

The Impact of the Grameen Bank Mobile Phone Programme on the Lives and Housing of Rural Women in Bangladesh



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by

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The aim of this study is to evaluate the overall impact of the Village Pay Phone Programme on poor rural women in the context of rural development.

There are only three landline phones for every one thousand people in Bangladesh. This is one of the lowest phone penetration rates in the world. The Village Pay Phone Programme was developed by combining the Grameen Bank's expertise in micro-enterprise and micro-credit with the latest digital wireless technology.

In Bangladesh, rural people's occupations are becoming increasingly diversified and many people live outside their villages. The desire to keep in touch with family back home represents a business opportunity for telephone ladies. The TeleCommons data reveal that the Village Pay Phone plays a key role in facilitating family relationships and the flow of remittances to family members in the village. It has also proved to be a vital asset to small business owners.

The telecommunication business marks an innovative advance for the Grameen Bank which has gained world renown for its success in nurturing rural entrepreneurs in an impoverished, aid-dependent nation. Bangladesh is believed to be the first developing country in which a micro-credit institution has relied on cellular technology to make a telephone service abundantly available. A telephone in a village does not just ensure voice communication from village to village, but rather it can be treated as an important tool for development. The scheme to create a rural communications network by equipping one woman in each village with a cell phone is the most imaginative of several efforts to address one of the world's most basic technology gaps.

Introduction to the Grameen Bank's Village Pay Phone Programme

1.1 Introduction to Bangladesh and the Grameen Bank

Bangladesh is an extremely densely populated country with a population of 130 million in an area of 144,000 km². The average per capita annual income is approximately \$366. Access to telephone services is very low and mostly available in cities, with only one telephone for every 300 people. The average waiting time for a telephone connection is 10 years.

In 1976, Professor Muhammad Yunus founded the Grameen Bank (i.e. Village Bank) to alleviate the poverty of the poorest people of Bangladesh, by providing micro-credit without collateral, especially to poor women.

Twenty-five years later the Bank is now established in over 40,589 of Bangladesh's 68,000 villages and has 2.4 million active borrowers. From an initial loan of \$27, over \$3.8 billion has since been lent and \$3.5 billion repaid. Each month \$25 million is loaned and the repayment rate is above 98 per cent.

The Grameen Bank – 1976 to date

- Journey from one village, Jobra, to 40,486 villages (out of 68,000 villages) in Bangladesh.
- From 42 borrowers in 1976 to 2,480,000 borrowers in 2002.
- 513,141 groups in 70,928 centres organised in 1,178 branches in 60 districts (out of 64 districts).
- From the first loan of Tk.856 (\$27) to cumulative loans of Tk.170,000 million (\$3.81 billion). Total cumulative repaid amount of Tk.157,000 million (\$3.47 billion).
- 558,055 houses built with cumulative loans of Tk.7,790 million (\$191.7million).
- Monthly average loan of Tk.1,400 million (\$25 million).

The Grameen Bank inspired the world to adopt micro-credit as a tool to fight against poverty. Nowadays micro-credit is a widely used and important strategy in alleviating poverty. Borrowers of the Grameen Bank are earning additional income by using micro-credit to set up small businesses.

1.2 GrameenPhone and Grameen Telecom

Two independent companies were formed to facilitate the Village Pay Phone Programme. One is a for-profit company (GrameenPhone), and the other is a not-for-profit (Grameen Telecom). GrameenPhone is a company that was formed to provide modern mobile telephone services at a rate affordable both to the rural beneficiaries of the Grameen Bank and to urban customers. GrameenPhone is owned by a consortium made up of four partners: Telenor of Norway (51 per cent), Grameen Telecom (35 per cent), Marubeni of Japan (9.5 per cent) and Gonophone Development Company (4.5

per cent). GrameenPhone was awarded a license to operate and maintain a GSM900 cellular network throughout the country on 11 November 1996. GrameenPhone launched its services on 26 March 1997, Bangladesh's Independence Day.

Grameen Telecom, the not-for-profit company, buys bulk airtime from GrameenPhone and retails it through Grameen borrowers. One Grameen Bank borrower in each of the villages will become the phone owner, or telephone lady as she is known, of the village. She will sell the telephone services to the villagers and earn money. Her income consists of the difference in the charges paid by customers for making and receiving calls, and the billed amount she has to pay to GrameenPhone. Grameen Telecom provides technical and customer support to the telephone ladies and prepares their monthly phone bills.

Global System Mobile (GSM) technology is used for the operation of the village pay phones in rural areas of Bangladesh. GrameenPhone developed the mobile phone network infrastructure at its own cost and these costs are not passed on to the telephone ladies.

The concept of the Village Pay Phone (VPP) was developed by the Grameen Bank by combining its experience in micro-credit enterprise, the latest digital wireless technology, and the ideas of Public Call Offices (PCOs) and privately operated phone centres. VPP is a unique idea that provides modern telecommunication services to the poorest people of the country.

Grameen Telecom believes VPP will be the largest wireless pay phone programme in the world. Grameen Telecom's target is to install 45,000 village phones by the end of 2003. At June 2002 there were 14,443 phones installed, by July 2002 this had risen to 15,746 and in December 2002 the number of installed phones was 22,110.

The objectives of the Village Pay Phone Programme are:-

- To provide easy access to a telephone service when needed, all over rural Bangladesh.
- To introduce a new income generating source for the villagers.
- To bring the potential of the information revolution to the doorstep of the villagers.
- To introduce telecommunications as a new weapon against poverty.

1.3 Myth and reality

It is generally understood that telephone services, especially mobile phones, are for the rich, not for the poor. It used to be unthinkable that a poor woman could earn some extra income by being the owner of a telephone. That concept has now totally changed after the Grameen Bank made mobile phone usage available to the poor, even in the remotest corner of the country. Besides helping to generate income the mobile phones give the poor the opportunity to communicate with their relations at home and abroad.

Table 1.1 Telecommunication for the poor -- myth and reality

	Myth		Reality
1.	Mobile phones are too costly for the poor.	1.	If income from it is also high, and bank financing is available, it makes perfect sense for the poor.
2.	Phones follow wealth.	2.	Wealth follows phones that help to generate income for the poor.
3.	Phones for the poor will require heavy subsidy.	3.	Since the poor can earn enough they don't need subsidy.
4.	Phones bring profits to the rich -- these are not for the poor.	4.	Phones are profitable for both the poor and the rich alike.
5.	Phones serve secondary needs. One needs to focus on the primary needs of the poor.	5.	If the poor can earn more income through the phone, they can meet their primary needs better.

1.4 The background and objectives of the Grameen Bank's Village Pay Phone Programme

In the rural areas of Bangladesh isolation and poor infrastructure are often the norm and telecommunications can play an extremely important role in enhancing rural social and economic development. The Village Pay Phone Programme is a unique undertaking that provides modern digital wireless telecommunication services to some of the poorest people in the world.

Bangladesh is a developing country in south Asia. Agriculture accounts for a third of GDP and more than two thirds of all employment. The present under-development and poverty of the country is related to the under-development of basic infrastructure. The majority of the population resides in 68,000 villages, 90 per cent of which lack any access to a landline phone. Public telephones are an important communications link in Bangladesh. The Bangladesh Telephone and Telegraph Board (BTTB) is a government owned landline operator that enjoys a monopoly in this sector. The condition of this landline telephone system operated by the state-owned Bangladesh Telegraph and Telephone Board is poor. It has around 400,000 connections that are not necessarily active all the time.

A recent report produced jointly by World Bank and Bangladesh Centre for Advanced Studies (BCAS)ⁱ summarised the limitations of the landline telephone services in Bangladesh as follows:

Bangladesh Telecom Service at a glance

- The telephone density of 0.26 lines per 100 people is one of the world's lowest.
- The installation charge for a new line is \$450 which is one of the highest in the world.
- The charge for calling the UK, \$1.50 per minute, is 6 times higher than the charge for calling Bangladesh from the UK.
- On average, only 2 out of 10 calls are successfully completed.
- 50 complaints per 100 lines per year indicate the poor quality of the service.

In light of this frustrating picture of the telecommunication provision especially at village level, the Grameen Bank took an initiative of establishing a village pay phone programme to provide easy access to telephone services to the population of rural Bangladesh.

1.5 The Grameen Bank's Village Pay Phone Programme

The Grameen Bank launched a programme in March 1997 to put at least one mobile phone in each village of the country. It is one of several Grameen Bank schemes to help the poor jump from subsistence living into the digital age. To make the technology feasible and commercially viable, the Grameen Bank began leasing mobile phones to successful long time borrowers especially to women.

Grameen Bank members can obtain a loan of Tk. 21,000 (\$359) to buy a mobile handset to use as a pay phone to earn some extra money by providing telephone services to other villagers. The Grameen Bank has some special criteria for the selection of the operators known as telephone ladies. These are that they should:--

- Have a very good repayment record.
- Be literate or at least have children who can read and write.
- Have their residence near the centre of the village.
- Have a good business record.
- Have sufficient spare time to work as operators.

One telephone lady in each village purchases a phone under the lease-financing programme of the Grameen Bank and provides telephone services to the people in her village. She is responsible for providing the services to her customers for both incoming and outgoing calls, collecting call charges and ensuring proper maintenance of the handset. Repayment of the loan for the telephone is processed through the existing loan granting and collection procedures of the Grameen Bank. The initial start up cost for a village phone is \$400 which includes a handset with the necessary accessories, high gain antenna, installation, training and GP connection.

Customers can make out-going calls as well as receiving calls. Making a phone call is simple - a person visits the VPP centre, which is usually the house of the phone owner, or telephone lady as she is called, and makes the call. When a call comes from outside, the telephone lady takes the phone to the desired person's house. Alternatively the caller makes the call at a predetermined time when the recipient waits at the VPP centre. The telephone lady receives some extra money when she has to take the phone to the receiver's house or for informing the receiver about the phone call.

Payments for each phone call are made to the telephone ladies by the customers. At the end of each month Grameen Telecom sends a bill to the telephone lady for her monthly usage of the phone. The Grameen Bank Manager collects the money for these bills

along with the other repayments when he/she comes to the village for the regular weekly meetings. Generally the telephone lady pays off the monthly total bill after depositing money in her Grameen Bank personal account on a weekly basis. The telephone lady's income is the difference between the phone bill charges and the amount of money paid by the customers. The airtime charge made by Grameen Telecom is less than the commercial charge because it buys bulk airtime from GrameenPhone.

The implementing agencies like GrameenPhone, EKTEL and Sheba have introduced mobile phone networks in most areas of the country, establishing a base station where signal is available. The end users do not have to bear any cost in this regard. If coverage is low, then an additional antenna is needed that costs Tk. 600 (\$10.2) for a locally made antenna. An imported antenna may cost Tk. 6,000 – 7,000 (\$103 – 120).

22,110 telephone ladies were providing telecommunication services to around 25,000 villages at the end of 2002. It is anticipated that this number will be around 45,000 by the end of 2003.

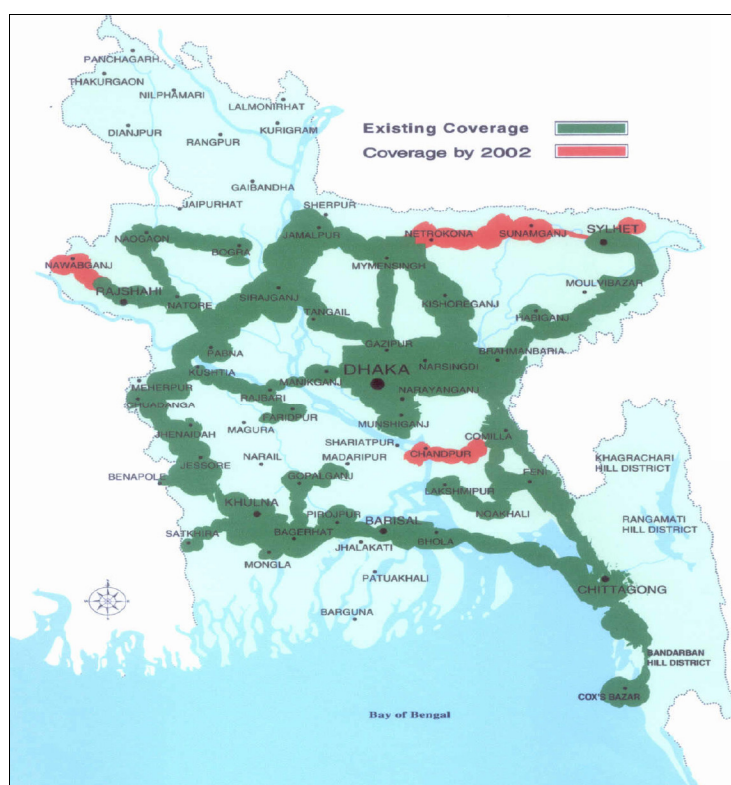
The net average monthly income from the phone business of a telephone lady is around Tk. 4,000 (\$68) after paying the phone bill. In many cases the income is much higher. Sometimes the monthly income is above Tk. 20,000 (\$351). Detailed case studies are set out in Chapter 6 on pages 23 – 34.

Telephone ladies receiving their packs to start their mobile phone businesses



It can be seen from the map of Bangladesh below that GrameenPhone has already covered almost all of the areas in Bangladesh. Some districts in the north and in the Chittagong Hill areas are yet to be brought under this Programme in the future.

Figure 1.1 GrameenPhone coverage in Bangladesh



1.6 Rationale of the study

If the pioneering work of the Village Pay Phone Programme is conducted successfully it is anticipated that:-

- It will be replicated widely.
- The advent of telephone services could change the social equilibrium in villages, as relatively wealthy villagers would use a service that remains in the hands of the village poor.
- The poor in the village have more ready access to these facilities as the phones are leased and managed by members of the Grameen Bank.
- It is expected that the poverty of the telephone ladies would be reduced through the flow of incremental income from selling services.

1.7 Objectives of the study

The objectives of this study on the Village Pay Phone Programme are as follows:

- To ascertain how, and to what extent, the Village Pay Phone Programme can promote the socio-economic uplift of villagers, especially of the poor.
- To evaluate the economic effects of the Village Pay Phone Programme at the household and village levels.
- To assess specific social impacts that include changes in the social equilibrium, empowerment of disadvantaged groups, kinship networks.

ⁱ World Bank and BCAS (1998) Bangladesh – A Long-run Perspective Study, University Press Ltd, Dhaka.

Methodology of the study

2.1 Study design

This study was designed using variables and indicators to help understand the impact of mobile telephone ownership on the socio-economic condition of the telephone owner (known as a telephone lady), as well as the overall uplift of the village. Some focus group discussions were held in some adjacent villages where the Village Pay Phone Programme is not in operation to provide a control. These villages were selected randomly.

Important aspects in the implementation of the study were the co-operation of Grameen Bank Zonal Managers, the active involvement of some officials of Grameen Bank and Grameen Shakti and participation of the sample respondents in the survey process.

In line with the design proposed for the study, the respondents were telephone ladies of various ages who were interviewed using a structured questionnaire (see Appendix A).

2.2 Sample design

The survey used a minimum sample size that was large enough to allow for reliable analysis (i.e. 100 respondents from different villages). It was mainly Assistant Engineers from the head office of Grameen Shakti and concerned Unit Managers in association with Grameen Bank Zonal Managers who carried out the interviews of the telephone ladies. Special training was given to them before starting their surveys.

The most commonly used sampling method was used in drawing a sample of 100 telephone ladies from experimental areas and 35 villagers for focus group discussion by way of control in villages where there was no VPP Programme. At the first stage of sampling, several villages with a village pay phone service were randomly selected.

2.3 Survey areas

The survey was carried out in different areas of the Sathkhira, Bagerhat, Khulna, Sylhet, Narayanganj, Feni and Noakhali districts of Bangladesh. While the total number of respondents was 100, they came from 91 different villages in the seven survey districts. The survey in these locations was supervised by the Grameen Shakti personnel in these respective locations (see Appendix B).

2.4 Data collection instruments (DCIs)

Data were generated by means of interviewing the telephone ladies and through group discussion in the control areas. A few customers of VPP were also interviewed. The data collection instruments include:-

- A set of interview schedules for the telephone ladies.
- A set of interview schedules for the customers.
- Focus group discussion guidelines to be used in the control area.

The customers and telephone ladies were interviewed verbally and the findings were recorded in the interview schedule.

2.5 Implementation

The study was implemented in three broad steps:--

- Step 1 Holding of several brainstorming sessions to deal with the operational issues regarding the variables and indicators as well as about the ways of conducting the survey.
- Step 2 Development of draft data collection instruments, pre-testing of all draft DCIs, finalising of DCIs and printing of the necessary copies, training of the field staff (Unit Managers of Grameen Shakti), actual field data collection, coding, editing and data processing.
- Step 3 Analysis and writing of the study report.

Both quantitative and qualitative approaches were used to collect relevant information. The questionnaire was developed in English. Special training was given to the Unit Managers deployed in collecting information. The topics of training included objectives of the study, sampling issues, content of the questions in the data collection instruments, techniques of interviewing, etc. A total of seven Grameen Shakti personnel were deployed for data collection.

The field work was carried out in the last two weeks of March 2002. The data analysis and tabulation plans with dummy tables were prepared during the data collection period.

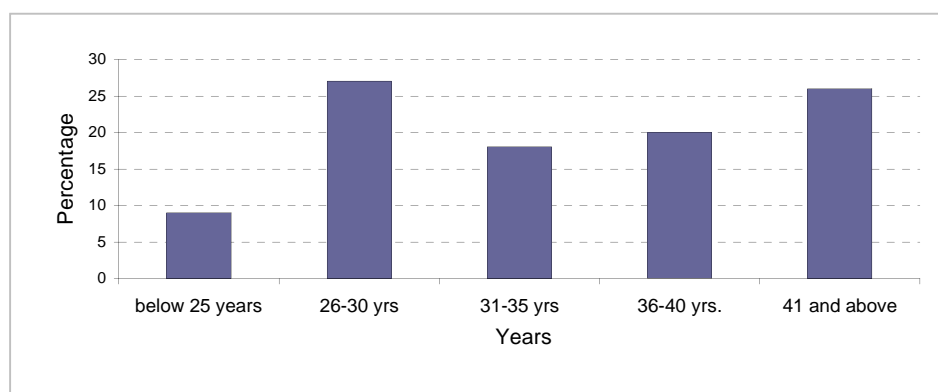
The data management activities comprised registration of filled in data collection instruments, data processing and computer entry. These were carried out at the Head Office of Grameen Shakti. SPSS software was used to enter, edit and analyse the data. The information obtained in the focus groups was analysed by the member of survey team for which task a substantial amount of time has been devoted in the brainstorming sessions within the core team.

Background information on telephone ladies

3.1 Age of telephone ladies

The mean age of the respondent telephone ladies is 36 years with a range from 25-41 years. It is observed that the dominant age group is 26-30 years which constitutes 27 per cent of total respondents.

Figure 3.1 Age group of telephone ladies



3.2 Duration of Grameen Bank membership

Telephone ladies have to be Grameen Bank members with a sound credit history.

The following table clearly shows that the duration of membership for most (42 per cent) of the respondents is between 6 - 10 years. More than one third of the respondents have been involved with the Grameen Bank for the last 2 - 5 years. Some of the respondents (2 per cent) have been involved with the Grameen Bank for more than 15 years. The mean duration of Grameen Bank membership for the respondents is 8 years.

Table 3.1 Length of Grameen Bank membership

Years of membership of Grameen Bank	Percentage of telephone ladies
2 – 5	36
6 – 10	42
11 – 15	20
16 and over	2

3.3 Average annual income of telephone ladies

The annual income of the telephone ladies before having a village pay phone ranged from Tk.10,000 (\$173) to Tk.195,000 (\$3,333). The mean annual income was Tk.55,632 (\$950). Since all telephone ladies were existing long-term Grameen Bank borrowers their income levels are higher than average in the rural areas of Bangladesh.

Use of the village pay phone

4.1 Duration of GrameenPhone connectivity

The Village Pay Phone Programme was launched in 1997. The study shows that the duration of GrameenPhone connectivity varies from 5 months to 43 months, with the mean duration being 16 months. Five case studies are given in Chapter Six of telephone ladies who have well established telephone businesses of at least 30 months.

4.2 Distance from GrameenPhone network

It has been noted that for the majority of telephone ladies (41 per cent), the GrameenPhone network is available within 16 to 30 km of their homes. Mean distance is 15 km. Notably, only 4 per cent of respondents live more than 31 km away from the GrameenPhone network.

Table 4.1 Distance from the GrameenPhone network

Distance (km)	Percentage of telephone ladies
Less than 5	28
6 – 15	27
16 - 30	41
31 and over	4

4.3 Status of landline phone

The Village Pay Phone Programme is in operation in some of the villages where a landline phone is also available. Approximately 55 per cent of all telephone ladies have access to both mobile and landline phones. A landline phone service is not available for the remaining 45 per cent of respondents.

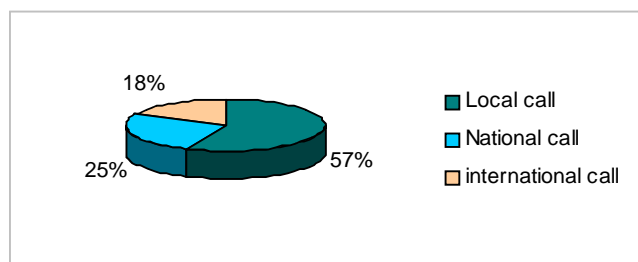
4.4 Customers' satisfaction with the service provided by landline phone

The survey showed that most customers are not satisfied with the landline service. Only 5 per cent are satisfied with the landline phone service.

4.5 Destination of calls made

All telephone ladies are connected with an ISD line, enabling local, national and international calls to be made. The destination of calls made (as opposed to received) can be seen in Figure 4.1, with 57 per cent being local, 25 per cent being national and 18 per cent being international.

Figure 4.1 Destination of calls made



4.6 Satisfaction levels with the performance of the village pay phone

The village pay phone enables rural people to make calls from their villages and also to receive calls from outside.

This study shows that people are highly satisfied with the performance of the village pay phone service as clearly depicted in Figure 4.2 below. 91 per cent of respondents classed its performance as excellent, whereas only 9 per cent are more or less satisfied, having some complaints about its services.

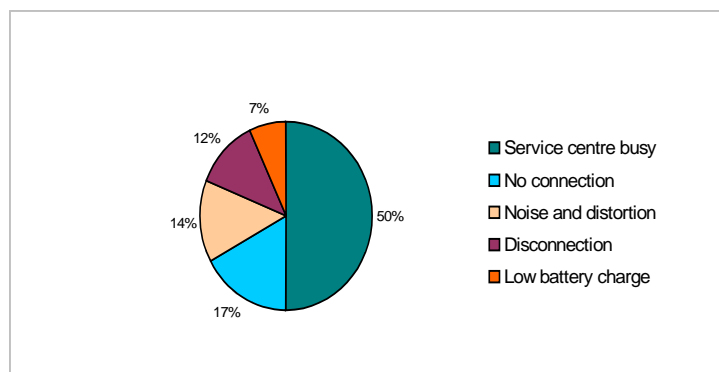
Figure 4.2 Consumers' satisfaction with the performance of VPP



4.7 Problems encountered with the village pay phone

The respondents were asked about the problems they usually face in connection with the Village Pay Phone Programme. About 58 per cent of the respondents do not face any kind of problem whatsoever. The remaining 42 per cent complained about different problems and these are shown in Figure 4.3 below.

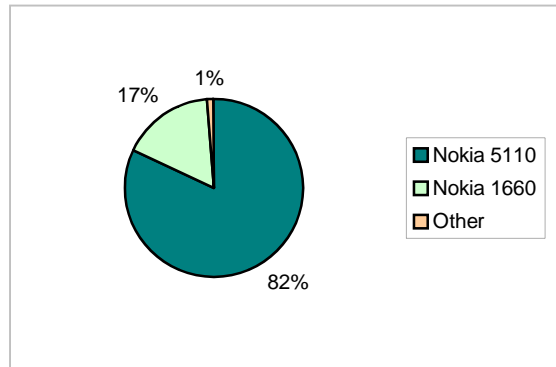
Figure 4.3 Problems complained of in connection with the village pay phone



4.8 Type of handset and charger used

The telephone ladies use different mobile handsets. The most popular handset used is the Nokia 5110. Eighty two per cent use Nokia 5110 and 17 per cent use Nokia 1610 and the rest use other handsets. They use electricity to charge their mobile handset. Ninety four per cent of respondents use mains electricity and the remaining six per cent use solar power to charge their set.

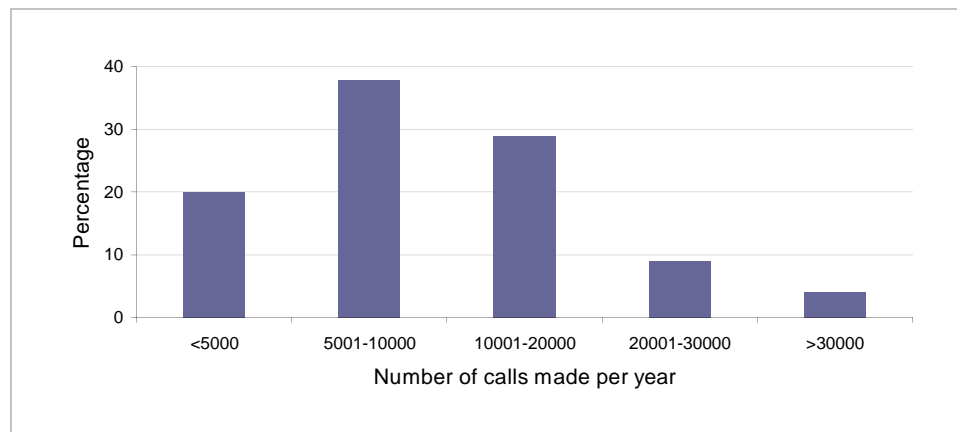
Figure 4.4 Type of handset used



4.9 Number of calls made in a year

The survey shows that the minimum number of calls made from one phone in a year is 1,800 and the maximum is 46,000 in a year. The mean number of calls is 11,330 per year. Figure 4.5 clearly shows the number of calls made in a year, with the most frequent band being 5,001 – 10,000.

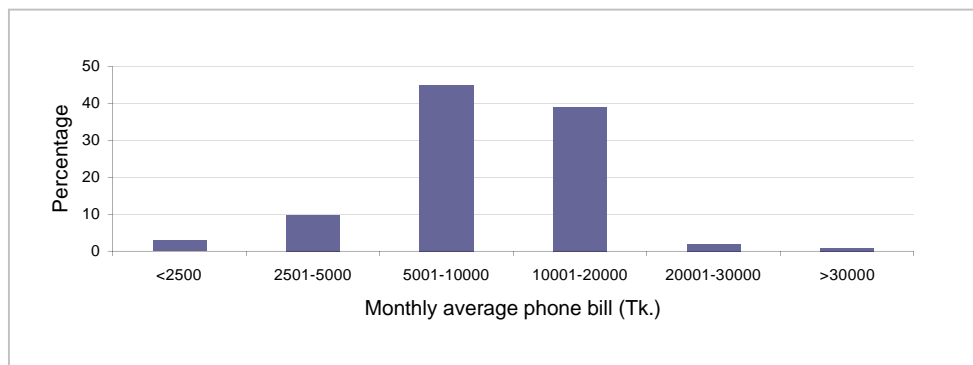
Figure 4.5 Number of calls made per year



4.10 Monthly average phone bill

The monthly average and range of phone bill can be seen in Figure 4.6. This ranges from Tk.1,200 - Tk.60,000 (\$20 - \$1,026). On average the phone bill received by the telephone lady is Tk.10,910 per month (\$186).

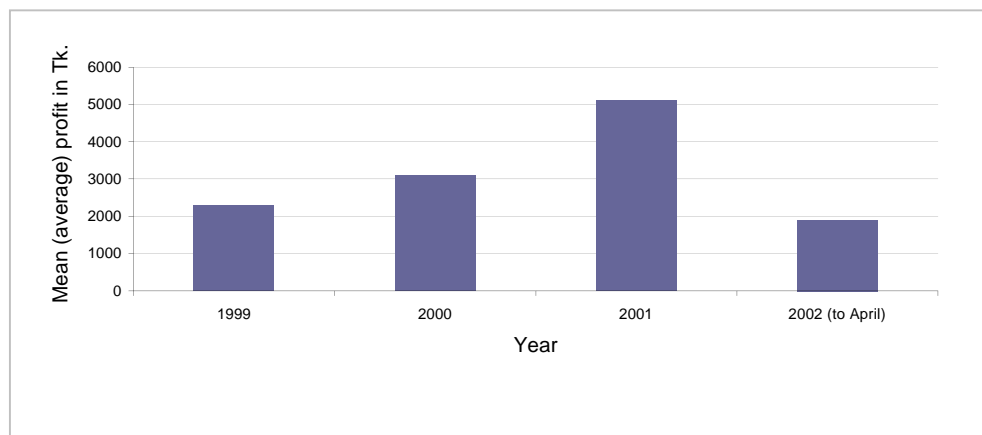
Figure 4.6 Monthly average phone bill



4.11 Profit earned from the village pay phone (1999 - 2002)

Telephone ladies have gradually started earning profit. It is clear from Figure 4.7 that over time the amount of profit is increasing. It was Tk.24,000 (\$410) on average in 1999 and it has increased to Tk. 51,000 (\$872) in 2001. The 2002 figures are up to April only.

Figure 4.7 Profit earned by the telephone ladies



4.12 Type of clients

It has been found that a range of clients come to the telephone ladies to make telephone calls. It is mostly business owners (96 per cent) who use the village pay phone. Other users are teachers (0.86 per cent), housewives (0.79 per cent), service holder (0.67 per cent). It is worth noting that students (0.49 per cent) and farmers (0.34 per cent) are also using the village pay phone.

4.13 Purpose of phone calls

The TeleCommons Development Group Report of March 2000ⁱ revealed that 58 per cent of all telephone calls completed were incoming international calls from people living outside of Bangladesh. Thus village pay phones provide an important link that enables relatives to stay in touch with family at home. Almost 42 per cent of Grameen Bank member phone users indicate that their main reasons for using the phone involve discussions of financial matters.

The study shows that the reasons for making a telephone call are mainly issues related to business, personal, official, social and political.



A telephone call being made from the home of a telephone lady



Local business people using the mobile phones to help their businesses

4.14 Problems involved in operating the Village Pay Phone Programme

- There may be pockets where a signal is not available making it impossible to establish a network.
The only solution in this case is to set up base station for which vast investment is required.
- Lack of maintenance appears as another problem in operating the village pay phone system. If any technical problem arises with the phone, the owner needs to go to town for it to be repaired which is time consuming.
Special training should be given to the operators so that they can carry out all necessary maintenance.

ⁱ Richardson D, Ramirez r, Haq M, (2000) A Multi-media Case Study, Tele Commons Development Group Report (TDG), March 2000.

The socio-economic impact of the Village Pay Phone Programme

This chapter seeks to identify the development effects of village pay phones, including socio-economic as well as health related aspects.

The economic effects are mainly related to income, whilst the socio-cultural effects are those pertaining to social status and empowerment, changes in the social equilibrium, improvement in health conditions etc.

5.1 Economic aspects

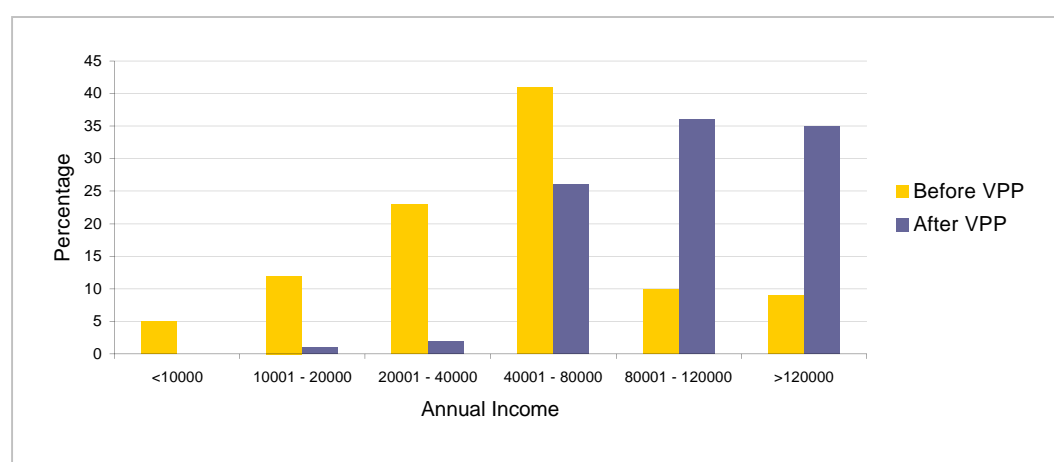
As an owner of a village pay phone (VPP), the income level of the telephone lady is increased. Table 5.1 below shows the minimum, maximum and average annual income before and after having a village pay phone are shown and these are Tk.55,632 (\$950) and Tk.112,122 (\$1,917) respectively.

Table 5.1 Annual income of telephone ladies

Average annual income	Minimum		Maximum		Mean	
	Tk.	\$	Tk,	\$	Tk.	\$
Before VPP	10,000	171	195,000	3,333	55,632	950
After VPP	11,100	190	270,000	4,615	112,122	1,917
From VPP	4,000	68	213,000	3,641	57,197	977

The following figures clearly show this increase in income level for a telephone lady after having a mobile phone business.

Figure 5.1 Annual income of telephone ladies before and after the village pay phone



5.2 Market information

Most of the telephone calls are made to get market information. This is followed by family and personal purposes and health related issues. Having better market information leads to better management of businesses. For example, a small egg producer will telephone different markets in order to find out which one is offering the highest price for eggs on that day.



Checking the market price of eggs on the phone



What is the price of bananas on the other side?

5.3 Social aspects

In addition to the economic impacts of VPP ownership, a section was added in the structured questionnaire to identify the social impacts. Respondents were asked about the social impacts in terms of the indicators shown below in Table 5.2.

Table 5.2 Social status of telephone ladies

Indicator	Status	Percentage
Social status	increased	100
Business hours	increased	90
Communication	increased	100
Self-confidence	increased	100
Dependency on the family	decreased	100
Access in family	increased	99
Treated as family burden	Not at all	100

All indicators (except dependency on the family) have increased as a result of owning a village phone. All of the respondents reported that their dependency on the family decreased. This is a positive outcome for telephone ladies. None of them are now considered as a burden in their respective families.

The owners of the phones seem to be more empowered than before, and they are proud to see that some of their erstwhile "patrons" are now turned into "clients" due to the ownership of the phones. The most dynamic social impact that VPPs seem to have created is the changing "social equilibrium" in sampled villages where the richer section now depends on the poorer section for the supply of a phone service. Even when the financial return from a traditional activity (e.g. livestock/poultry rearing) and the mobile

phone is the same, the sample households seem to prefer the latter because of more power and social status. From the villagers' point of view, the VPPs help them to face natural calamities far more quickly and effectively than before, establishing quick contact with relatives at home and abroad.

From the social point of view, it can be concluded that owning a mobile phone has led to:

- An increase in the social status of women in society.
- An increase in the confidence among women.
- The provision of a daily income.
- An increase in the range of knowledge about many other things.
- A gradual change in the social equilibrium.
- Substantial positive developments in the empowerment of women;
- A strengthening of kinship networks;
- Proof that women are no longer a burden on their families.

5.4 Health related aspects

Improved health condition is another important indicator of an improved quality of life. The questionnaire sought to identify health conditions before and after phone ownership.

The telephone ladies identified the different health service providers they used to go to for treatment. These service providers included doctor, fakir and kabiraz. A kabiraz is a village physician who treats the patient with herbal medicine obtained from local trees and shrubs, as well as minerals. Many people, especially poor people, use their services as they are cheaper. Fakirs are people who are enriched with spiritual knowledge and power which they use to treat poor people. Fakirs are mostly fakes and cheats. They earn money due to the ignorance and simplicity of the poverty stricken, unlettered and illiterate people.

Table 5.3 Means of health treatment

	Before having VPP (%)	After having VPP (%)
Doctor	70	99
Fakir	12	0
Kabiraz	18	1

Immunisation is essential for children to protect them from disease. Prior to the VPP programme 88 per cent of respondents used to immunize their children, now it is 96 per cent.

Women are encouraged to be aware of maintaining a small family size along with their increase in social and economic status. The survey results show that currently 86 per cent of the respondents use contraception compared to 72 per cent before the introduction of the VPP programme.

Health conscious people use sanitary latrines, so the use of a sanitary latrine was used as another indicator to judge their health consciousness. The findings are given in Table 5.4 below.

Table 5.4 Use of sanitary latrines

	Before having VPP (%)	After having VPP (%)
Using latrine	87	99
Not using latrine	13	1

The findings suggest that the VPP Programme has a positive impact on the usage of sanitary latrines. The table shows that there is 12 per cent increase in use of sanitary latrines due to this programme. This indicates they are becoming increasingly health and hygiene conscious.

5.5 Overall impact of the Village Pay Phone Programme

- Families stay in touch with their relatives who are working abroad.
- Where government landline telephone services are unlikely to arrive, the mobile phone has already begun to boost people's income and quality of life.
- Mobile phone technology appears to be the best available technical and organisational solution to rural telecommunication access.
- There are significant positive social and economic impacts in the whole village including relatively large consumer surplus for the telephone lady running the phone business.
- The Village Pay Phone Programme raises perhaps for the first time the important issue of gender when considering goals of universal telecommunication access.
- The availability of a village pay phone provides phone services urgently in the hour of need. For example, there are dramatic rescues through a life saving call to a doctor in case of emergency.
- The development of village pay phones can be considered basic infrastructure. Local producers secure the price of their products by asking the price in cities, and can cut out profiteering by the middlemen.
- The village phone reduces the communication gap between town and cities and reduces rural isolation.
- The village phone provides a new income source for the poor family who is selected to operate the village phone. It brings respect and honour in addition to money.
- It has allowed small businesses to flourish in some underdeveloped areas and means that rural people no longer have to move to cities to find jobs.

5.6 Villages without the Village Pay Phone Programme

Focus group discussions were arranged in five villages where the Village Pay Phone Programme is not operational. Seven respondents were in each group, giving a total of 35 persons contacted. These areas are Dacope, Korla, Rampal, Mollarhat, Fultala. In response to our queries, the villagers informed the interviewers that:

- Due to the lack of a modern communication system, their husbands or sons need to go to town or other places to contact relatives or for business. Much money and time is involved in doing so.
- Farmers and other traders cannot check market rates for their products and wholesalers usually cheat them.
- It is not possible to make urgent calls in the event of emergency, e.g. calling a doctor for a medical emergency.
- It is very difficult for them to stay in touch with relatives working overseas.

Case studies of five telephone ladies

The Grameen Bank branched out in 1997 from its traditional emphasis on loans for dairy cows, egg laying hens and rice husking machines and began leasing mobile phones to successful long time borrowers. This has geared up the life patterns of village women. Some case studies are given below:-

Case Study 1 Aleza Begum



Aleza Begum is a member of the Grameen Bank, Bashon Gazipur Branch in Gazipur District. She joined the bank in 1997. Her husband Md. Lutfar Rahman is a part-time pick-up driver. He gets work only during the sugar cane harvesting season, so almost every year they faced poverty without any job and income. When they got married they had two small rooms in a mud house. After forming a group of five borrowers, Aleza received a loan from the Grameen Bank and used it for a variety of purposes. She repaid the loan amount successfully to the Bank.

In 1999 when the Grameen Bank introduced mobile phones as possible small businesses for its borrowers, she was very much interested and finally she received a mobile phone under the leasing program.

At the beginning she faced different types of problems. In particular she did not know how to keep track of total airtime. This has now been sorted and Aleza and her husband have no more problems with their phone.

Aleza has one son and one daughter. Her son Md. Mashader Rahman studied up to Grade Eight. He is the one who is now mainly operating the phone business. Her daughter is in Grade Six.

Aleza has two good rooms now. The rooms are made with brick walls and a tin roof. She has saved the money from her mobile phone business income and has been able to have a proper house (brick built and tin roof) rather than a mud one within a very short period, which is the dream of her neighbours.

The size of her village is 4 km² and has a total population of 5,000. Around 40 to 50 people come to make phone calls every day. She has been operating the phone for the last three years and the average weekly calls are as follows:--

- Local calls - 560 minutes
- National calls - 70 minutes
- International calls - 40 minutes

Aleza Begum has a savings account in her Grameen Bank branch. All the income from the phone she deposits in her account. At the end of the month she pays the monthly telephone bill and then she uses the rest of the money to improve her livelihood. To date she has repaid Tk.17,000 (\$291) and interest to the bank for her mobile phone.

She has spent Tk. 50,000 (\$854) for her house improvements. She has taken a shop in the market by paying Tk. 20,000 (\$342). She spends Tk. 500 - 600 (\$8.5–10.2) monthly for her daughter's education. In addition she meets different kinds of family needs, for example, she has to spend a good amount of money around Tk. 50,000 (\$854) for her son's medical treatment.

In the future she wants to take a large loan to buy a pick-up truck for her husband and she also wants to expand her son's shop as well. One of her main ambitions is to send her daughter to college or university for higher education.

Generally people used to go 15 - 20 km from the village to Gazipur town to make phone calls. They never received calls from their relatives who are working abroad. Now they are making phone calls from the home and also receiving calls from abroad. By using the phone local business owners are getting the many advantages of speedy communication, which helps their businesses.

Those villages without a phone are left behind in the communications era and with the mobile phone they are further ahead than previously, as they have good communication and technology within their reach.

Aleza is now in an honoured position as she has established her family status in the society. People honour her. She is grateful to the Grameen Bank for the support that they have given her.

Case Study 2 Nurunnahar



Nurunnahar was born in poverty. She joined the Grameen Bank on 26 June 1994. At first she came to know about Grameen Bank activities through a neighbour. At that time her husband, Mr Azizul Rahman Al-Amin, worked in a grocery shop, which was owned by her father-in-law. Due to lack of the necessary capital her husband was unable to continue his shop business. For this reason he could not maintain his family properly. Nurunnahar took education up to Secondary School Certificate so she was very conscious about a better life. Due to this reason she became a member at the Grameen Bank. She invested her first loan in her husband's business, but the income was not sufficient to maintain her family.

At that time (1999) she became interested to receive a village pay phone after hearing about it in the centre meeting. After that she talked with her husband about the village pay phone service. But she was confused as to how it would be possible to operate or maintain a phone properly. One day she went to the Grameen Bank Kaligoni Branch office with her husband. After discussion with the Branch Manager she decided to operate a village pay phone. She got it under a leasing arrangement for Tk. 21,000 (\$359) on 24 May 1999.

Her husband used this phone for business purposes at her shop in the local Kaligoni market. He was also running a Photostat shop and a phone accessories business. At the beginning neither she nor her husband could operate the phone properly. In addition she faced bill collection and income-expenditure calculation problems but after a few days they were able to overcome these problems. Now both she and her husband are very skilled and experienced in VPP operations.

She had been operating her village pay phone since May 1999 and she has earned a lot of money. There are 70 to 80 people who regularly come to her house or shop to use the phone. The local people are highly pleased that Nurunnahar has got a phone

service. Due to the phone service she is now socially respected and economically sound and respected in the society.

Typical weekly calls are as follows:-

- Outgoing local calls - 1300 minutes
- Incoming local calls - 35 minutes
- Incoming international calls - 142 minutes
- Outgoing international calls - 15 minutes

To date she has paid Tk. 651,646 (\$11,139) in settlement of the phone bills. She pays Tk. 17,148 (\$293) for an average monthly bill. The highest monthly bill was Tk.25,780 (\$441) for April 2000 and the lowest bill was Tk.12,592 (\$215) for December 2001. From the beginning until now she has made a gross profit of approximately Tk. 600,000 (\$10,256). She has met all kinds of family costs with this profit, as well as purchasing many new items such as a colour television, a fridge, a wardrobe, a display cabinet, a fan and a cassette player etc.

For her future plans Nurunnahar is interested in taking out a micro-enterprise loan to buy a minibus in future. She has also received a Tk. 84,000 (\$1,435) loan for buying a photocopier machine. She has also been working in the local private eye hospital since October 2001.

Nurunnahar has one daughter and one son. Her son is studying in Grade Three. She wants her two children to continue their studying to ensure they go on to higher education. She lives with her husband and children in the village of Monsefpur. She has only one house that is made of mud and tin. In future she wants to build a brick house from the profit she has earned from her village pay phone business.

Nurunnahar has now realised how to improve her quality of life. She has achieved many milestones for her family after joining Grameen Bank. For this she is grateful to the Grameen Bank for providing her a loan for a village pay phone, without which she would not have achieved such glorious success in her life.

Case Study 3 Rasheda Begum



Rasheda Begum is a member of Grameen Bank Kaligong Branch in the Dhaka Zone. She joined a group in December 1991. Her group is No. 06, Centre No. 26 and Loanee No. 4243.

When Rasheda became a member of the group her economic status was very bad. Her husband worked in the fields as a daily labourer. They have four sons and four daughters. It was very difficult to maintain all the children and themselves from the income of daily labour. Rasheda and her husband were regularly unable to provide sufficient food for their children. It was very pathetic for parents. So Rasheda had to come out from the four walls of the house to find work to earn extra income. In the meantime the Grameen Bank had started its activity in their locality and Rasheda decided to join in a borrowers' group to receive a loan.

In December 1991 she received a Tk. 3,000 (\$51) loan for a paddy husking and poultry business. She paid off the loan amount successfully by weekly instalments. Next time she received Tk. 4,500 (\$77) to buy a cow. This loan was also repaid regularly by weekly instalments. When the Grameen Bank started the Village Pay Phone Programme, she was very interested to receive the mobile phone because her eldest son had already informed her that this was very profitable business.

In 1999 she received a mobile phone under the leasing loan programme. The total cost was around Tk. 21,000 (\$359). At present her eldest son Md. Rofiq is running this phone business. Resheda herself and her other children are helping in this business. Rasheda is earning more from this business than she expected. Now she has no problem for food, clothes and other things. All her daughters are already married. She is in a good position now by doing business in different times. The typical weekly phone calls are as follows:-

- Local calls - 900 minutes
- National calls - 35 minutes
- International calls - 100 minutes (incoming)
- International calls - 10 minutes (outgoing)

Generally the number of incoming calls is more than outgoing calls for international calls. Rasheda does not save the profit from the mobile phone. She invests this to expand their family rice business. She has a GPS account in the Grameen Bank where she monthly deposits Tk. 200 (\$3.4). Now she is one of the big business owners of their local market. In June 2001, she paid the highest amount of bill Tk.21,038 (\$360) and in August 2002 the lowest amount of bill Tk. 8,000 (\$137). In the last 38 months she has paid total bill of Tk. 450,814 (\$7,706). The average bill is Tk. 11,864 (\$209). As per her description the net profit is Tk.400,000 (\$6,838). Rasheda is planning to buy a lorry and expand the family rice business.

From the income of her phone business Rasheda has built a brick bathroom and has completed the brick wall of her house. In future she plans to complete the house in brick. So Rasheda gained status for her family in the village. Villagers now have the opportunity to make phone calls to different places. The businessmen are exchanging information on the market rate of different items using the phone. The village which is not on the landline phone network is really undeveloped and untouched by modern facilities.

Rasheda and her eldest son are very grateful to the Grameen Bank, as it has arranged mobile phone services for them that are affordable. They feel that the mobile phone is the main key to the change in their life. Many people come to visit their houses to make or receive phone calls. Rasheda feels honoured when they visit her house. She has managed to buy a colour television, a display cabinet and various other pieces of furniture. Rasheda believes that all poor people can change their economic status by doing some business if they are industrious and honest.

Case Study 4 Laily Begum



On 15th September 1992 Laily Begum joined as a replacement member in the Group No. 2, Centre No. 33 of the Grameen Bank Dakinkhan Uttara Branch in the Dhaka zone. As a child the family condition of her father was not that bad. After her marriage however in her husband's house her life was not smooth. Laily's husband, Mr Atikullah works as daily labourer. Laily herself sewed blankets for other people, did embroidery etc. leading a hand to mouth existence.

Observing the improvement in the living conditions of their landless neighbours, she became interested in joining the Grameen Bank in order to try and improve the living conditions of her own family. Initially she received Tk. 4,000 (\$68) as a loan to buy a milk cow and some chickens. By selling the calves of the milk cow she made a profit. Laily gave some capital to her husband to start a tea stall.

In this way she took out a loan five times from the Grameen Bank and was thinking about an alternative way to make more income for her family. At this stage she came to know that the Grameen Bank was offering village pay phone business opportunities to their members. At first this proposition seemed to be quite impossible to her. Before that time no poor and landless people of the locality were able to talk with a mobile telephone and Laily heard that only the rich people could use this expensive phone. The poor people of the locality didn't even have the capacity to eat three times a day, so how could they operate this VPP? She was very much surprised about this type of proposition.

When the centre manger discussed about VPP in the weekly centre meeting Laily showed a keen interest. At the initial stage Laily discussed about VPP with her relatives and neighbours. At that time some relatives and neighbours expressed comments such as "Grameen has told you this for nothing. Why will the Grameen authority give this costly and valuable thing to illiterate people?"

In the meantime, Grameen Bank officers and Grameen Telecom authorities began to come to Laily's house. At this time the people of the locality were excited as some new technology was coming to their village. They had no idea about the mobile phone at that time.

All imagination and dreams came true when Laily got the village pay phone on 26 March 1997. It was the most memorable day in her life that, as a pioneer of VPP, she talked to Her Excellency Sheikh Hasina, the Prime Minister of the People's Republic of Bangladesh. When Laily first got the phone in her hand her dream was fulfilled at last.

Taking the telephone handset in her hand, Laily and her husband Atikullah started walking from the Bank towards her house. On the way home some interested people tried to touch the telephone and wanted to be sure that the telephone set could be used to communicate with others. Mr Atikullah expressed his feelings at this situation, with the result that on the way home 12 - 14 persons used his telephone and he earned more than Tk. 100 (\$1.7). Mr Atikullah now operates VPP and also supervises the hotel and restaurant. Mrs Laily remains busy looking after household activities, helping her husband's business and preparing the boys and girls to go to school on time.

Laily's present family members are herself (aged 32) her husband (aged 40), a daughter aged 15 and two sons aged 12 and 8. All children are studying at school.

Before taking on the VPP, Laily had only a mud house to live in. Now she is living in a brick built house with two rooms and a veranda. In the veranda there are also two rooms, one for dining and another one for sitting. She has another house that is let to a doctor at a monthly rent of Tk. 1,500 (\$26). In that house one paramedic doctor and one doctor see patients regularly. On the roadside Laily had made five rooms for rent. Of the five rooms, Mr Atikullah uses one room for his VPP and hotel business. Two rooms have been rented as retail space at Tk. 500 (\$8.5) per month and another one is rented at Tk. 600 (\$10.2) per month.

Nearly seven thousand people live in Laily's village of Patir. It has an area of nearly two square kilometres. Nearly 40 - 50 people use Laily's VPP regularly. On average, the weekly calls total comes to about 600 minutes. One advantage is the ease of overseas calls where Mr Atikullah sends a message to the person requested and when he comes again talked to that particular person. In this process weekly call time comes to 100 minutes. The local call charge per minute is Tk. 6 within Bangladesh and for foreign countries the call charges are taken from Grameen Telecom's schedule rate. In addition, for incoming calls from overseas Mr Atikullah charges Tk.5 per minute and for local calls Tk.2 per minute. For outgoing calls Laily pays to Grameen Telecom as per the schedule rate, but for incoming calls what she earns is totally profit for her. In some cases for overseas calls people give her tips for sending a message to their residence.

Table 6.1 Income, expenditure and profit of Laily Begum's VPP business

Year	Income from outgoing and incoming calls (Tk.)	Bill from Telecom Dept. (Tk.)	Operating costs (Electricity and Battery) (Tk.)	Total expenditure (Tk.)	Net Income (Tk.)	Net Income (\$)
1	2	3	4	5=(3+4)	6=(2-5)	6=(2-5)
1997	108,725	66,586	2,500	69,086	39,639	678
1998	105,332	60,708	2,500	63,208	42,124	720
1999	80,458	46,216	2,500	48,716	31,742	543
2000	85,342	47,063	2,500	49,563	35,779	612
2001	120,681	70,057	2,500	72,557	48,124	823

With the profit from her VPP business, Laily Begum cultivates land which includes paddy and vegetable cultivation (tomato, brinjal, bean etc.), and pays for the childrens' house tutor as well as depositing money every month in her GPS account. She has also bought a refrigerator and some ornaments for her own use. In the early days of her marriage Laily wished to wear ornaments but she could not make or buy them, but now she has bought a necklace, earrings and a buckle for herself.

In the future Laily and her husband plan to develop an Internet and Voiceover IP with which they will be able to make international calls anywhere in the world at a minimum cost using the computer. They are very hopeful that they will be able to start a low-cost telephone system with the help of an internet connection. Laily's husband added that he could not learn in the school due to his illiteracy but now he determined to see his children qualified as a doctor and computer scientist.

Starting a telephone facility in the village gave a new opportunity to a range of rural people to communicate at home and abroad. Before this programme the villagers used to go more than five to six kilometers to make a telephone call. They had to spend more time and much money. Nowadays it is very easy to use the telephone. In any case of disease, pregnancy/delivery of women, any accident, urgent news of joys or sorrows it is now very easy to inform relatives in a moment, either at home and abroad.

In respect of the development of the locality or area Laily said that due to the facilities of the village pay phone a quick response to a whole range of transactions are now done very easily, including increase in money circulation, tranjection, purchasing land quickly, foreign currency remittance from abroad etc. The road communications are now improved and various types of building are being built for new business and factories. People from various companies are coming regularly to start new projects and by this means employment opportunities are increasing day by day.

With respect to the difference between a village with and without a phone, Laily said it may be compared with that of day and night. If for any reason the telephone service is stopped for a moment it seems to them that all the activities have stopped and it is an obstacle for development. With the coming of VPP the village is developing in a variety of ways. The prices of land and property are rising due to improved road communications, electricity and gas facilities are also expanding gradually. Laily and her husband said that with the help of modern technology they could connect to a cyber cafe and operate a fax machine and the VPP Programme would be more fruitful. If there were more VPPs in a village profits may decrease but the VPP operators would have to take more care about consumers and render better services

to the consumers in the competitive market. If more than one phone was installed in the same place there may arise some competition between the VPP owners. Somebody may charge under the standard rate fixed by telephone authority. In this situation he may get more customers. As a result the other owners of VPP may suffer. If there is no new work it will not be possible to operate a new telephone set.

To start the VPP Programme Laily spent Tk. 5,000 (\$85) to buy a new antenna for the phone and phone connection fee of Tk. 22,000 (\$376). Her weekly instalment for the phone was Tk. 160 (\$2.7). She paid in full for the phone on 1 November 1999.

The present value of total assets of Laily Begum are given below in Table 6.2. This compares to her position prior to first joining the Grameen Bank when she had a homestead (3 katha), 1 house, 1 cot, utensils and dress to the value of Tk. 75,000 (\$1,282).

Table 6.2 Current assets of Laily Begum and her family

Description	Quantity	Value (Tk.approx.)	Remarks
Homestead	8 katha	1,600,000	Present value of the land
Cultivation land	1 acre	500,000	
House	2	21,500,000	Brick made
Rented shop	5 rooms	150,000	
Refrigerator (8.5 ft ³)	1	29,000	
Television	1	7,300	Black and white
Tape recorder	1	2,000	
Steel almirah and showcase	1+1	9,000	
Cot	2	4,000	
Chair and table	2+2	1,000	For home use
Furniture of shop (chair and table)	16+4	5,400	
Gold ornaments (necklace, buckle etc)	300 gm	50,000	6 Bhari
VPP set (mobile phone)	1	22,000	
Utensils	4 fans and utensils	50,000	
TOTAL		2,644,700 (\$45,208)	

Laily informed us that after taking the village pay phone many men, including many foreigners, also came her residence. In the village those who did not care for her now show her respect. She now has a respectable position in society. Her husband, Mr Atikullah is treated as an honourable and well-known citizen in the locality. The VPP acts as an escalator in improving the quality of her life.

Case Study 5 Hoshneara



Hoshneara came from a very poor family. She studied up to Grade Ten. She has five brothers and sisters. Her parents met these costs by doing different sorts of small businesses. Hoshneara has grown up in a family that had to fight with poverty. She got married five years ago into another poor family in the neighbouring village. Her husband also had six brothers and sisters. They had two small rooms made of mud. The eldest two brothers had already left home.

Hoshneara's husband, Mr Babul Hossain, had a studio business in their village market. He had no camera of his own. The camera, which he used in his business, was rented. However, after marriage Hoshneara was trying to do some extra jobs and finally in 1997 she joined in a Grameen Bank group. She received Tk. 3500 (\$60) to purchase a sewing machine. She had the idea to do a tailoring job. She did well in this job and successfully repaid the loan to the Grameen Bank.

Next year she received another Tk. 5000 loan (\$85) to buy some cloth and started to make baby clothes. She sold these in their house and also in the market. She also repaid this loan amount to the bank successfully.

All members of her centre like Hoshneara very much as she is educated and punctual. In December 1999 Hoshneara received a mobile phone under the Grameen Bank leasing programme and started a mobile phone business with the villagers and other people as their customers. Sometimes her husband takes the phone set in his studio and sometimes she keeps it in their house.

To date they have earned a handsome amount of money from this phone business. From the income of this phone Hoshneara has already made a semi-permanent (tin roof with brick wall) house with three rooms. There is a balcony that is fenced by steel. From the profit Hoshneara bought a new camera at a cost of Tk. 8,000 (\$137). She spent Tk. 15,000 (\$256) for decoration of the studio and spent Tk. 200,000 (\$3,418) for completion of the house.

Everyday around 30 - 35 people come to make phone call. The average weekly calls are as follows:

- Local calls - 500 minutes
- National calls - 30 minutes
- International calls - 20 minutes

In the future Hoshneara wants to send her son to study at medical college and to expand the studio business.

The villagers are very happy that they can easily make phone calls to everywhere. The businessmen always come to make phone calls and they exchange the market rate. Hoshneara has one savings account in the Grameen Bank branch. She deposits 75 per cent of the income in this account and at the end of the month she pays the phone bill from this account. With the rest she maintains her family expenditure and invests to expand business.

Findings of the study

7.1 General findings

- The Grameen Bank's Village Pay Phone Programme is an innovative diversification in the Grameen Bank's micro-credit programmes, moving away from the funding of traditional activities to modern, service oriented activities.
- The introduction of micro-credit by the Grameen Bank has made it possible to reduce poverty levels and to bring enormous social and economic renewal in rural communities.
- The basic village phone package (Nokia hand-set, battery, fast charger, sign board, calculator, stopwatch, use guide in Bangladesh and price list for calling different locations) costs approximately Tk. 21,000(\$359).
- Population mobility is a key indicator of demand for telephone services. An estimated 450,000 Bangladeshis live abroad. The desire to keep in touch with their families back home represents a business opportunity for telephone ladies. It has been found that labour mobility in Bangladesh has increased enormously in the recent past.
- The VPP is not only for the poor. It also sells its services at commercial rates supplementing the government phone company.

7.2 Detailed findings

- Business is found to be the principal occupation for most of the household heads of the telephone ladies.
- More than half of the telephone ladies (55 per cent) repay Tk.200-300 as weekly installment for their phone business.
- The VPP is also operational in villages where landline phones are available.
- Almost all the respondents were not satisfied with the performance of landline phone, whereas 91 per cent are highly satisfied with the service provided by VPP.
- Of all calls made, 60 per cent are local, whereas 25 per cent are national and 15 per cent are international.
- Access to electricity enables the phone operator to recharge batteries or power the phone directly using mains electricity. It is found that 94 per cent of telephone ladies use mains electricity to charge their mobile set. It is hoped that solar electricity can be used for non-electrified areas and that there will be an increase in the 6 per cent currently using solar power for charging.
- The Village Pay Phone Programme is not only socially beneficial in effecting deep structural changes but also profitable.
- The level of income of the telephone ladies has increased significantly.
- The use of VPP has brought about a positive social improvement in the lives of telephone ladies and they have also become more health conscious than before.
- All of the telephone ladies have become optimistic about their life with the increase in the level of income and a better standard of living.

Conclusions of the study

Bangladesh, like many other countries in the developing world, is an example of telecommunication systems that do not work adequately. The emergence of the Village Pay Phone Programme may soon become an outstanding example of telecommunications that really work for social change and rural development. Social calls to family and friends frequently involve the transfer of information about market prices, market trends and currency exchange rates making the village phone an important tool for enabling households to take advantage of market information, to increase profits and reduce production costs of their small businesses.

The findings of this study call for a rapid reorientation in the thinking of policy makers. If rural development and poverty reduction continue to be government objectives, then the development of telecom services in rural areas appears to be a factor powerfully promoting and supporting these objectives.

8.1 Lessons learned and issues for scaling-up

- The Grameen Bank experience with the Village Pay Phone Programme reveals that there is a huge demand for mobile phones all over rural Bangladesh.
- People are willing to pay for VPP services, so services should be of high quality and careful consideration needs to be given to the pricing strategy.
- The promising Village Pay Phone Programme pursued by the Grameen Bank in some places is replicable in other places of the country.
- Illiterate women who have never seen a telephone before have mastered the skills quickly, gained confidence and earned new status and respect in their communities as owners of powerful and desirable assets.
- Women learn about medical information and the status of markets by overhearing conversation.

References

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Barkat, Abul, Rahman, Matin Ur, Noor, Tawheed Reza, Maksud, AKM, Azad, M Abul Kalam, *Baseline Survey of Essential Services Package Support Program (esp-sp) of Concern Bangladesh*, Grameen Village Phone, 1998

Questionnaire on telephone ladies

Name:

Age:

1. Address:

Your family at a glance

Member's name	Relation	Occupation

2. Date of Membership of Grameen Bank (GB):-----

3. Date of getting mobile phone with connectivity:-----

4. Type of mobile connection

☐ Regular

 ☐ National

 ☐ International

5. Which mobile set do you use? _____

6. How much did you take as loan for the mobile phone? _____

7. In which place do you provide mobile phone service?

9. a) Weekly installment Tk. _____ b) Number of total weeks _____

Technical aspects

10. Are fixed phones available at your locality? Yes/No

11. Are you satisfied with the service and charges of fixed phone? Yes/No

12. How do you feel regarding services of Grameen Phone?

☐ Excellent

 ☐ Good

 ☐ Fair

 ☐ Poor

13. Where is your nearest service and repair center for mobile set? _____

14. Operational and maintenance problems experienced with the system:

- a. Noise and distortion
- b. Low charge of battery
- c. Disconnection
- d. No connection
- e. Service center busy

15. Mobile phone network tower is _____ kilometers apart from your residence.

16. You use to charge phone set by

☐ Grid electricity

 ☐ Solar electricity
Economic aspects

17. How much do you earn on an average?

Per day _____ Per month _____ Per annum _____

18. How many clients use to call on an average?

Per day _____ Per month _____ Per annum _____

19. How much do you charge a client for mobile using per minute?

	Mobile to Mobile	NWD	ISD	Remarks
Incoming				
Outgoing				

20. Your monthly average phone bill? _____

21. Net profit you earn for the mobile service in

1997: _____ 1998: _____ 1999: _____ 2000: _____ 2001: _____

22. Your average annual income before having mobile phone:

- a. Household goods :
- b. Agricultural :
- c. Fisheries :
- d. Livestock :
- e. Transport :
- f. Others :

Total :

23. Average annual income from:

- a. Mobile Phone :
- b. Household goods :
- c. Agricultural :
- d. Fisheries :
- e. Livestock :
- f. Transport :
- g. Others :

Total :

Social aspects

24. You have clients of different groups like:

☐ Teacher ☐ Farmer ☐ Business ☐ Shopkeeper
☐ Students ☐ Housewife ☐ Service holder ☐ Self-employed

25. Purposes of caller over mobile phone:

☐ Business ☐ Personal ☐ Official ☐ Social ☐ Political

26. Percentage of call type per month (Approx.):

_____ Local _____ National _____ International

27. What impact mobile phone has created in your social life?
- i. Do you feel your status has been increased in your village for Mobile Phone? Yes/No

- ii. Do many people including former patrons appreciate you as well as respect? Yes/No

	<u>Increased</u>	<u>Decreased</u>	<u>No change</u>
iii. Business hours:	ð	ð	ð
iv. Social importance	ð	ð	ð
v. Communication	ð	ð	ð
vi. Self-confidence	ð	ð	ð
vii. Dependency	ð	ð	ð
viii. Access in family	ð	ð	ð

28. Do your family members consider you as burden? Yes/No

29. If you are ill where you go for treatment?

Before having mobile After having mobile

- Doctor
- Fakir
- Kobiraz

30. Do you prefer to take your child to a doctor for the following illness?

Before having mobile After having mobile

- Diarrhoea
- Pneumonia
- Fever
- Other

31. Do you go to a doctor / clinic for your own problems?

Before having mobile After having mobile

- During Pregnancy
- Family planning
- Others

32. Before having mobile After having mobile

- a) Do you immunize your children?
- b) Do you use any contraceptive method?
- c) What is your source of drinking water?
- d) Do you use sanitary latrine?

33. Do you send your children to school? Yes/No

34. There is no dream, no hope and no vision in life---is it true right now? Yes/No

Mobile Phone Owner's Signature _____

Sign:
(Surveyor)
Name:
Designation:

Survey areas

Sl. No.	Name of district	Number of villages	Number of respondents	Names and designations of interviewers
1.	Khulna	11	13	Habibur Rahman, Unit Manager, Paikgachha Unit (Dist: Khulna) and M. Mozammel Hoque (Unit Manager, Dacope Unit (Dist: Khulna), Grameen Shakti
2.	Bagerhat	17	20	M. Abdul Mannan Sarker, Unit Manager, Morelganj Unit (Dist: Bagerhat), Grameen Shakti
3.	Satkhira	19	20	A. K. Zahid, Unit Manager, Ashashuni Unit (Dist: Satkhira), Grameen Shakti
4.	Sylhet	15	16	Muhammad Hasan, Assistant Manager, Grameen Shakti, Head Office
5.	Narayanganj	13	14	Abdus Salam Khan, Assistant Engineer, Grameen Shakti, Head Office
6.	Feni	10	11	M. Saiful Islam, Assistant Engineer, Grameen Shakti, Head Office
7.	Noakhali	6	6	M. Saiful Islam, Assistant Engineer, Grameen Bank Head Office)
TOTAL		91	100	