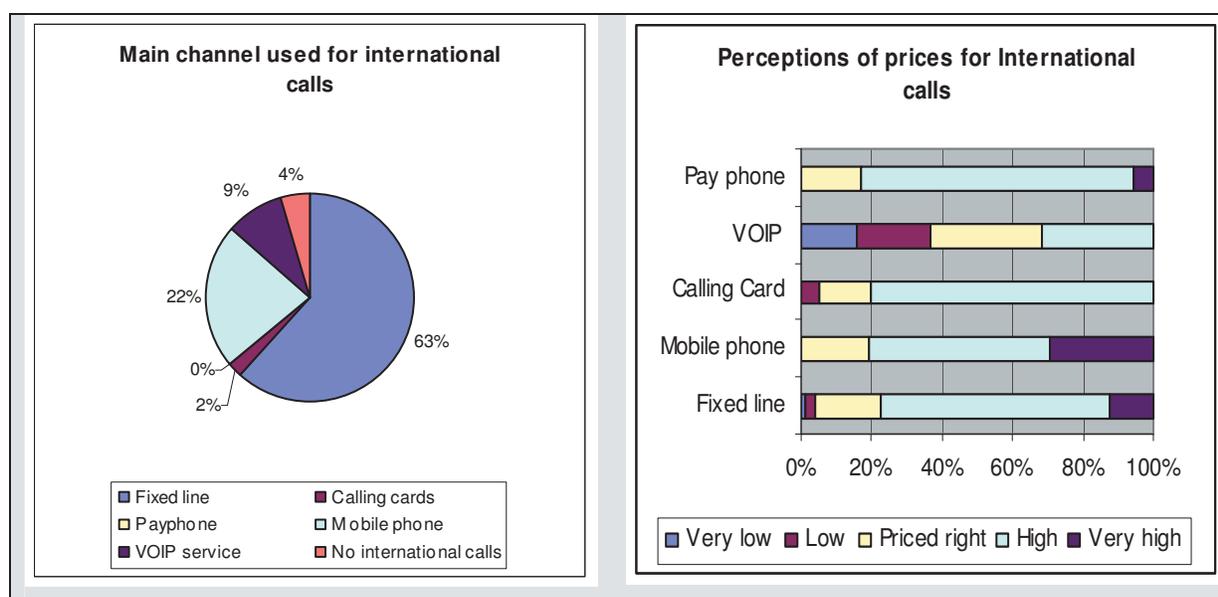
Chart 4.5



4.5 Use of International Service

Almost all businesses made international calls. Even with a number of options available, the fixed line was the most popular means of making international calls, used by 63 per cent of respondents. This was followed by the mobile phone used by 22 per cent of businesses. VoIP calling was used by 9 per cent of respondents (Chart 4.6, (a)). In general, the rate for international calls was viewed as high or very high by respondents. The noted exception was VoIP calling which was seen as price right or low by 67 per cent of respondents (Chart 4.6, (b)).

Chart 4.6



4.6 Use of Computers and Internet Access

Computers were used by 87 per cent of the respondents with 50 per cent indicating that a majority of staff used computers as part of their job. Most businesses (85 per cent) also had Internet access and 71 per cent had a computer network.

Broadband service was widely used by respondents. Sixty-five per cent of businesses used ADSL high speed Internet access and 16 per cent had a Dedicated Internet access service; only 7 per cent still used dial-up service (Chart 4.7, (a)). However, use of the Internet by staff appears to be limited as a majority of respondents, 48 per cent, indicated that less than 20 per cent of staff used the Internet as part of their job (Chart 4.7, (b)). Cable & Wireless

was the sole provider of Internet access in Grenada at the time of the survey.

Chart 4.7 (a)

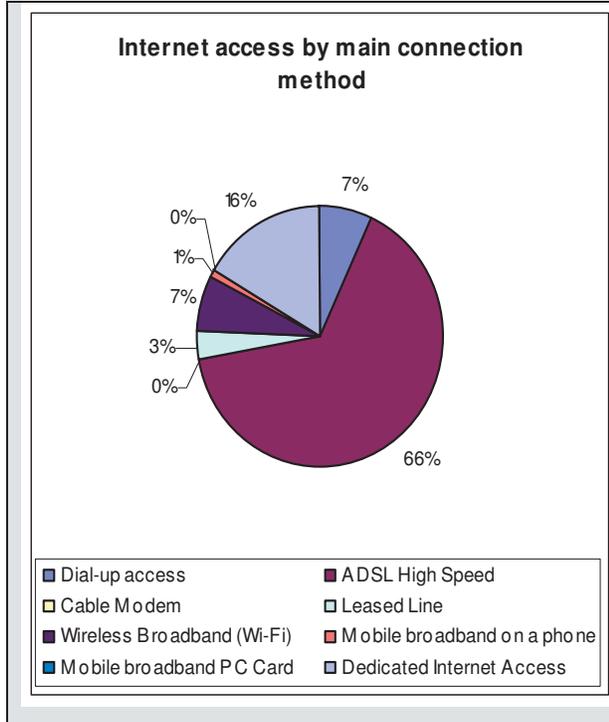
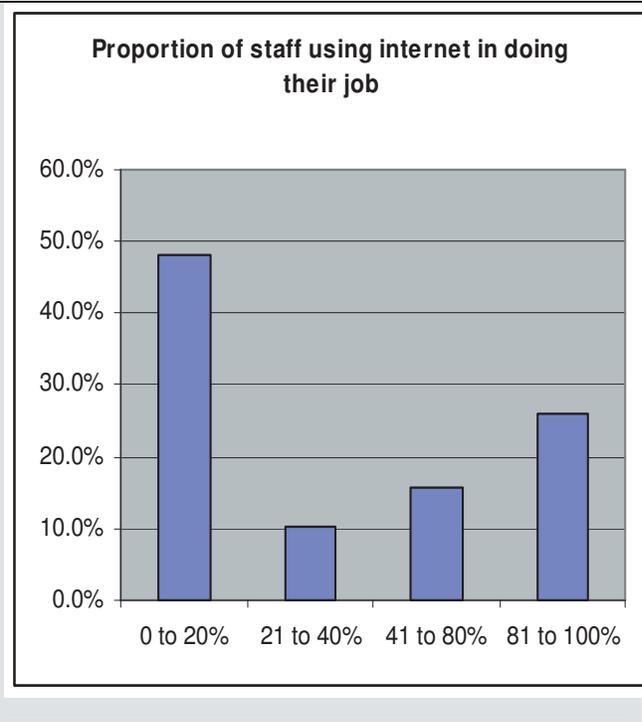


Chart 4.7 (b)

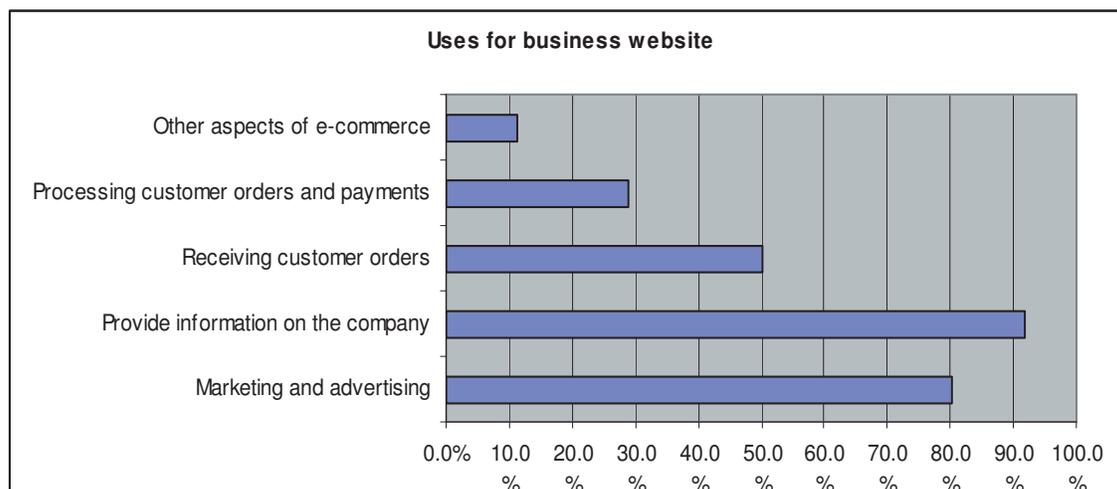


4.7 Email Use and Web Presence

Almost all businesses with Internet access, 95 per cent, used email, and 89 per cent had a corporate email account. Email was mainly used to communicate with consumers and suppliers; only 11 per cent indicated the main use was to communicate among staff.

Company websites were not as popular as corporate emails; less than half of respondents had a company web site. Overwhelmingly, businesses used their company website for providing information about the company or for marketing and advertising. However, one-third of respondents said that their website was also used to process customer transactions (Chart 4.8).

Chart 4.8

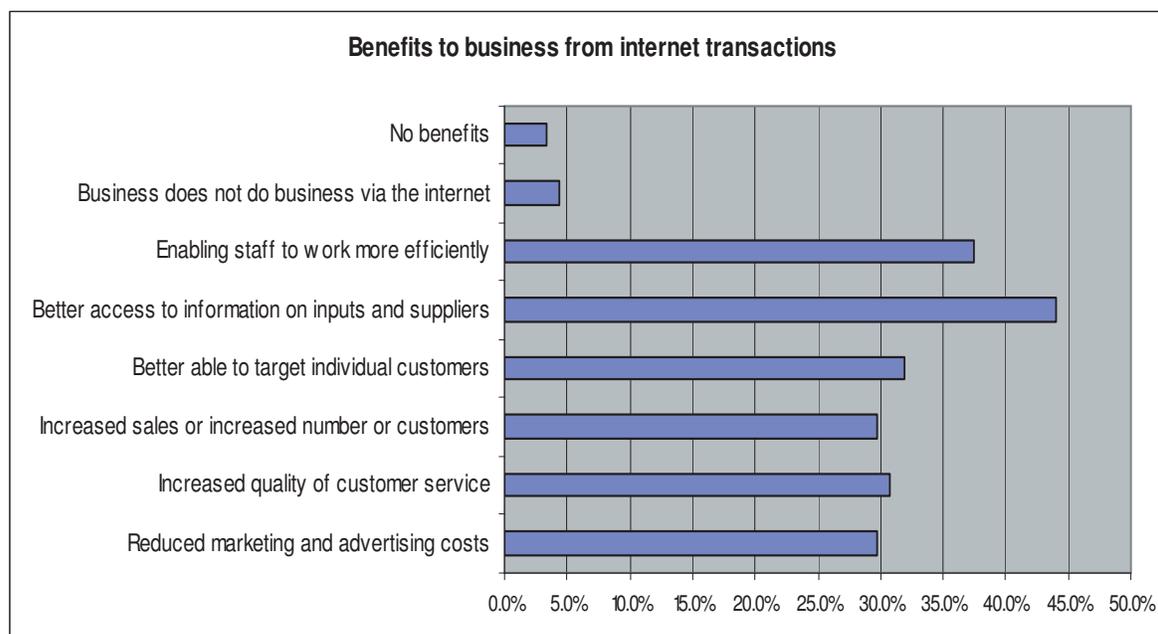


4.8 Internet Transactions

A majority of respondents recognised the potential of the Internet as only one in ten indicated that they do not use the Internet for business. The popular use of the Internet was for getting information and conducting research. However, just under half of the businesses used the Internet for making purchases and 41 per cent for indentifying potential suppliers. The most significant benefit to the use of the Internet was gaining better access to inputs and suppliers, noted by 44 per cent of firms (Chart 4.9). Thirty-eight per cent of respondents stated that Internet use enabled staff to work more efficiently while one-third noted that Internet use resulted in more tangible benefits such as increased sales or number of customers.

For the minority of businesses that did not transact business on the Internet, the main reasons given were insufficient customer demand for online service (18 per cent), too costly to set up online facilities (14 per cent) and lack of skilled staff (13 per cent). Security and privacy concerns as well as the preference for face-to-face interaction also limited e-commerce adoption.

Chart 4.9



4.9 Perceived Importance of ICTs to Businesses

The majority of respondents recognized the importance of ICTs to the success of their businesses. Ninety-one per cent of businesses surveyed indicated that ICTs were important to their business including 36 per cent that stated that ICTs were indispensable to their businesses (Chart 4.10, (a)).

Respondents believed that the ICT adoption played an important role in the delivery of high levels of customer service (80 per cent), working with suppliers (78 per cent), enabling staff to work more efficiently (74 per cent) and generating new business (69 per cent) (Chart 4.10, (b)).

Chart 4.10 (a)

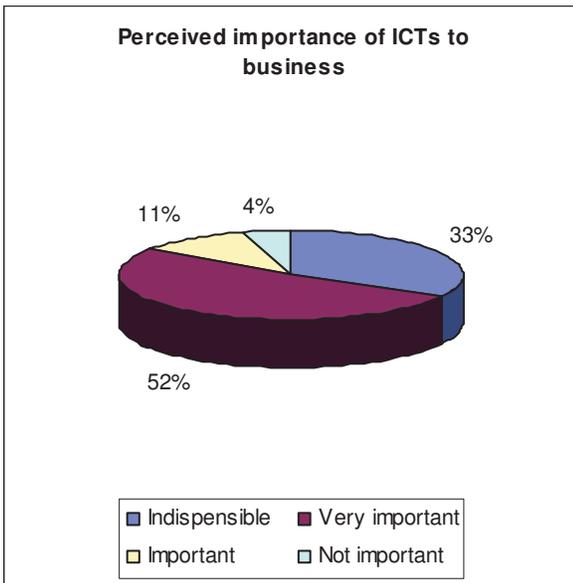
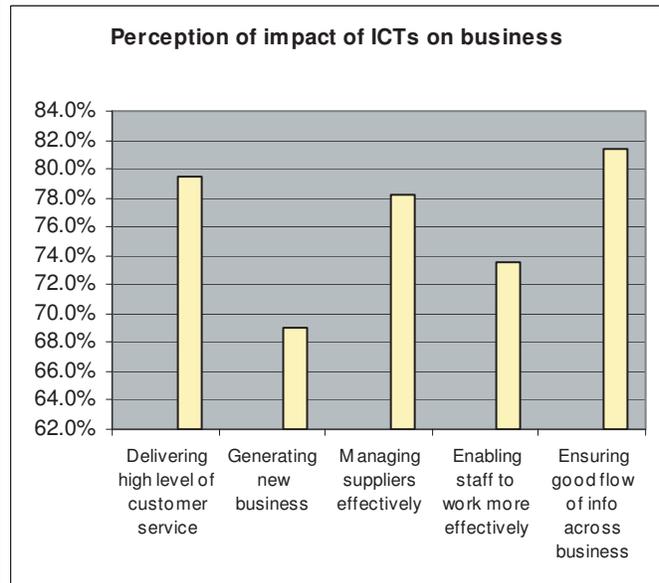


Chart 4.10 (b)



Despite the perceived importance of ICTs, most respondents indicated that they did not have dedicated staff to deal with ICTs. Just 26 per cent of respondents had specialised staff dedicated to ICTs and 13 per cent stated that spending on ICT was unplanned.

4.10 Use of Advanced ICTs and Perceived Barriers to ICT Adoption

While a majority of respondents used the basic ICTs such as fixed and mobile voice, computers and Internet access, the use of more advanced ICTs was not as widespread. In terms of value added services, 17 per cent of respondents used teleconferencing service, 50 per cent used text messaging and 47 per cent had a company website. Despite this low usage of more advanced technologies, respondent had an overall positive attitude towards advanced technology with 69 per cent agreeing that it is important to have the most advanced technology. The low usage of some services may be as a result of lack of confidence and knowledge as roughly 60 per cent of respondents conceded that they were not very knowledgeable in ICT issues.

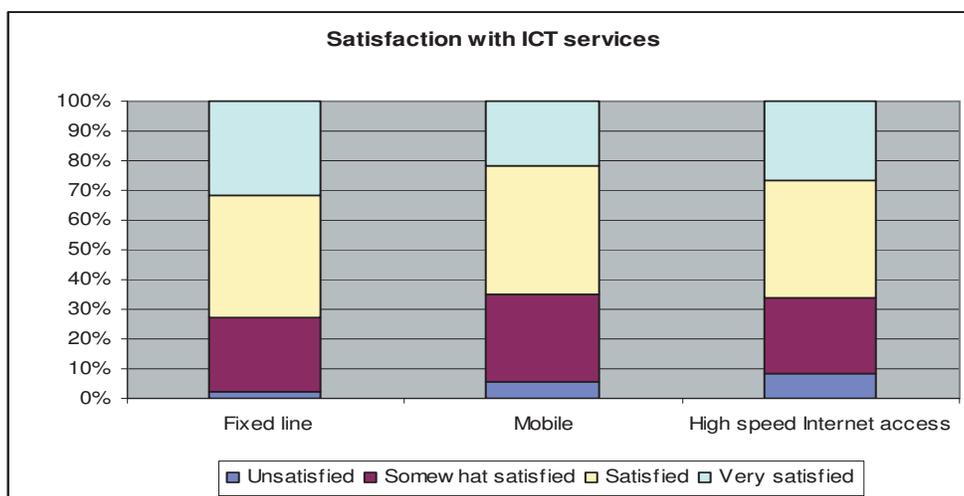
Most businesses, roughly 88 per cent indicated that no regulatory or other requirements hindered their business from using ICTs. Six per cent were unsure. In contrast, knowledge of potential ICTs may be a factor limiting use as 68 per cent of respondents indicated that they were unsure of potentially beneficial ICTs not currently offered.

4.11 Satisfaction with ICTs

Respondents were asked to rank their level of satisfaction with some basic ICTs; and respondents were generally satisfied. Seventy-three per cent of businesses were satisfied with their fixed line service including 31 per cent who were very satisfied. Their level of satisfaction was slightly less for mobile and broadband services, 66 per cent of respondents indicated satisfaction with these services (Chart 4.11).

Among the respondents who noted some dissatisfaction, the main reason was the price of services for fixed and mobile voice, while lack of speed was stated as the main cause for concern with broadband service.

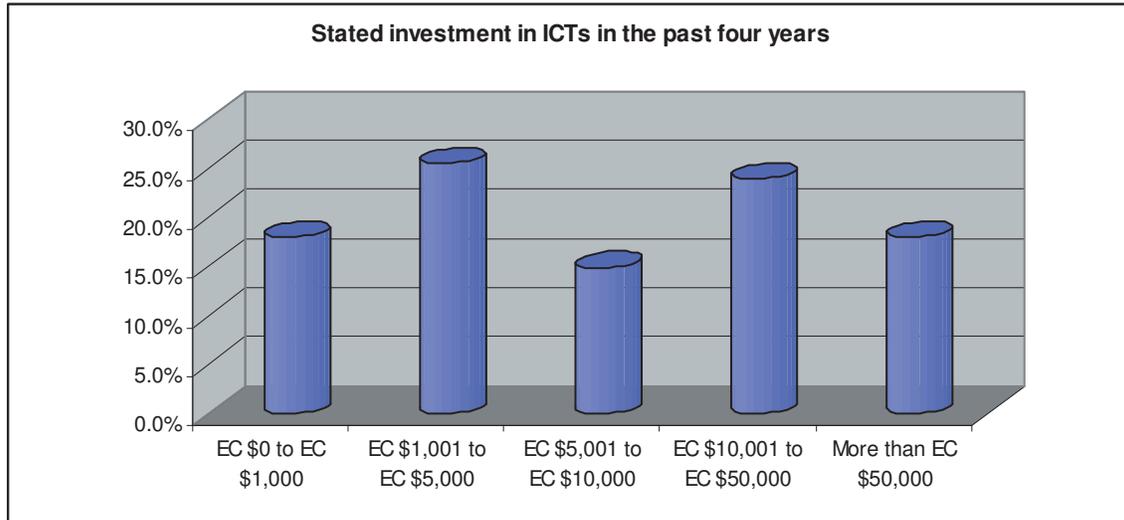
Chart 4.11



4.12 Attitude towards Training and Investment in ICT

A majority of respondents viewed the need for ICT training for their staff in a positive light; only 38 per cent indicated that the cost of ICT training was too much. Respondents also had a favourable view towards investment in ICT. A minority, 15 per cent, felt that the overall benefit of ICT use did not justify investment and only 5 per cent thought that investing in ICTs was risky. Close to 40 per cent of firms claimed to have invested between \$5,000 and \$50,000 in ICTs in the past four years and a further 17 per cent claimed to have invested more than \$50,000 (Chart 4.12).

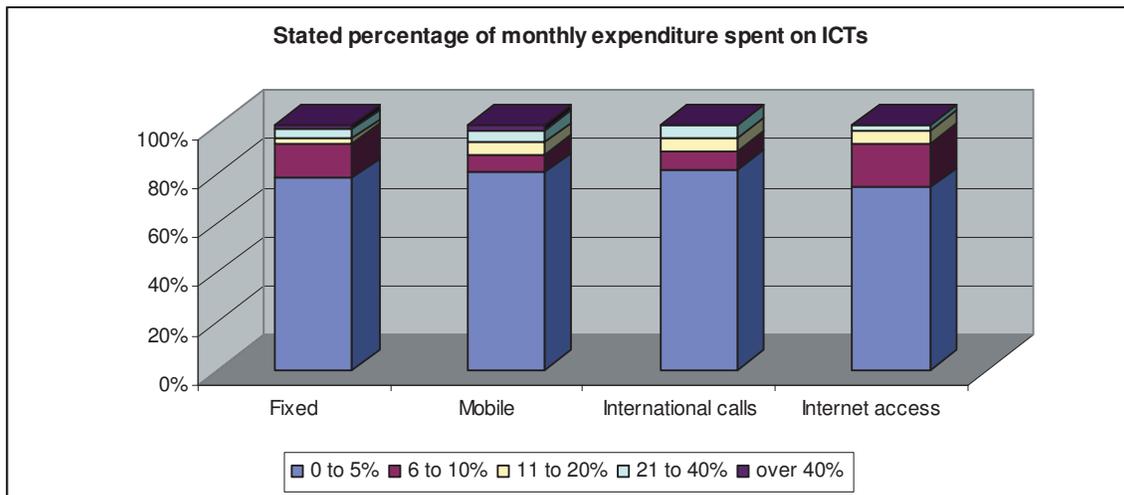
Chart 4.12



4.13 Expenditure on ICTs

For a significant number of respondents, expenditure on various ICTs consumed less than 10 per cent of total monthly expenditure. Ninety-two per cent reported expenditure on fixed line service at less than 10 per cent of total expenditure, more than 85 per cent reported monthly expenditure on mobile phone service at less than 10 per cent of total expenditure, while more than three-quarters reported spending less than 5 per cent on international calls and on Internet access (Chart 4.13).

Chart 4.13

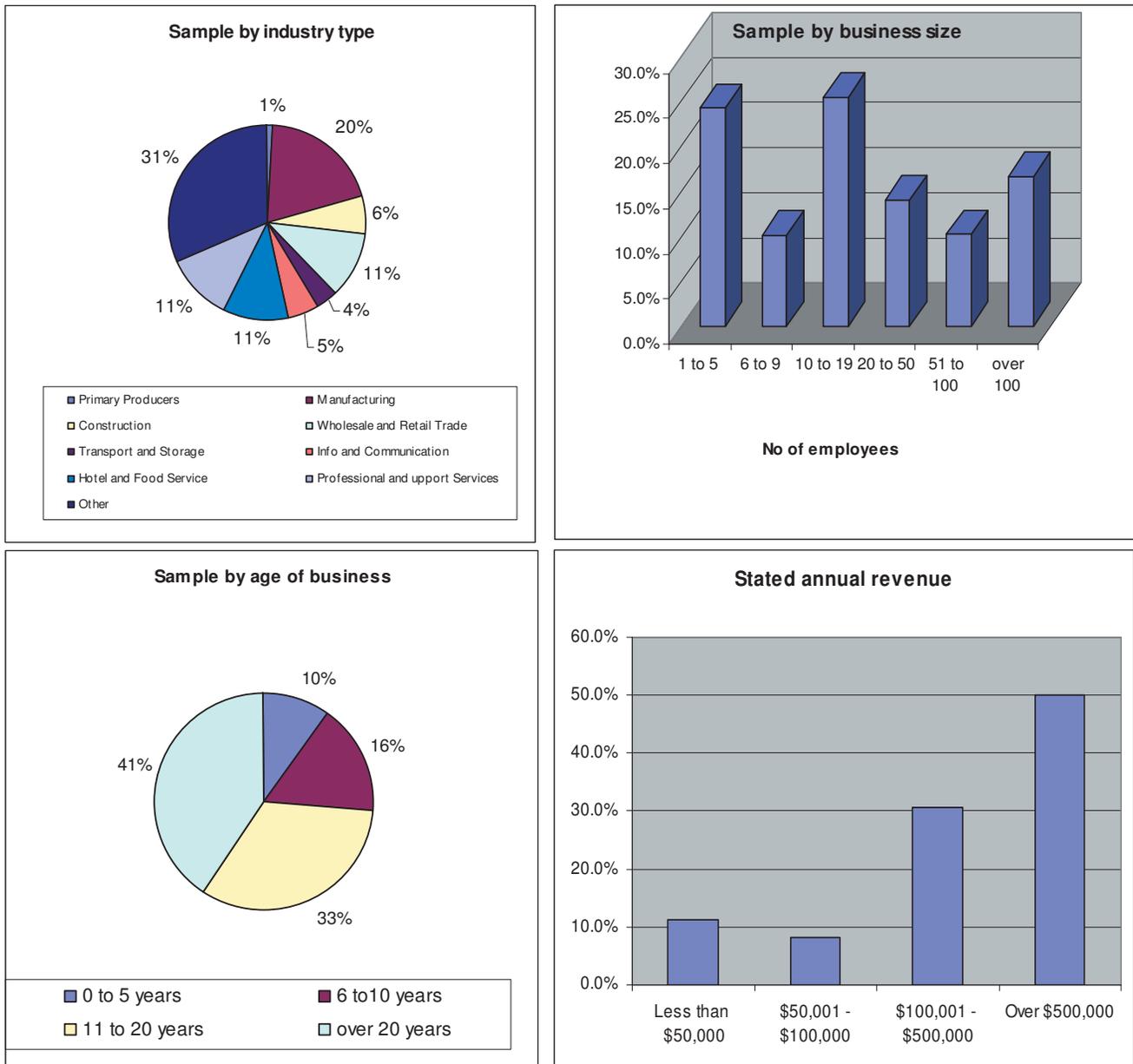


5. USE OF ICTs BY SMEs IN ST. KITTS AND NEVIS

5.1 Respondent profile

A total of 81 businesses were interviewed in St. Kitts and Nevis. Most businesses (67 per cent) operated from one location, were in business for more than 10 years (62 per cent) and had less than 50 employees (73 per cent). A wide cross-section of economic sectors were targeted. One-fifth of respondents were in manufacturing, 11 per cent in wholesale and retail and 11 per cent offered professional or technical services. A full breakdown of the sample by various attributes is presented in the chart below.

Chart 5.1

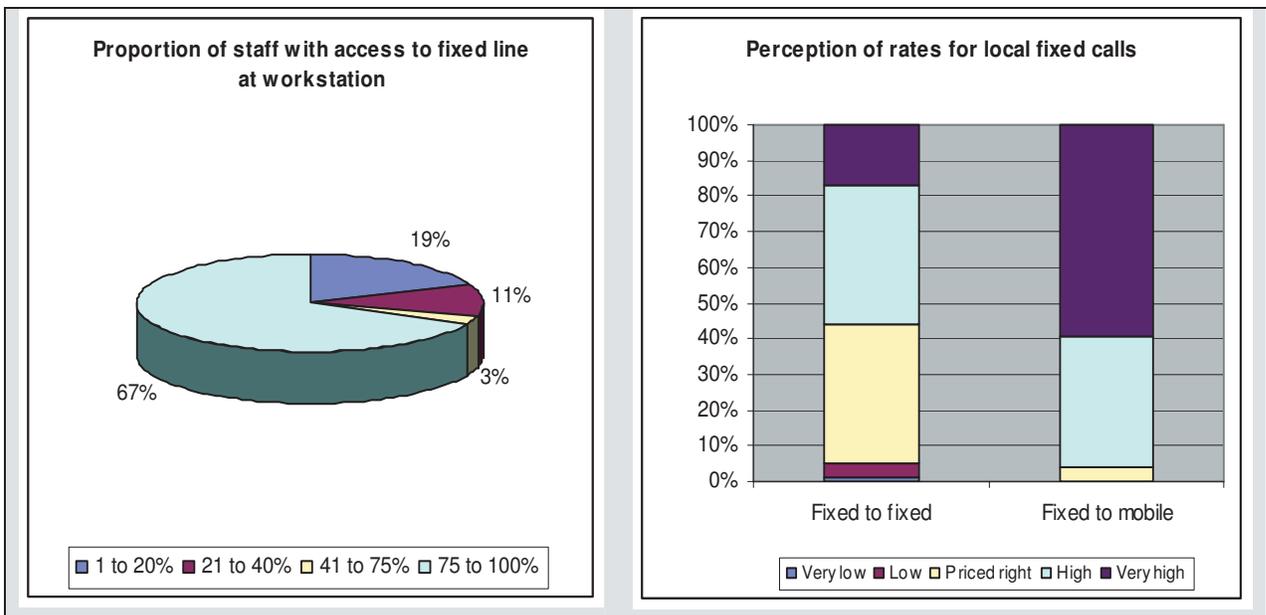


5.2 Use of Fixed Line Voice Service

Fixed line service was widely used by the businesses surveyed. Ninety-six per cent of respondents had the service with a majority having more than one line. This service was seen as essential as the majority of respondents (86 per cent) said that it was very unlikely that they would terminate the service. Most employees had access to a fixed line at their workstation. Sixty-eight percent of respondents indicated that more than three quarters of their staff had access to a fixed line at their workstation (Chart 5.2, (a)). Among value added fixed services used, call waiting (61 per cent), call forwarding (53 per cent) and voice mail (43 per cent) were the most popular. Fax service was also very common used by 90 per cent of respondents.

Although businesses viewed fixed line service as indispensable, the rates for the service were seen as unattractive. The rates for fixed-to-fixed calling was viewed as high or very high by 56 per cent of businesses while close to 100 per cent viewed the rates for fixed-to-mobile as high or very high (Chart 5.2, (b)). Consistent with this view of fixed-to-mobile calling rates, more than 60 per cent of businesses blocked or restricted fixed-to-mobile calling.

Chart 5.2

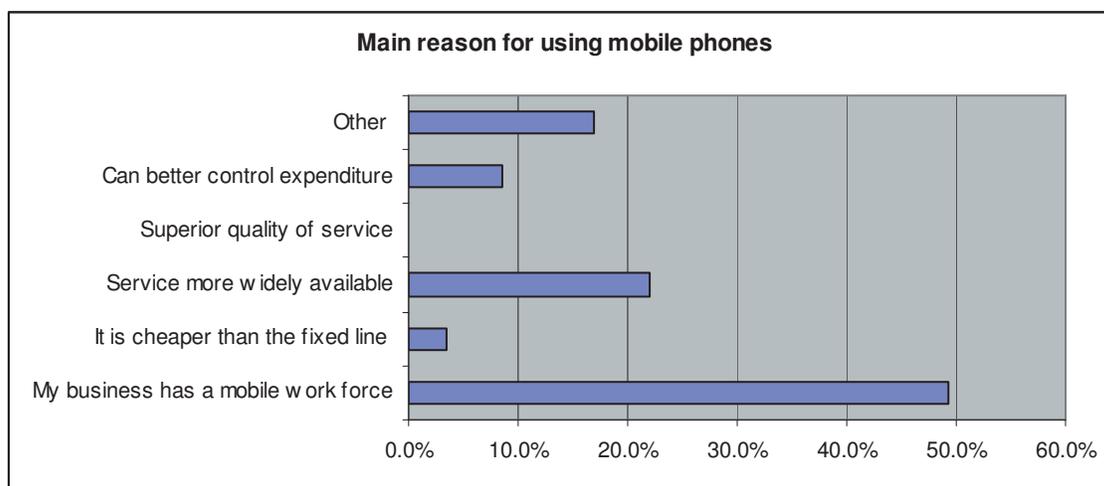


5.3 Use of Mobile Services

Mobile phone service was not as widely used as fixed line service. Just under three-quarters of the businesses surveyed indicated that the company had mobile service. Eighty-five per cent of the businesses with no mobile

phone service had no plans to subscribe for the service mainly due to cost. More than 65 per cent of firms with mobile service had a post paid plan with 18 per cent having both prepaid and post paid plans. The mobile phone was viewed as a practical tool by most respondents; the main reason given for use of mobile phone service by business, was that they had a mobile workforce (Chart 5.3).

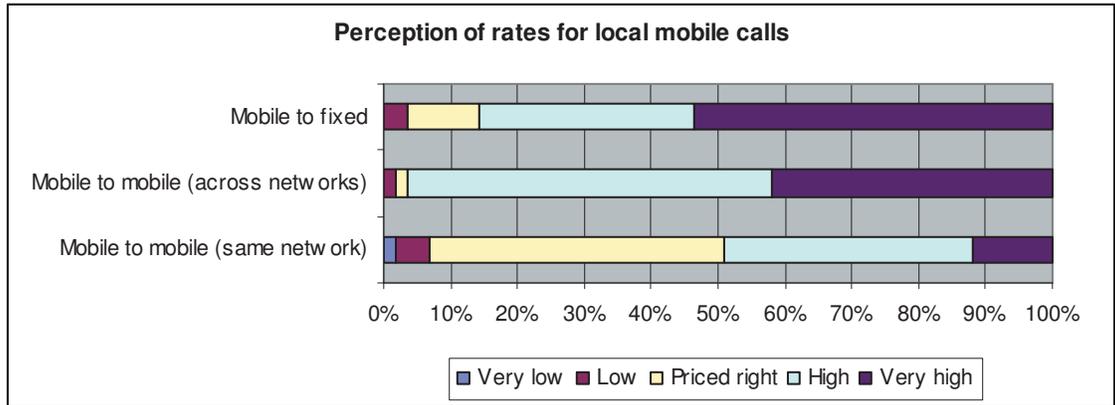
Chart 5.3



Staff access to the company's mobile phone was limited. Forty per cent of firms indicated that less than 20 per cent of staff had access to the company's mobile phone. Among respondents, the market for mobile service was split three to one between Cable & Wireless and Digicel with more than 90 per cent of firms indicating that they had not switched providers in the past two years.

Awareness of corporate mobile plans was relatively high in St Kitts and Nevis. Thirty-six per cent of respondents used shared mobile minutes and 14 per cent had a closed user group. However among the firms not using corporate plans, a lack of awareness was the overriding reason. The rate for mobile calling on the same network was generally perceived to be priced right but a significant number of respondents believed that the rates for calls across networks and mobile-to-fixed calls were high or very high (Chart 5.4).

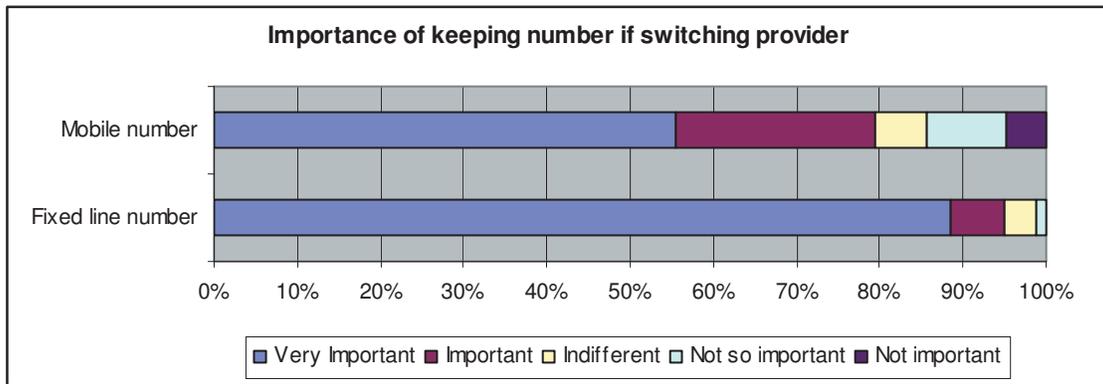
Chart 5.4



5.4 Importance of Number Portability

The option of keeping the existing number if switching provider was critical to respondents, however fixed number portability was generally viewed as more important than mobile number portability. A significant 89 per cent of respondents said it would be very important to keep their fixed line number if they switched provider. For the mobile number this dropped to 56 per cent with a further 22 per cent stating that it would be important to keep the mobile number (Chart 5.5).

Chart 5.5



5.5 Use of International Service

Only six per cent of businesses surveyed indicated that they did not make international calls. A number of options are available for international calls, however, the most popular means of making international calls was the fixed line used by 61 percent of respondents. This was followed by the VoIP calling used by 22 per cent of firms, with only 6 per cent of respondents

using the mobile phone (Chart 5.6, (a)). Despite the popularity of fixed international calling, the rates for internal calls were viewed as high or very high by most respondents (Chart 5.6, (b)). The noted exception was VoIP calling which was viewed as priced right (47 per cent) or low (25 per cent) by most respondents.

Chart 5.6 (a)

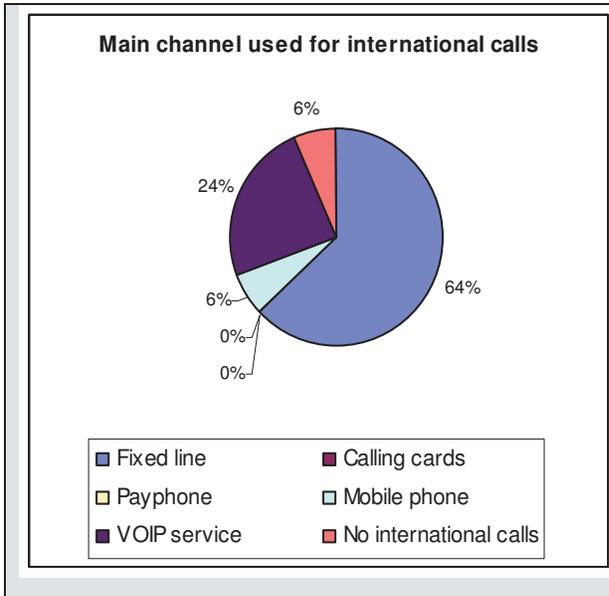
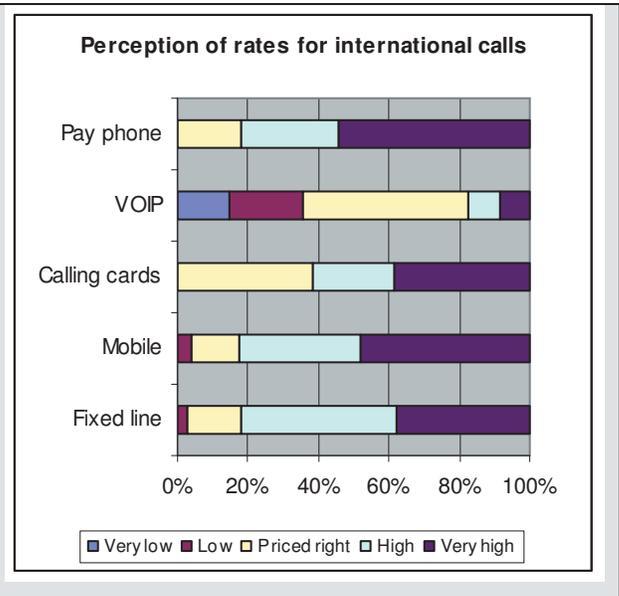


Chart 5.6 (b)



5.6 Use of Computers and Internet Access

Computer use was almost universal with 93 per cent of respondents having at least one computer. A significant number of businesses with computers, 85 per cent, also had a computer network and 59 per cent indicated that more than 40 per cent of their staff used a computer in doing their job.

Internet access was widespread, 93 per cent of respondents had access. Even so, just about half of respondents indicated that more than 40 per cent of staff used the Internet in doing their job (Chart 5.7, (b)).

ADSL high speed access was the preferred connection method for 68 per cent of businesses. Wi-Fi was the second most common form access used by 12 per cent of respondents. A mere 1.4 per cent of respondents still used dial-up Internet service (Chart 5.7, (a)). Despite the presence of competitors, Cable & Wireless was the service provider used by 93 per cent of the businesses surveyed.

Chart 5.7 (a)

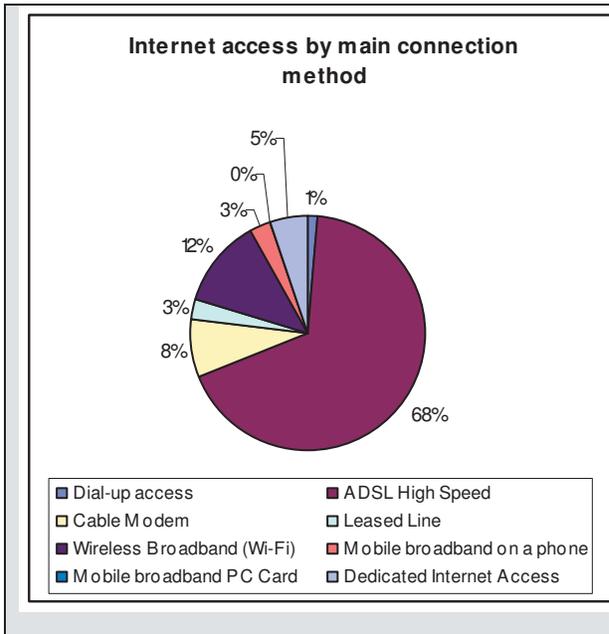
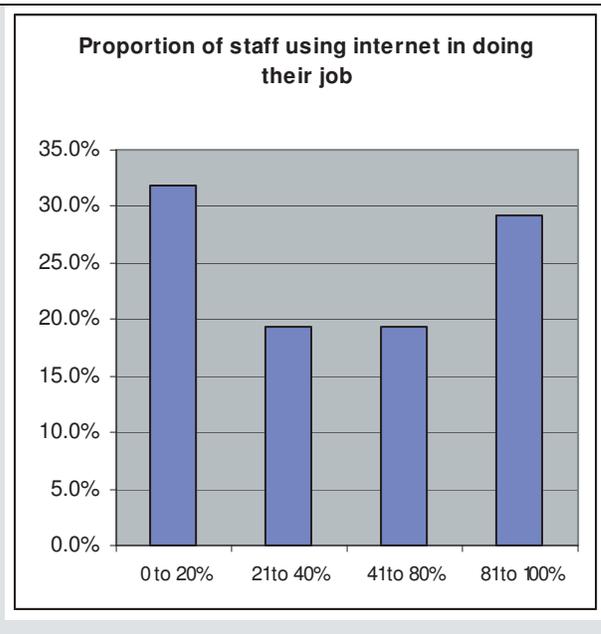


Chart 5.7 (b)

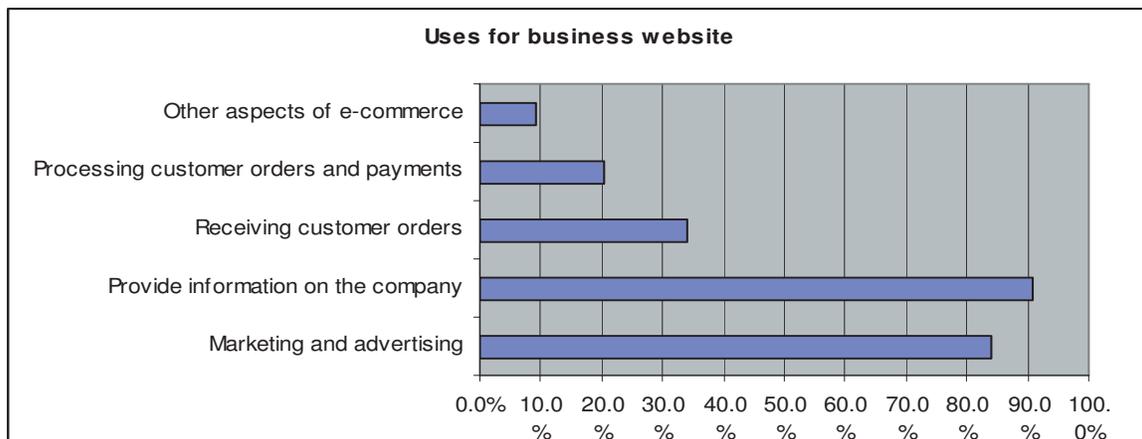


5.7 Email Use and Web Presence

Email was used by 89 per cent of respondents; 91 per cent had a corporate email address. Contacting suppliers and communicating with customers was the main use for email by businesses, but 14 per cent of respondents indicated that the main use was to communicate among staff.

A majority of respondents, 63 per cent indicated that the company had a website which was primarily used for providing information about the company and for marketing and advertising. However, one fifth of respondents indicated that their website was also used to process customer transactions (Chart 5.8).

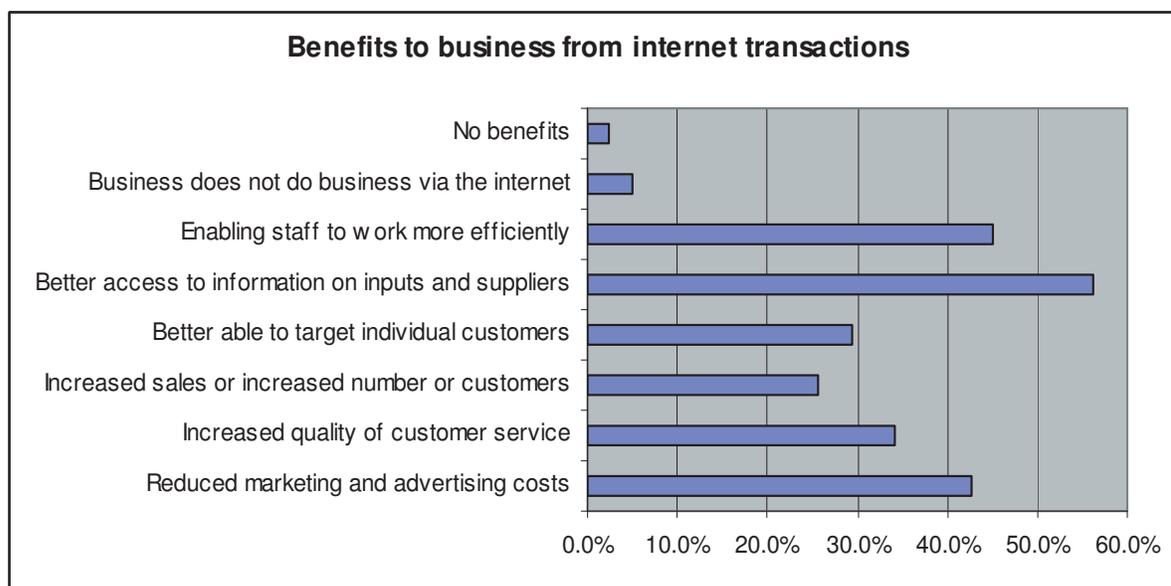
Chart 5.8



5.8 Internet Transactions

The Internet was seen as an important resource, as 97 per cent of respondents used the Internet to some extent for business transactions. The predominant use of the Internet was for getting information and conducting research; however, 67 per cent of businesses also used the Internet for making purchases and 50 per cent for indentifying potential suppliers. The primary advantage to using the Internet was gaining better access to inputs and suppliers, as noted by 56 per cent of businesses. This was followed closely by enabling staff to work more efficiently (45 per cent) and reducing marketing and advertising costs (43 per cent) (Chart 5.9).

Chart 5.9



For the four per cent of firms that did not transact business on the Internet, the principal reasons given were the preference for face-to-face interactions and the unsuitability of products for sale on Internet.

5.9 Perceived Importance of ICTs to Business

The use of ICTs was generally viewed as essential to the success of businesses. Ninety-six per cent of businesses surveyed indicated that ICTs were very important to their business, including 59 per cent that stated that ICTs were indispensable to their business (Chart 5.10, (a)).

For the most part, respondents believed that the use of ICTs played a pivotal role in the delivery of high levels of customer service (85 per cent), working

with suppliers (92 per cent), enabling staff to work more efficiently (81 per cent) and generating new business (82 per cent). Ninety per cent of business also believed that the use of ICTs improved the flow of information access the company (Chart 5.10, (a)).

Chart 5.10 (a)

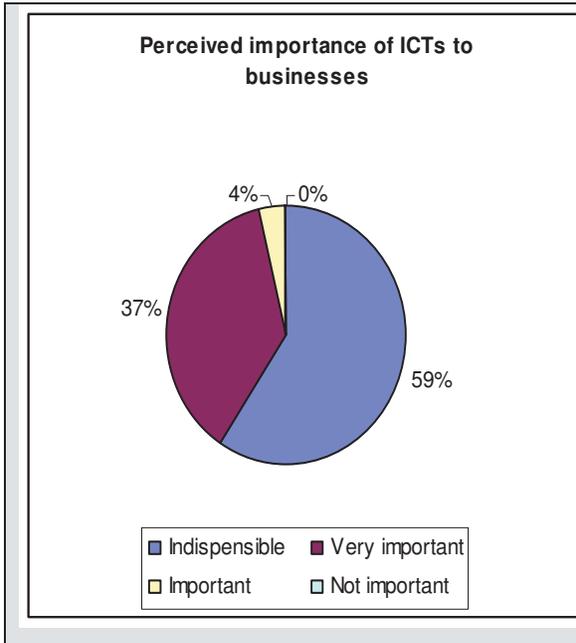
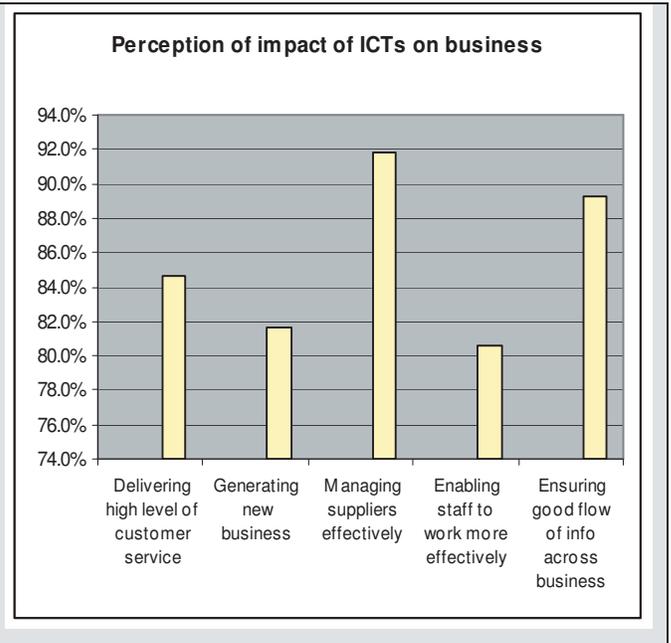


Chart 5.10 (b)



The perceived importance of ICTs did not necessarily translate to the dedication of resources to ICTs. A large number of respondents indicated that they did not have dedicated staff to deal with ICTs. In fact, only 30 percent of respondents had specialized staff dedicated to ICTs and 10 per cent stated that spending on ICTs was ad hoc.

5.10 Use of Advanced ICTs and Perceived Barriers to ICT Use

The use of advanced ICTs and value added telecoms services was not as widespread as the use of basic services. Only one-third of businesses with fixed line used teleconferencing service and a mere four per cent used video conferencing. Overall, advanced mobile and Internet services fared better than advanced fixed service. The majority for businesses with mobile service, roughly 70 per cent, used SMS and nearly 30 per cent used a mobile data service such as GPRS, EDGE or Blackberry service. Sixty-three per cent of businesses with Internet access had a company website; though only 20 per cent used their website for e-commerce activities such as

processing customer orders. Even so, 67 per cent of respondents used the Internet to place orders. Respondents had an overall positive attitude towards advanced technology with 74 per cent agreeing that it is important to have the most advanced technology.

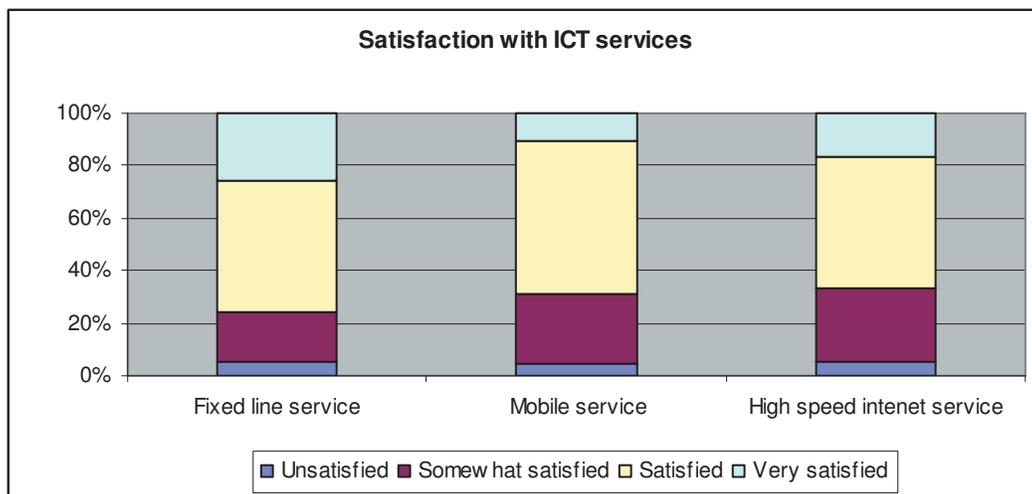
A small number of businesses, roughly 3 per cent, indicated that regulatory or other requirements hindered their business from using ICTs, though the specific barriers were unclear. Conversely, 94 per cent indicated that no regulatory or other requirements restricted their use of ICTs and three per cent were unsure. In contrast, knowledge of ICTs may be a significant barrier to further ICT use as 64 per cent of respondents indicated that they were unsure of potentially beneficial ICTs not currently offered.

5.11 Satisfaction with ICTs

Respondents were generally satisfied with the basic ICTs. Respondents were asked to rate their level of satisfaction with fixed, mobile and Internet service on a scale from one to ten. Seventy-six per cent of firms were satisfied with their fixed line service rating it between seven and ten on the scale. Slightly fewer respondents were as satisfied with mobile (68 per cent) and high speed Internet access services (67 per cent) (Chart 5.11).

Among the respondents who were not satisfied with their service, the main complaints were that fixed and mobile voice services were too costly while lack of speed was stated as the main cause for concern with high speed Internet access.

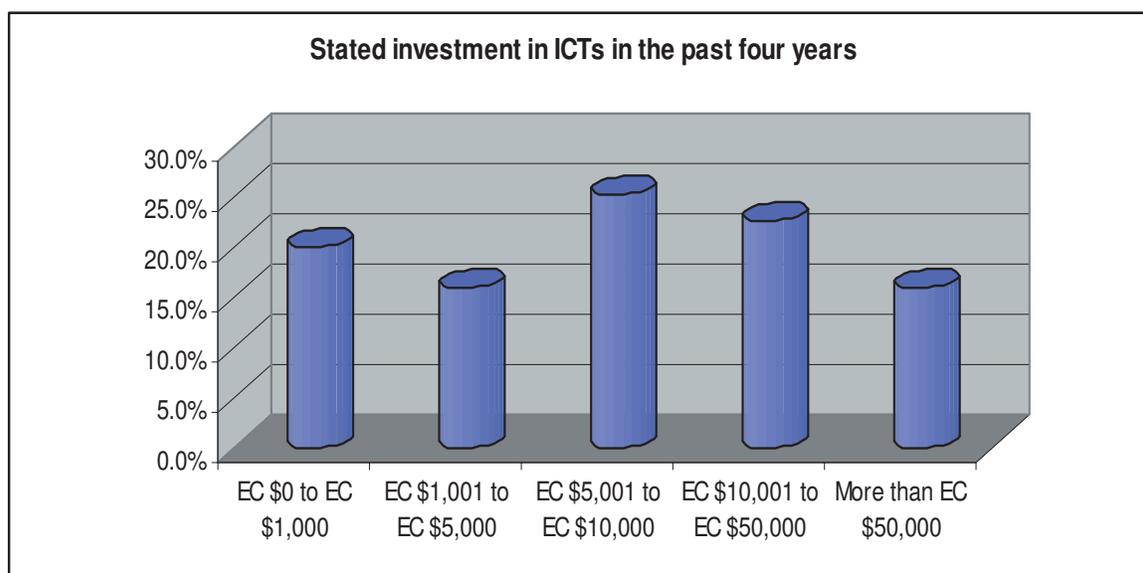
Chart 5.11



5.12 Attitude towards ICT Training and Investment in ICT

In general, respondents had a positive attitude toward ICT training for staff; just eight per cent indicated that it costs too much to train staff in the use of ICTs. Most respondents, 64 per cent, also felt that the overall benefit of ICT use justified investments in ICT and staff training. More than 48 per cent of firms claimed to have invested between \$5,000 and \$50,000 in ICTs in the past four years with a further 16 per cent claiming to have invested more than \$50,000 (Chart 5.12).

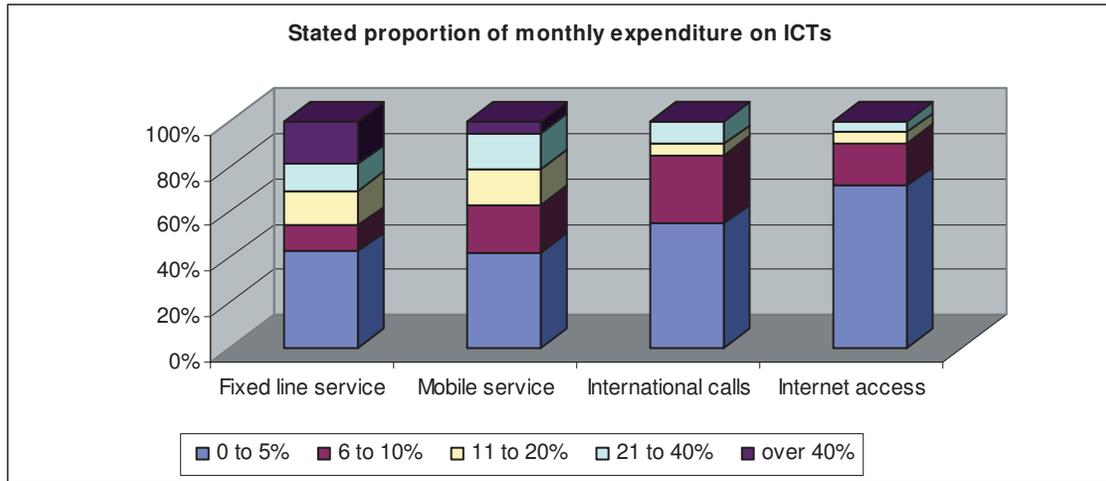
Chart 5.12



5.13 Expenditure on ICTs

For the majority of respondents, expenditure on various ICTs accounted for less than 10 per cent of total monthly expenditure. Just over half of respondents reported spending less than 10 per cent of monthly expenditure on fixed line service; 63 per cent reported monthly expenditure on mobile service at less than 10 per cent of total expenditure. The amount spent on international calls was less than 10 per cent of monthly expenses for 81 per cent of businesses while just over two-thirds reported spending less than 5 per cent on Internet access (chart 5.13).

Chart 5.13

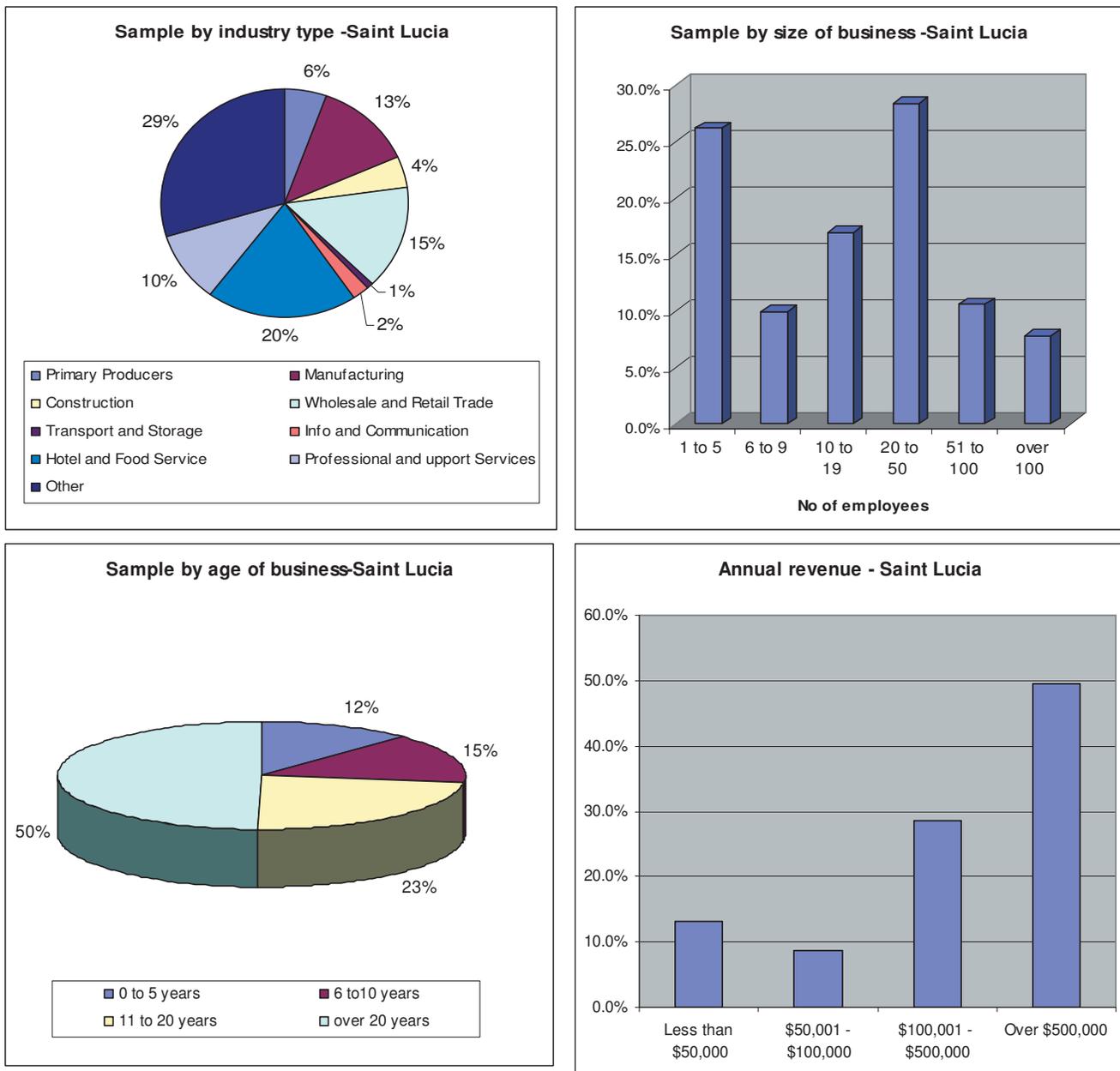


6. USE OF ICTs BY SMEs IN SAINT LUCIA

6.1 Respondent Profile

A total of 141 businesses were interviewed in Saint Lucia representing a cross-section of economic sectors. Close to half of the businesses surveyed were in operations for more than 20 years, 26 per cent had five or less employees, six out of ten had one business location and half had revenues in excess of \$500,000. The sample break by various factors is presented in Chart 6.1.

Chart 6.1

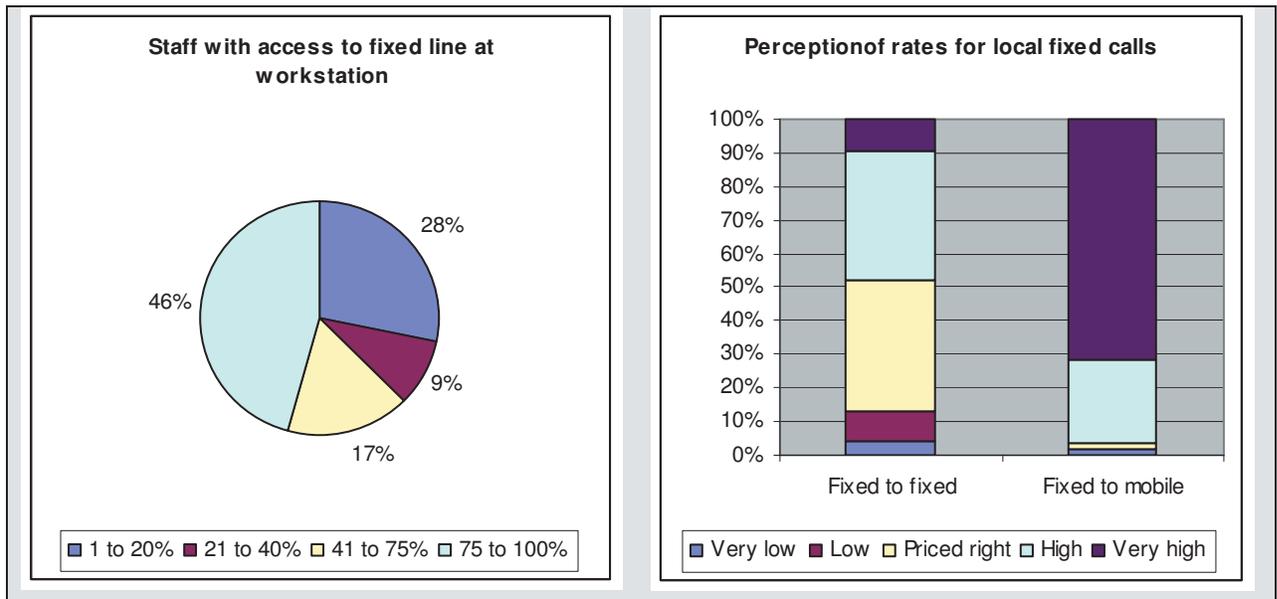


6.2 Use of Fixed Line Voice Service

Fixed line service was widely used by the businesses surveyed and was generally viewed as very important. Ninety-six per cent of the respondents had at least one fixed line phone and 82 per cent said that it was very unlikely that they would terminate the service. Staff had ready access to the fixed line, 68 per cent of businesses indicated that more than 75 per cent of staff had access to the fixed line service at their workstation (Chart 6.2, (a)).

Chart 6.2 (a)

Chart 6.2 (b)



Among the value added services offered, voice mail and caller IC were the most popular, used by 44 per cent of respondents. This was followed by call forwarding used by 35 per cent of businesses. Eighty per cent of respondents also used fax service.

Respondents were asked to rate the price for local fixed-to-fixed and fixed-to-mobile calls. Though fixed line service was viewed as critical by most respondents, the rates for calls from the fixed line were viewed unfavourably. Close to half of the businesses claimed that the rates for fixed-to-fixed calling were high or very high. The rates for fixed-to-mobile calls were seen as even more unattractive; nine out of ten businesses indicated that the rates for fixed-to-mobile calls were high including 72 percent that stated the rates were very high. Consistent with the view that

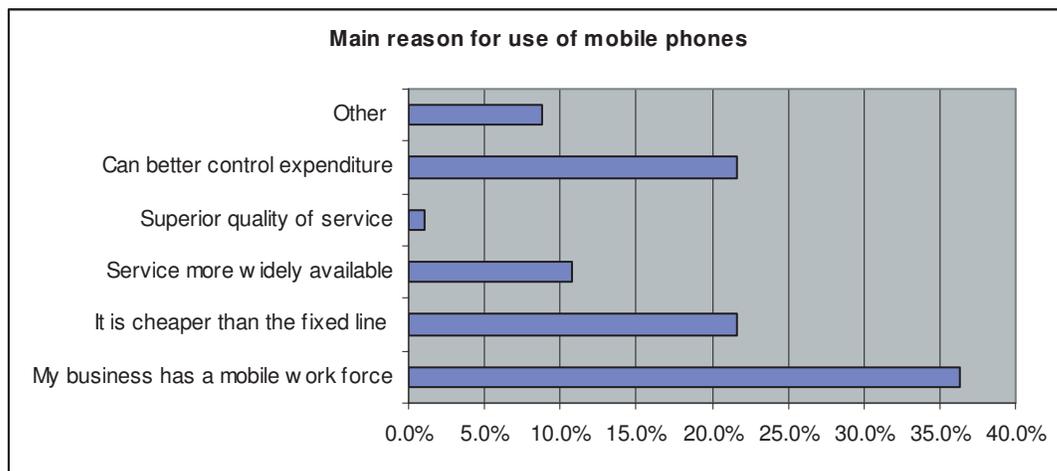
fixed-to-mobile rates were very high, more than 60 per cent of business either blocked or restricted fixed-to-mobile calling.

6.3 Use of Mobile Services

The use of mobile phone service was less widespread among businesses than fixed line service. Just over three-quarters of the respondents indicated that they had mobile phone service. More than 97 per cent of the businesses with no mobile phone service did not have the service in the past, and 93 per cent had no intention of getting mobile phone service in the future as the service was seen as costly. Just over half of businesses with mobile service had a post paid plan and 23 per cent had both prepaid and post paid plans.

In the main, businesses used mobile service because they had a mobile workforce (36 per cent), though 22 per cent felt that it was cheaper than having a fixed line service, and a further 22 per cent noted that they it afforded them better control over expenditure (Chart 6.3). Lack of awareness of the available corporate mobile plans, appears to limit the use of such plans by businesses. Fifty per cent of respondents did not use a corporate plan because they were not aware of these plans, though 41 per cent indicated that the plans were not suitable to their business.

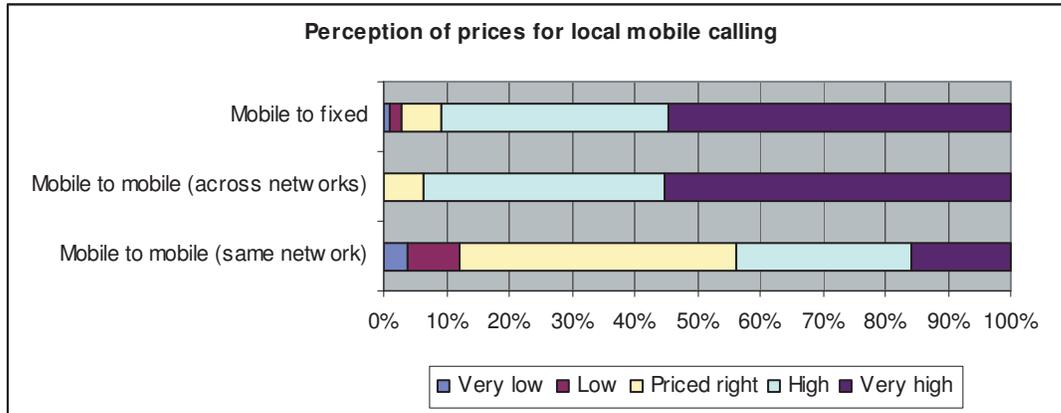
Chart 6.3



Staff access to mobile phones was limited. Only one-third of respondents indicated that more than eighty per cent of staff had access. Among the businesses surveyed, the market was split six to four between Cable & Wireless and Digicel. Businesses appeared loyal to their service provider, more than 80 per cent of respondents indicated that they had not switched

providers in the past two years. This may also be influenced by a lack of number portability in the ECTEL States. Respondents were asked to assess the rate for mobile services. While 44 per cent thought that on-net calls were priced right, the majority felt that the rates for off-net mobile and mobile-to-fixed calls were high or very high (Chart 6.4).

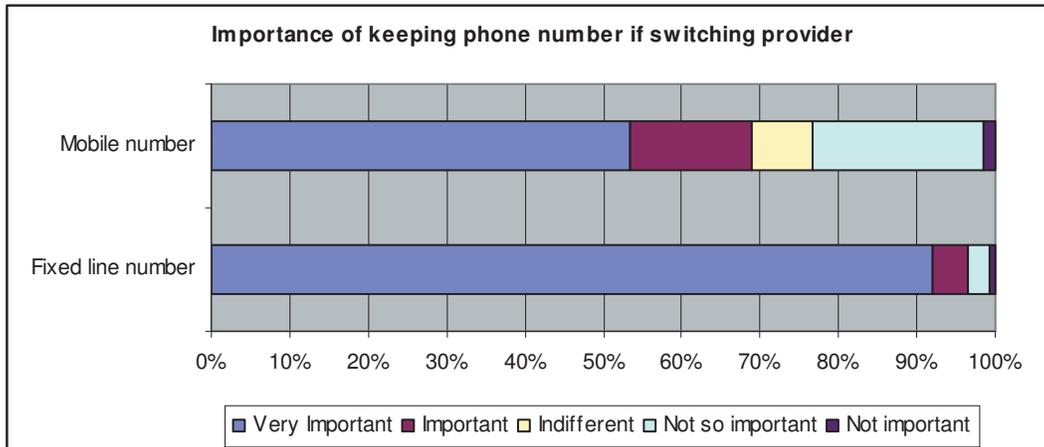
Chart 6.4



6.4 Importance of Number Portability

Businesses felt that the option of keeping the same telephone number if switching telecommunications service provider was crucial. An overwhelming 92 per cent, said it would be very important to keep their fixed line number if they switched provider. For the mobile number it was less dramatic with as 54 per cent indicated that it would be very important to keep their mobile number with a further 16 per cent stating that it would be important to keep their mobile number (Chart 6.5).

Chart 6.5

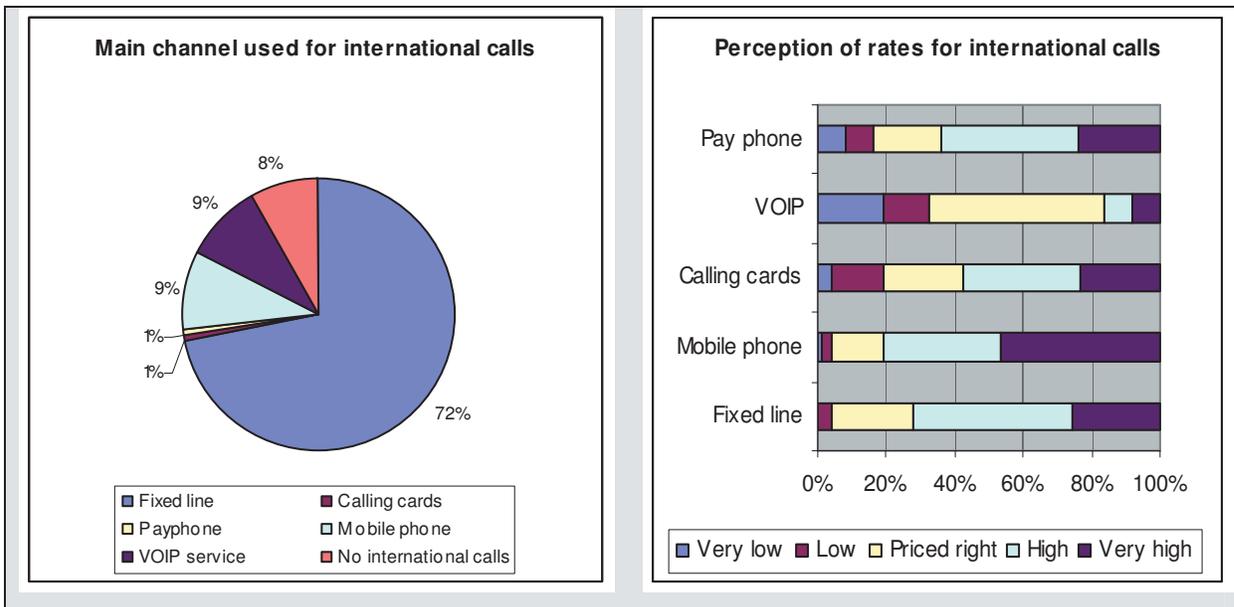


6.5 Use of International Service

Nine out of 10 businesses surveyed indicated that they made international calls. There are a number of channels available to businesses for international calling. Despite the options available, the fixed line was by far the most popular means of making international calls, used by 70 percent of respondents (Chart 6.6, (a)). This was followed by VoIP service and mobile phone service both used by 9 per cent of respondents. Respondent’s view of the rates for fixed line international calling was not in line with the seeming popularity of fixed line international calling. Seventy-two per cent of businesses thought the rate for fixed international calling was high or very high. In fact, with the notable exception of VoIP calling, respondents largely felt that that the price for international calls was high or very high (Chart 6.6, (b)).

Chart 6.6 (a)

Chart 6.6 (b)



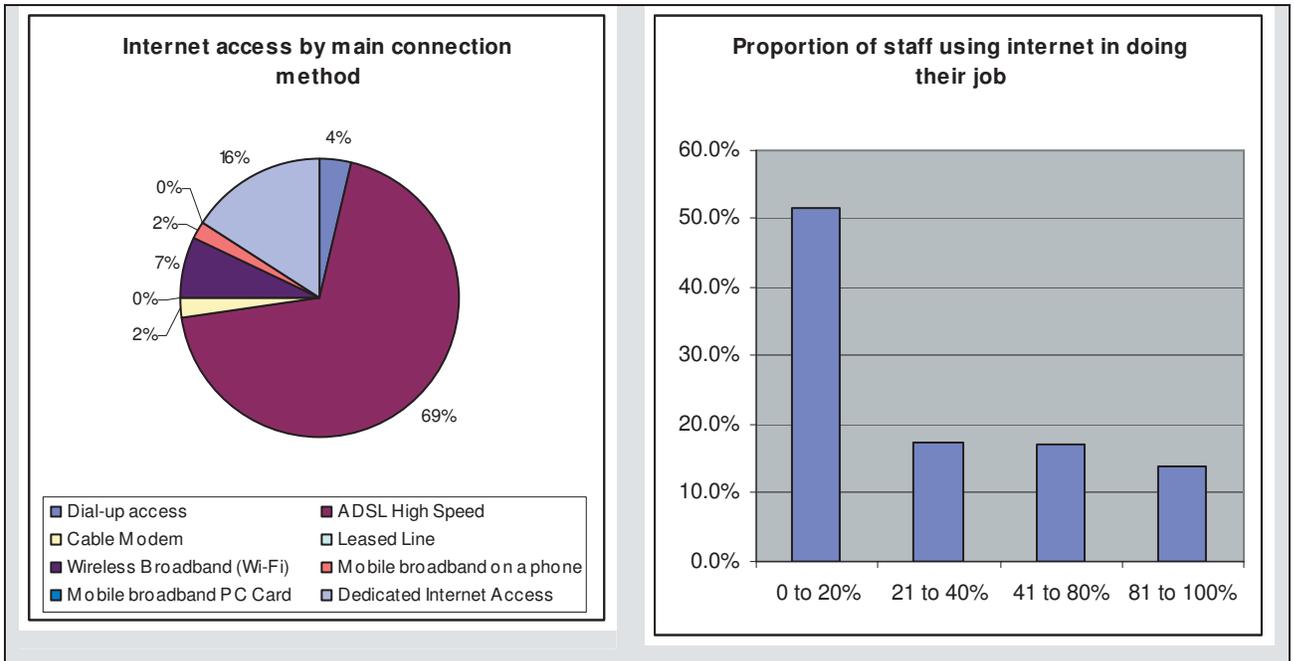
6.6 Use of Computers and Internet Access

Computer use was extensive among businesses surveyed; only seven per cent of businesses did not have at least one computer. Half of respondents indicated that more than 40 per cent of staff used the computer for work. Most businesses with computers had a computer network (83 per cent) and nearly all (86 per cent) had Internet access. ADSL high speed Internet

access was the predominant mode used for Internet access (69 per cent) followed by Dedicated Internet Access (16 per cent) (Chart 6.7, (a)). However, the survey results indicate that the Internet was not necessarily seen as an essential tool for employees; 69 per cent of respondents stated that less than 20 per cent of their staff used the Internet as part of their job (Chart 6.7, (b)).

Chart 6.7 (a)

Chart 6.7 (b)

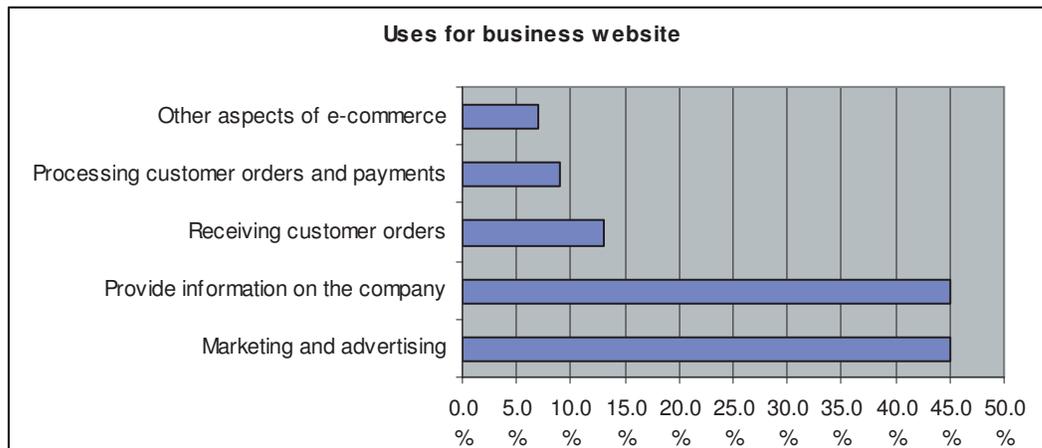


6.7 Email Use and Web Presence

Most businesses with Internet access used email (94 per cent), of which 71 per cent had a corporate account. For those businesses, email was primarily used for contacting suppliers (42 per cent) and communicating with consumers (34 per cent). For the other 17 per cent of respondents, the main use for email was communicating among staff.

Having a web presence was not as prevalent as the use of email, as less than 50 per cent of respondents had a company website. Company websites were largely used for providing information about the company (45 per cent) or for marketing and advertising (45 per cent). Only nine per cent of businesses indicated that their website was used for e-commerce activities such as the processing of customer transactions (Chart 6.8).

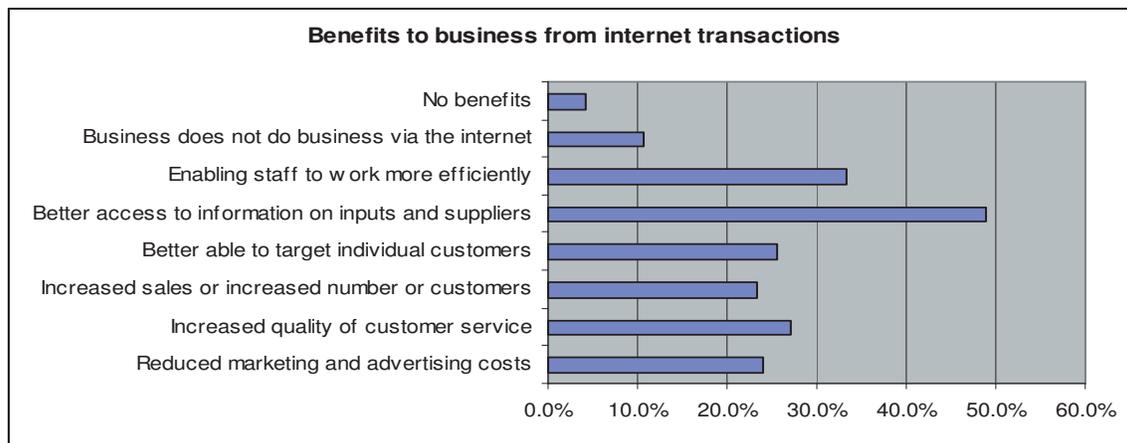
Chart 6.8



6.8 Internet Transactions

For most respondents the Internet was viewed as valuable; only five per cent of respondents indicated that they did not use the Internet for business transactions. The predominant use of the Internet was for getting information and conducting research (70 per cent). However, more than half of the businesses used the Internet for making purchases, and 49 per cent for indentifying potential suppliers. The most significant benefit noted to the use of the Internet was gaining better access to inputs and suppliers noted by 49 per cent of businesses (Chart 6.9).

Chart 6.9



For the businesses that did not transact business on the Internet, the main reasons given were that products were not suited for Internet (21 per cent) and the preference for face-to-face interaction with customers (21 per cent).

However 14 per cent of respondents cited security and privacy concerns and the lack of skilled staff to develop and maintain the required technology.

6.9 Perceived Importance of ICTs to Business

Nearly all businesses interviewed had a very positive outlook in relation to the use of ICTs. Eighty-six per cent of respondents said that ICTs were very important to their business, of which half stated that that ICTs were indispensable to their business (Chart 6.10, (a)). Allocation of resources did not necessarily match this enthusiasm as just 24 percent of respondents has specialized staff dedicated to ICTs and 10 percent had a formal ICT plan and budget.

In general, respondents viewed the impact of the use of ICTs on their businesses as positive. The majority noted that ICTs positively affected the delivery of high levels of service to consumers (73 per cent), flow of information across business (83 per cent) and the generation of new business (74 per cent) (Chart 6.10, (b)).

Chart 6.10 (a)

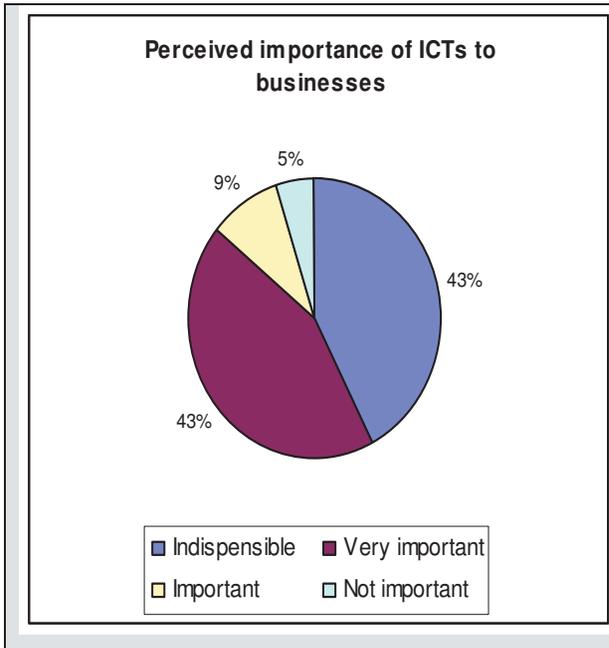
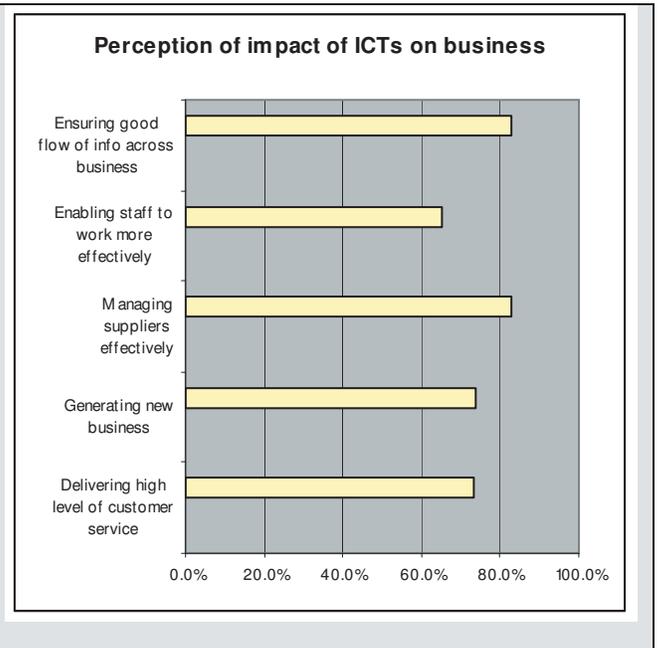


Chart 6.10 (b)



6.10 Perceived Barriers to ICT Use

Businesses surveyed seemed less likely to use advanced ICTs than the basic ICTs. A relatively small number of businesses with fixed lines, 22 per cent,

also used advanced services such as teleconferencing and a very insignificant 3.7 per cent used video conferencing. Less than half of mobile service subscribers used SMS and the use of more advanced mobile services was limited; 44 per cent did not use any mobile data service such as Blackberry, mobile email, or picture messaging. Less than half of businesses with Internet access had a company website of which only nine per cent used the website for e-commerce activities such as processing customer transactions.

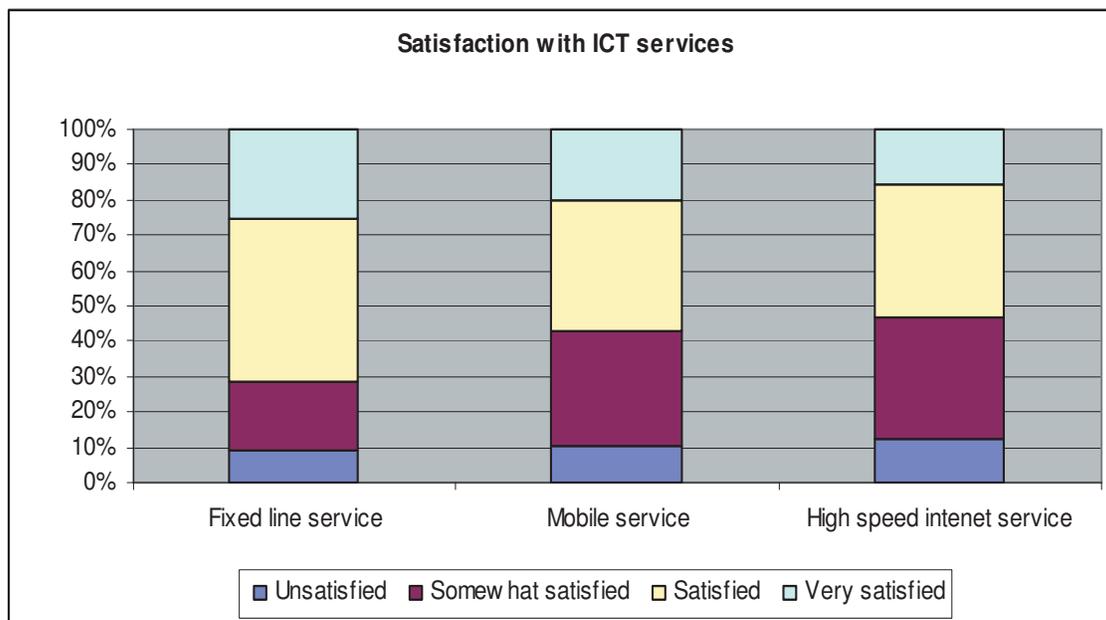
Despite this low usage of more advanced technologies, respondents had an overall positive attitude towards advanced technology with 66 per cent agreeing that it is important to have the most advanced technology. The low usage of some services may be as a result of lack of knowledge as roughly 60 per cent of respondents conceded that they were not very knowledgeable in telecoms and ICT issues.

Roughly 5 per cent of respondents indicated that regulatory or other requirements hindered their business from using ICTs. However the specific barriers were unclear. Conversely, 88 per cent indicated that no regulatory or other requirements restricted their use of ICTs and six per cent were unsure. In contrast, knowledge of ICTs may be factor limiting use as 68 per cent of respondents revealed that they were unsure of potentially beneficial ICTs not currently offered.

6.11 Satisfaction with ICTs

Businesses expressed general satisfaction with the basic ICTs. The businesses interviewed were asked to rate their level of satisfaction with ICTs on a ten point scale. Two-thirds of respondents were satisfied with their fixed line service, including 23 per cent who were very satisfied. The level of satisfaction with mobile and Internet was slightly less than for fixed service; still, just over half of respondents were satisfied with mobile and Internet service (Chart 6.11).

Chart 6.11

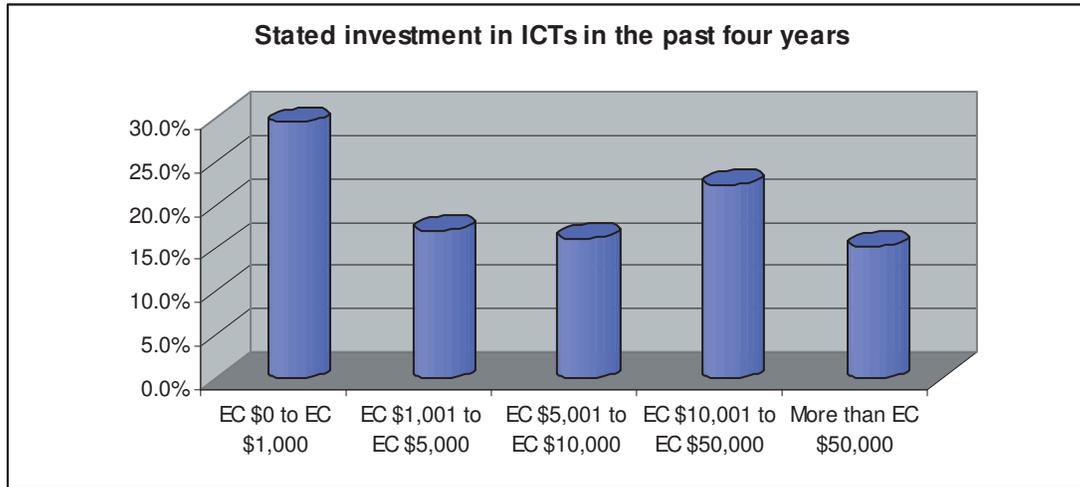


Among the respondents who registered dissatisfaction with services, the chief source of dissatisfaction with voice services was the cost of service while the lack of speed was the main cause for concern with high speed Internet access.

6.12 Attitude towards ICT Training and Investment in ICT

A majority of respondents had a favourable attitude toward ICT training for staff, though 46 per cent indicated that it cost too much to train staff to use ICTs. Respondents also had a favourable view towards investment in ICTs. A small minority, seven per cent, felt that the overall benefit of ICT use did not justify the investment in ICTs. One-third of businesses claimed to have invested between \$5,000 and \$50,000 in ICTs in the past four years with a further 15 per cent claimed to have invested more than \$50,000 (Chart 6.12).

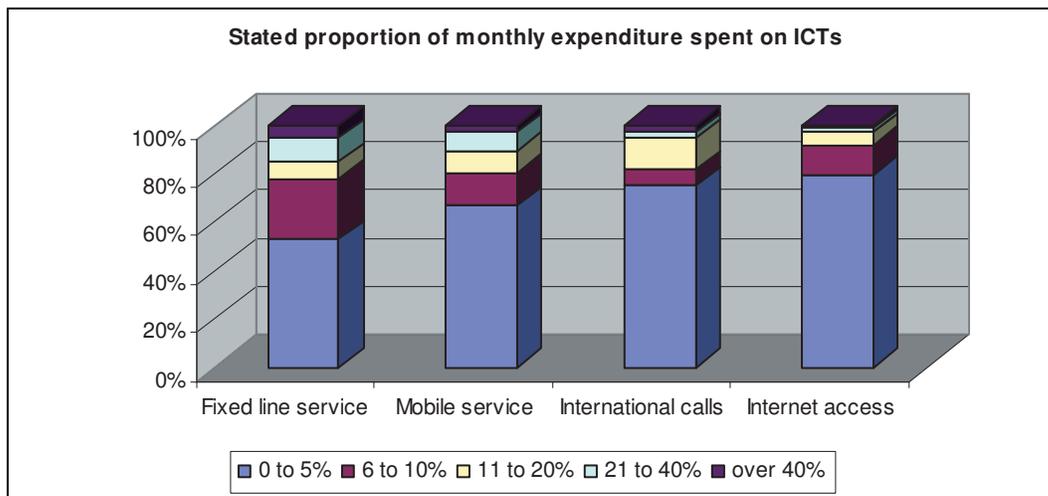
Chart 6.12



6.13 Expenditure on ICTs

Most businesses spend less than 10 per cent of monthly expenditure on different ICTs. Three-quarters of businesses surveyed reported spending less than 10 per cent of total expenditure on fixed services. Two-thirds spent less than 5 per cent on mobile services, and 75 per cent expended less than 5 per cent on international calls and on Internet service (Chart 6.13).

Chart 6.13

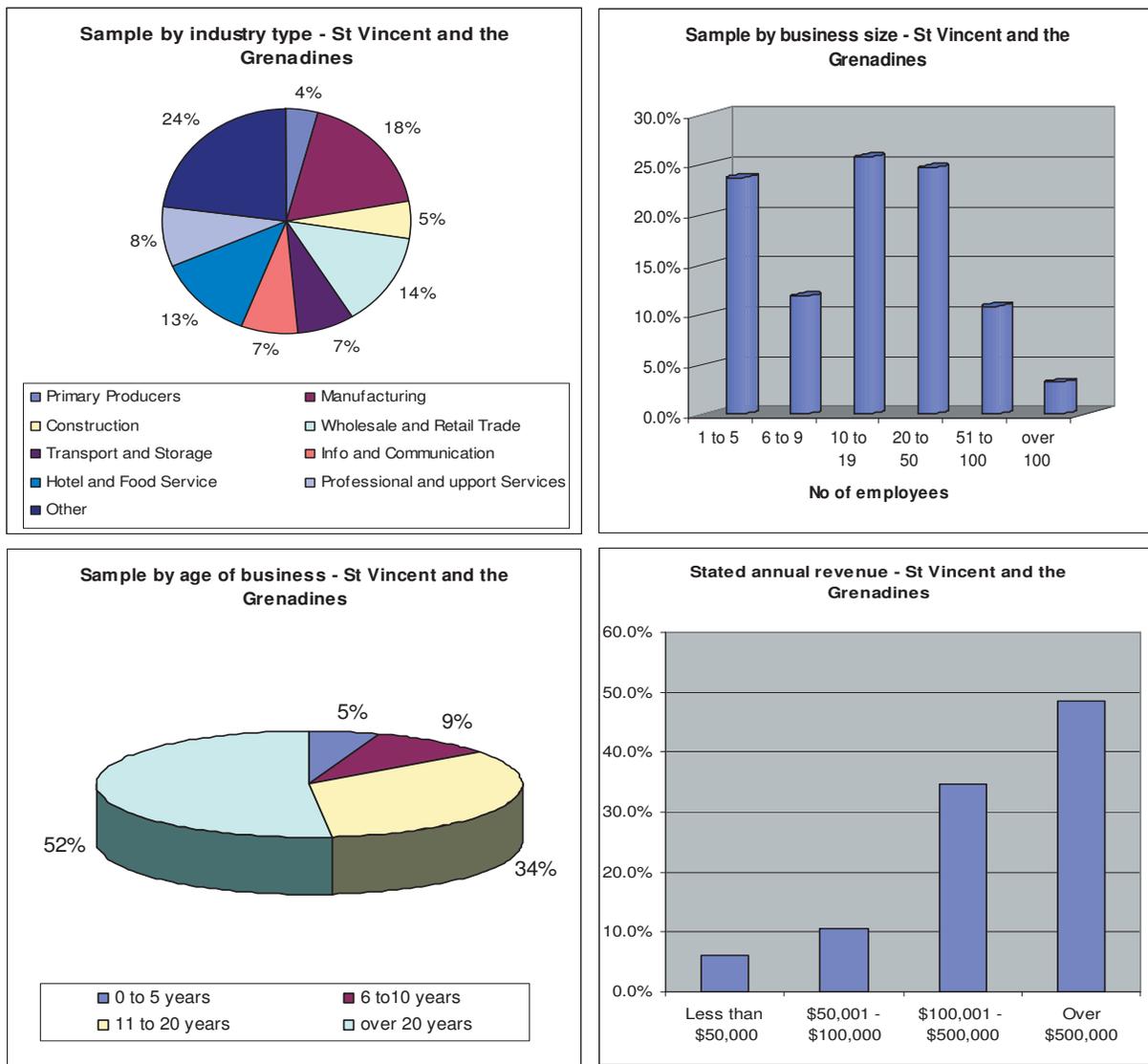


7. USE OF ICTs BY SMEs IN ST. VINCENT AND THE GRENADINES

7.1 Respondent Profile

A total of 95 businesses were interviewed in St. Vincent and the Grenadines. The majority were in business for more than 10 years (73 per cent), had less than 50 employees (81 per cent) and operated from one location (61 per cent). A wide cross-section of economic sectors were targeted. Among the respondents, 18 per cent were in manufacturing, 5 per cent in wholesale and retail and 8 per cent offered professional or technical services. A breakdown of the sample by service sector, size, age and revenue is presented in the chart 7.1 below.

Chart 7.1



7.2 Use of Fixed Line Voice Service

Fixed line service was the most widely used service by the businesses surveyed. All respondents had the service with a majority having more than one phone line. Fax service was also very common used by 88 per cent of respondents. The fixed line service was seen as indispensable as almost all respondents (81 per cent) said that it was very unlikely that they would terminate the service. Most employees had access to the fixed line service at their workstation. Seven out of ten respondents indicated that more than three-quarters of their staff had access to the fixed line service at their workstation (Chart 7.2, (a)). Respondents indicated using a number of value added services with the most popular being call waiting (27 per cent), voice mail (21 per cent) and caller ID (21 per cent).

Though respondents thought that their fixed line service was essential, they were generally unsatisfied with the rates for fixed calling. The rate for fixed-to-fixed calling was viewed as high or very high by 54 per cent of businesses, while virtually all (99 per cent) viewed the rate for fixed-to-mobile calls as high or very high (Chart 7.2, (b)). Despite indicating that the rate fixed-to-mobile calls was high, just over half of the businesses surveyed had no restriction on fixed-to-mobile calling.

Chart 7.2 (a)

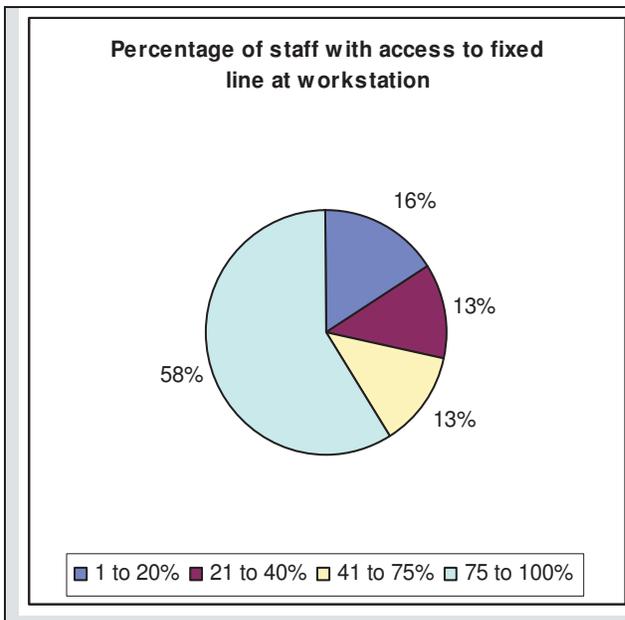
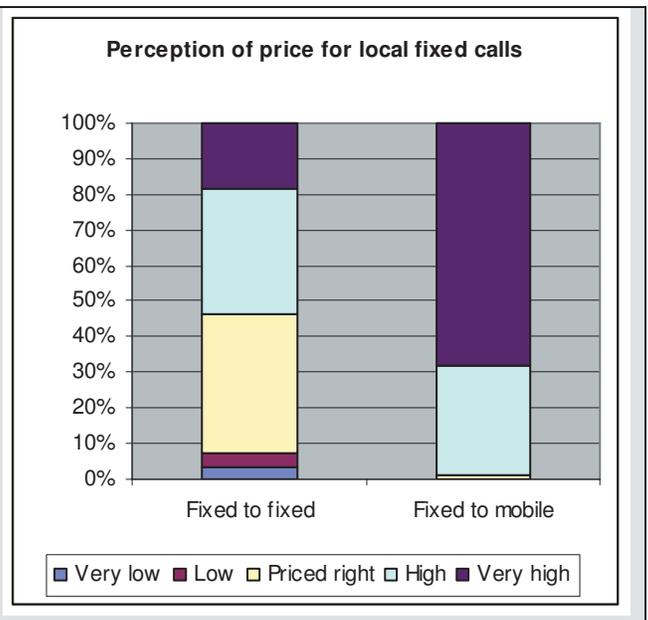


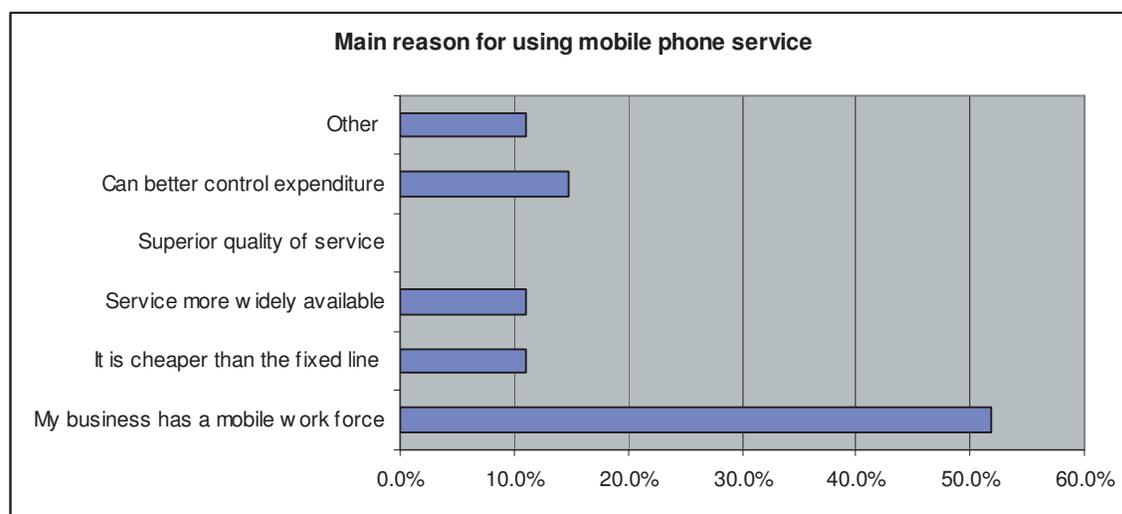
Chart 7.2 (b)



7.3 Use of Mobile Services

Mobile phone service was not as widely used as fixed line service. Less than 60 per cent of the businesses surveyed indicated that the company had mobile phone service. All businesses without mobile service indicated that they never had the service and only 7 per cent has plans to get the service in the future. Of the businesses with mobile phone service, the majority, 70 per cent had a post paid plan, 16 per cent had a pre-paid plan with 13 per cent having both plans. The primary reason give for the use of mobile phone service by business was having a workforce that was mobile, as stated by 52 per cent of respondents (Chart 7.3).

Chart 7.3

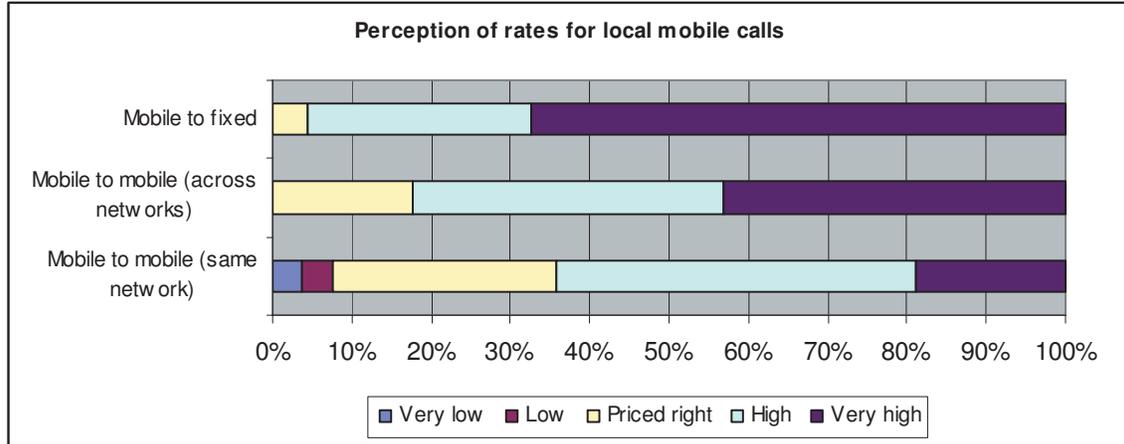


Staff had limited access to the company's mobile phone. Just over half of businesses indicated that less than 20 per cent of staff had access to the company's mobile phone. Among respondents the market for mobile service was split almost evenly between Cable & Wireless and Digicel with more than 95 per cent of businesses indicating that they had not switched providers in the past two years.

Awareness of corporate mobile plans was very low. Three-quarters of respondents did not use a corporate plan. Seventy per cent was unaware of these plans, though 24 per cent indicated that the available plans were not suitable for their business. In general, respondents perceived the rates for mobile calls to be high or very high. More than 60 per cent of respondents indicated that the rates for mobile calls, both on-net and across networks,

were high or very high; 67 per cent thought that the rates for mobile-to-fixed were very high (Chart 7.4).

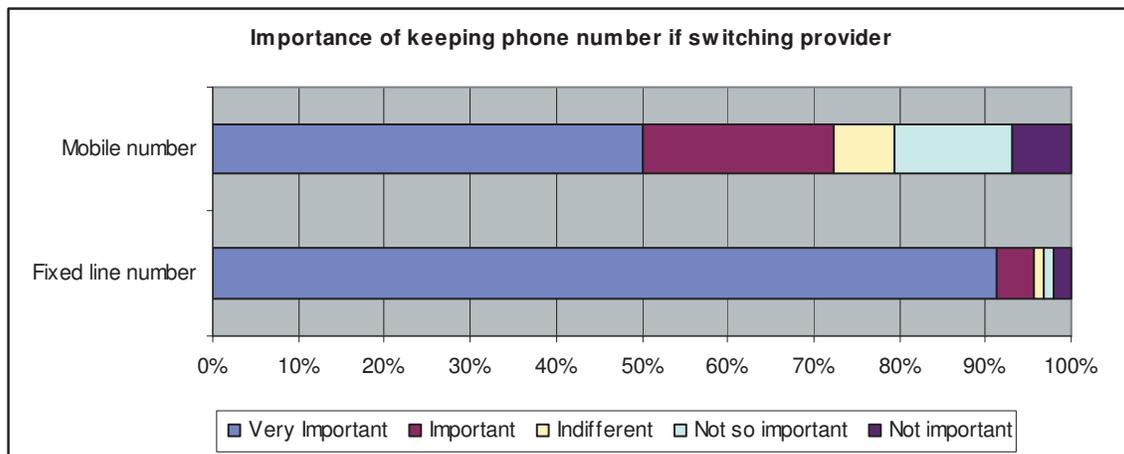
Chart 7.4



7.4 Importance of Number Portability

The ability to keep their existing phone number, particularly their fixed line number, if switching provider, was viewed as crucial to the majority of respondents. An overwhelming 92 per cent of businesses said it would be very important in keep their fixed line number if they switched provider. Keeping the same mobile number was seen as slightly less critical as half of respondents said it was very important to keep that number with a further 22 per cent stating that it would be important to keep their mobile number (Chart 7.5).

Chart 7.5



7.5 Use of International Service

All the businesses surveyed indicated that they made international calls. Several channels for international calling are available to businesses, still the fixed line phone was the most popular channel used for international calls as indicated by 68 per cent of respondents. VoIP service was a distant second used by 21 per cent of respondents followed by 6 per cent of businesses using mobile service (Chart 7.6, (b)). Respondents viewed the rates for internationally calling quite unfavourably. Despite the popularity of fixed international calling, 78 per cent of businesses thought the rates were high or very high. In fact, with the noted exception of VoIP calling, a majority of respondents viewed the rates for international calls as high or very high (Chart 7.6, (b)).

Chart 7.6 (a)

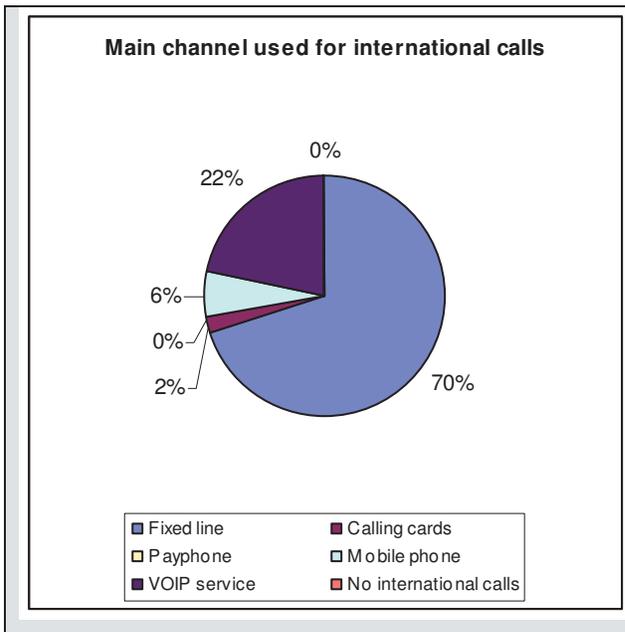
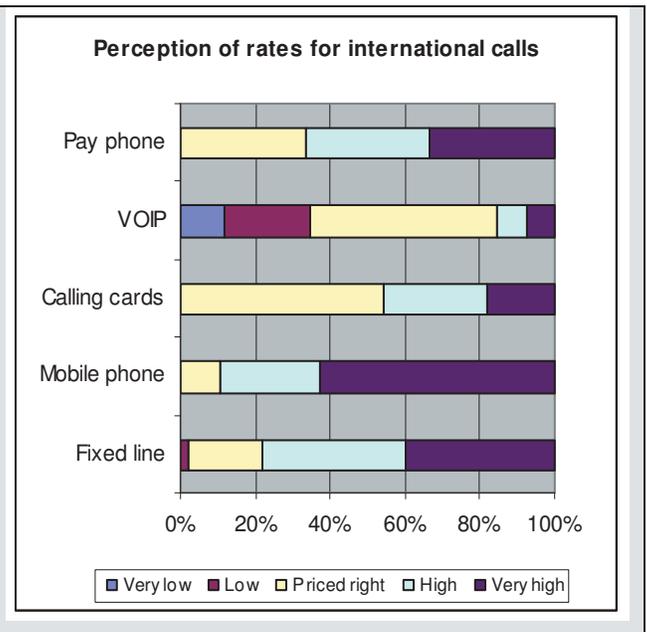


Chart 7.7 (b)



7.6 Use of Computers and Internet Access

The use of computers was prevalent among the businesses surveyed. Only six per cent of respondents did not have at least one computer. A significant number of businesses with computers, 80 per cent, also had a computer network and just over half indicated that more than 40 per cent of their staff used a computer in doing their job.

For businesses with computers, there was almost universal Internet access. However while 91 per cent of respondents had Internet access, just about one-third of respondents indicated that more than 40 per cent of their staff used the Internet in doing their job (Chart 7.7, (b)).

The preferred method of accessing the Internet was via ADSL high speed access, used by 79 per cent of businesses. Fewer than 10 per cent of respondents said that Wi-Fi was their main form of Internet access and less than four percent of businesses still had dial-up Internet service (Chart 7.7, (a)). Cable & Wireless was the predominant service provider used by 96 per cent of the businesses surveyed, with Karib Cable as the provider for the other four per cent.

Chart 7.7 (a)

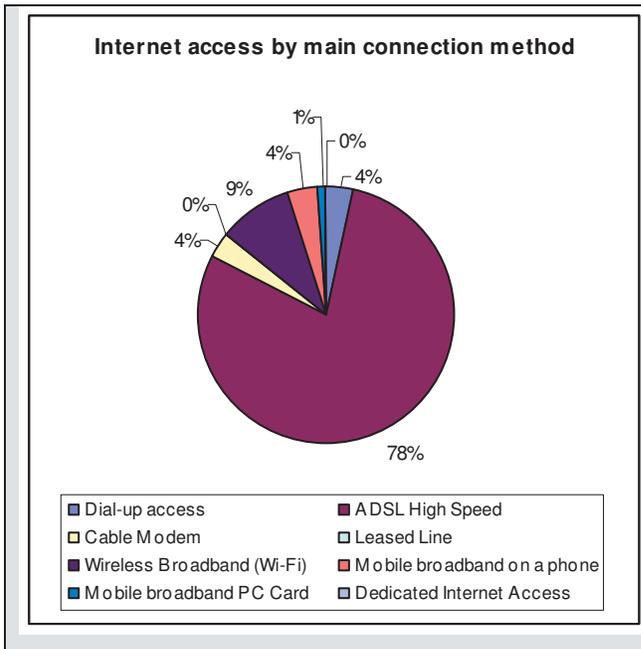
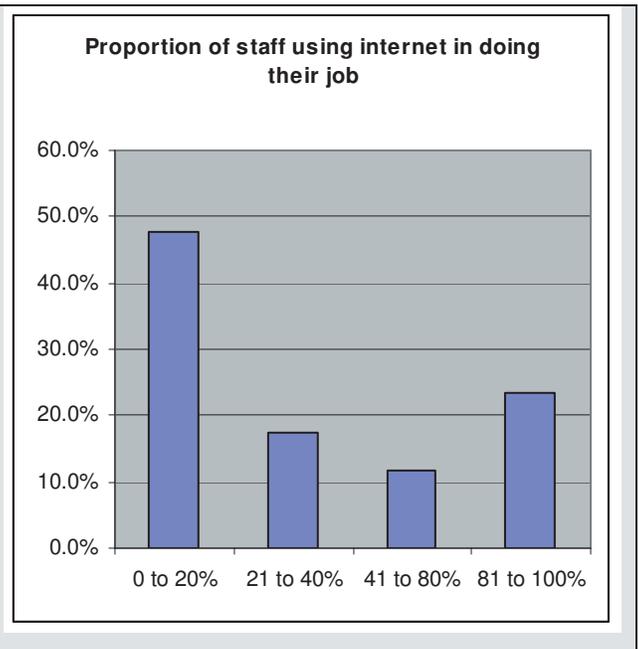


Chart 7.7 (b)

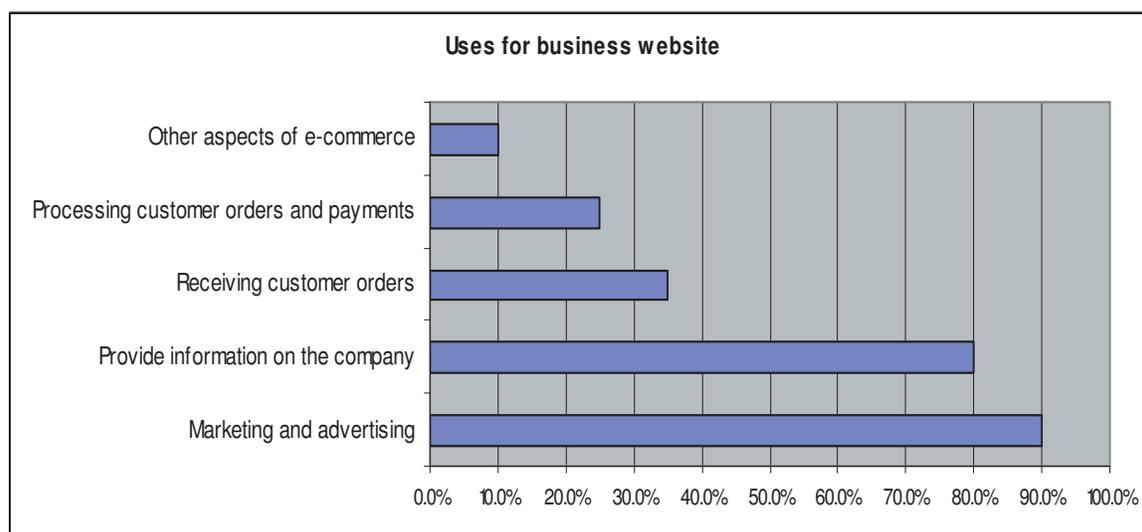


7.7 Email Use and Web Presence

Email was used by virtually all, 99 per cent, of respondents of which 88 per cent had a corporate email address. Email was principally used for contacting suppliers (46 per cent) and communicating with customers (38 per cent); the other 13 per cent of respondents used email mainly for communicating among staff.

Company websites were not as prevalent as the use of email with just under half of respondents having a company website. Company websites were used largely as a marketing tool for businesses. Nine out of ten businesses used the website for marketing and advertising and 80 per cent for providing information on the company. However one-quarter of businesses also used the website for e-commerce activities such as processing customer transactions (Chart 7.8).

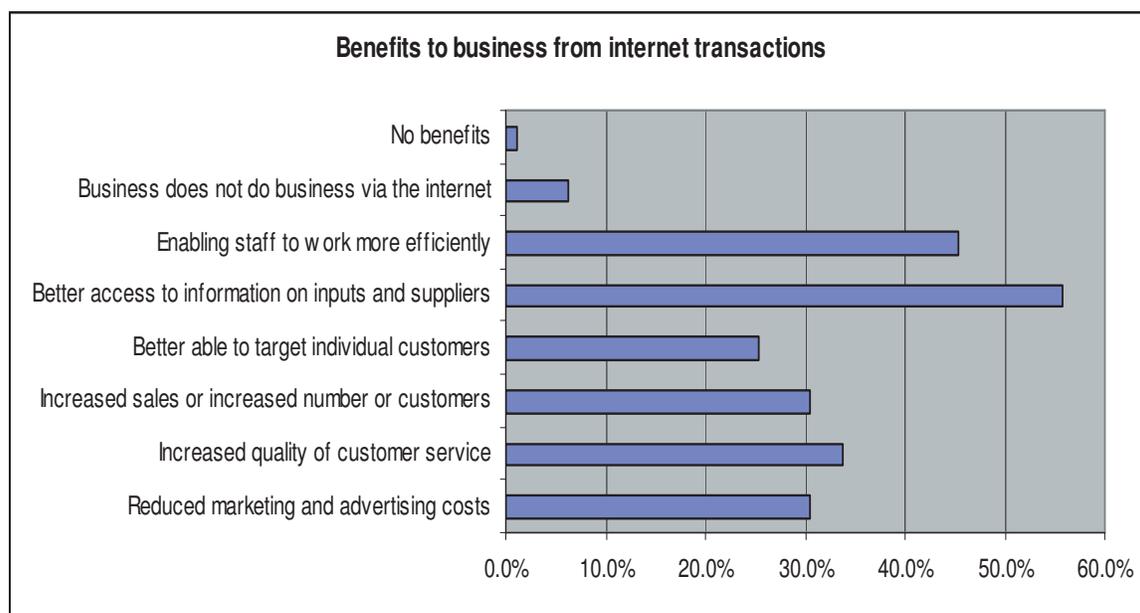
Chart 7.8



7.8 Internet Transactions

The Internet was seen as an important resource; 95 per cent of respondents used the Internet to some extent for business transactions. The predominant use of the Internet was for getting information and conducting research; however, 56 per cent of businesses also made online purchases and 52 per cent used it for identifying potential suppliers. The primary advantage to using the Internet was gaining better access to inputs and suppliers, noted by 56 per cent of businesses. This was followed closely by enabling staff to work more efficiently (45 per cent) and reducing marketing and advertising costs (30 per cent) (Chart 7.9).

Chart 7.9



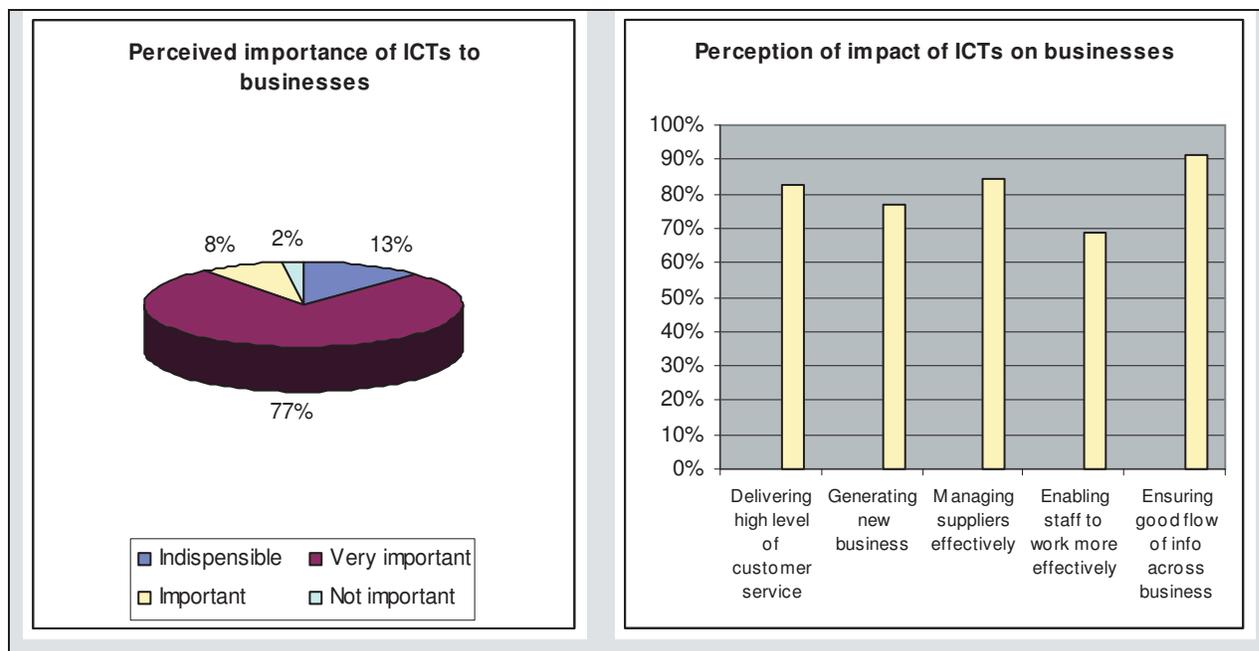
The principal reasons given by businesses that did not use the Internet for businesses transactions were the preference for face-to-face interactions with customers and security and privacy concerns.

7.9 Perceived Importance to ICTs to Business

The use of ICTs was generally viewed as critical to the success of businesses. Ninety per cent of firms surveyed indicated that ICTs were very important to their business, including 13 per cent that stated that ICTs were indispensable to their businesses (Chart 7.10, (a)).

For the most part, respondents believed that the use of ICTs played a key role in the delivery of high levels of customer service (83 per cent), working with suppliers (84 per cent), enabling staff to work more efficiently (69 per cent) and generating new business (80 per cent). Ninety per cent of business also believed that the use of ICTs improved the flow of information across the company (Chart 7.10, (b)).

Chart 7.10



The perceived importance of ICTs did not necessarily translate into dedication of resources to ICTs. A large number of respondents indicated that they did not have dedicated staff to deal with ICTs. In fact only 27 per cent of respondents had specialised staff dedicated to ICTs and 13 per cent had a formal plan and budget for ICTs.

7.10 Use of Advanced ICTs and Perceived Barriers to ICT Use

Advanced ICTs and value added telecoms services were not as commonly used as basic ICTs. Less than one-fifth of businesses with fixed line used teleconferencing service and a mere one per cent used video conferencing. Most businesses with mobile service, roughly 60 per cent, indicated that they did not use a mobile data service including SMS and a similar number did not use any mobile data service such as GPRS or Blackberry service. Less than half the businesses with Internet access have a company website and even less, 25 per cent, used their website for e-commerce activities.

Even with the relatively low usage of more advanced ICTs, respondents had an overall positive attitude towards advanced technology with 66 per cent

agreeing that it is important to have the most advanced technology. The low usage of some ICTs may be a direct result of a lack of knowledge as roughly 60 per cent of respondents conceded that they were not very knowledgeable in ICT issues.

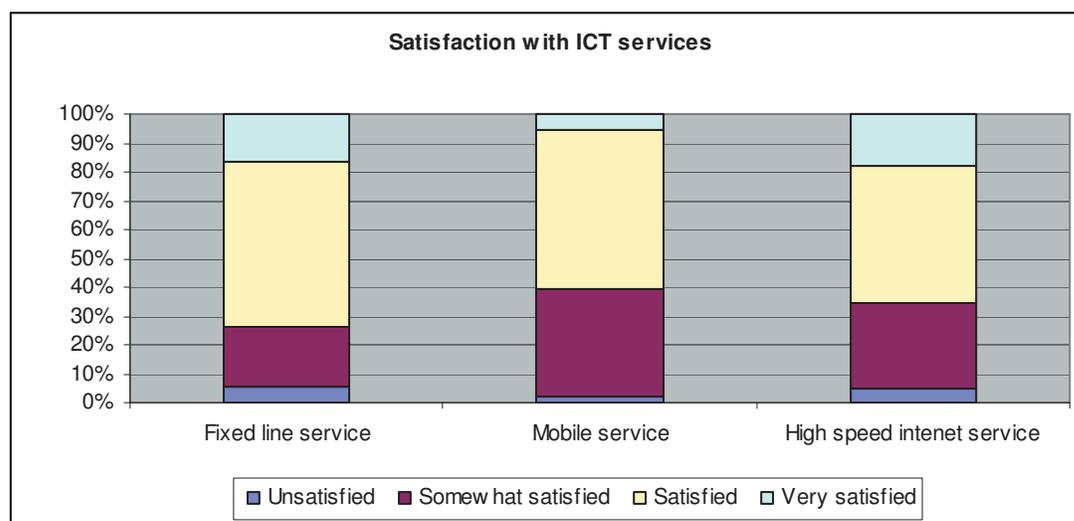
For the most part, respondents indicated that no regulatory or other requirements hindered their business from using ICTs. The use of advanced ICTs may be limited to some degree by a lack of knowledge about ICTs. Two-thirds of respondents admitted that they were unsure if there were ICTs that would be beneficial to their business but was not currently provided.

7.11 Satisfaction with ICTs

Respondents were asked to rate basic ICTs on a ten point scale. In the main, respondents were satisfied with these ICTs. Three-quarters of respondents indicated satisfaction with fixed line service. Mobile and Internet service were viewed only slightly less favourably, 60 per cent of respondents claimed satisfaction with their mobile service and 65 per cent said that they were satisfied with their Internet service (Chart 7.11).

Among the respondents who not satisfied, the major complaint with fixed and mobile services was the price for service while lack of speed was stated as the main cause for concern with high speed Internet access.

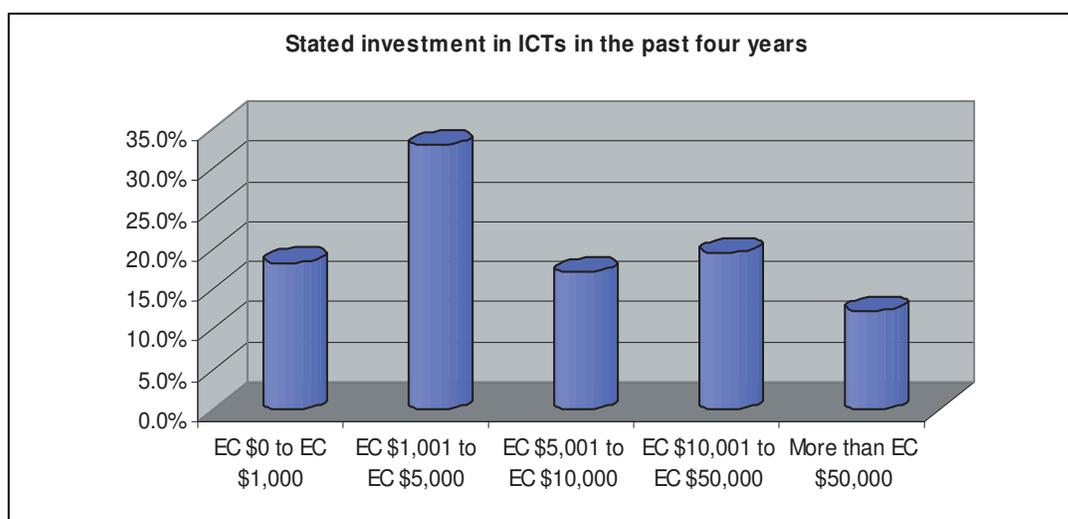
Chart 7.11



7.12 Attitude towards ICT Training and Investment in ICT

Respondents generally had a positive attitude towards ICT training for staff, as less than one-fifth felt that ICT training for staff was too costly. The attitude toward investment in ICTs as a whole was less favourable; just under half of respondents indicated that the overall benefits of ICTs use justified investments in ICT. Less than 40 per cent of businesses claimed to have invested between \$5,000 and \$50,000 in ICTs in the past four years and a further 12 per cent claimed investments of more than \$50,000 (Chart 7.12).

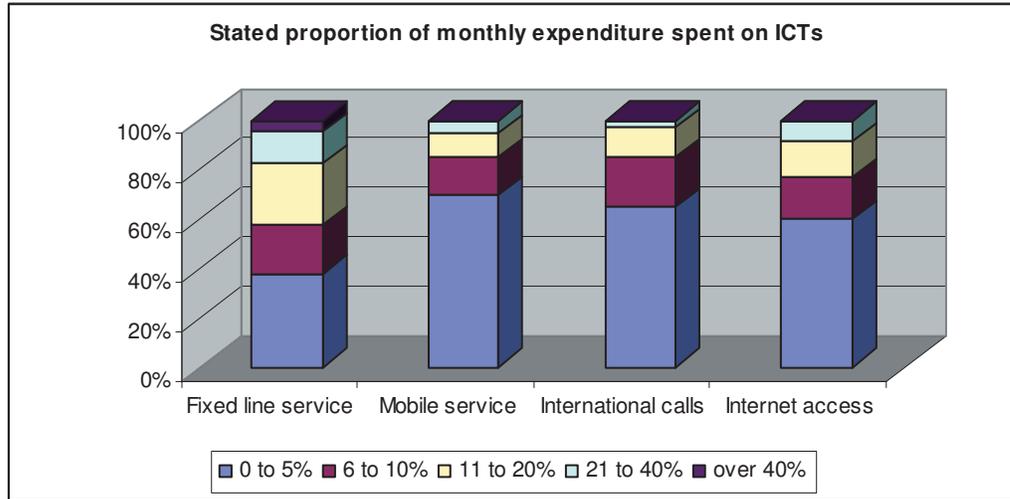
Chart 7.12



7.13 Expenditure on ICTs

For the majority of respondents, expenditure on various ICTs accounted for less than 10 per cent of total monthly expenditure. Just over half of respondents reported spending less than 10 per cent of monthly expenditure on fixed line service, and 85 per cent reported monthly expenditure on mobile service at less than 10 per cent of total expenditure. Expenditure on international calls was less than 10 per cent of monthly expenses for 86 per cent of businesses while just under two-thirds reported spending less than 5 per cent on Internet access (Chart 7.13).

Chart 7.13



EASTERN CARIBBEAN TELECOMMUNICATIONS AUTHORITY

ECTEL Mission Statement

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

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

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

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

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

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