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Phone Ladies- Change Agents to Shape the Bottom of the Pyramid: Experience of Bangladesh

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Abstract

“If we stop thinking of the poor as victims of as a burden and start recognizing them as resilient and creative entrepreneurs and value –conscious consumers, a whole new world of opportunity will open up”(Pralhad, 2005). ‘Village phone’ is such a weapon of social revolution in rural Bangladesh that fights against poverty by facilitating entrepreneurship , reducing transaction costs, and substituting for slow, unreliable transport and postal systems. It is a tool to empower the nation’s rural women with earnings, information, dignity and status. The women are now acting as change agents in rural Bangladesh by serving the community as an umbrella of information to solve all the problems at the robust pace. This paper seeks to determine the factors that are influencing the growth of village phone in Bangladesh. Our findings suggest the role of personal characteristics and social factors as crucial determinants for playing the role of change agents in the society. **Keywords:** Grameen village phone, phone lady, Bangladesh, entrepreneurship.

Introduction

Information is power. And it is such a power that can open up the windows of opportunities for a person as well as for a nation. For Bangladesh, ‘village phone’ is such a platform which is empowering the rural villagers with up-to-date information, connecting the community under an umbrella of communication and above all creating an army of women entrepreneurs who are acting as change agents to shape the future of the country. Village phone program has turned the deprived and inactive women into ‘phone lady’, a successful entrepreneur, a person of standing in her community. The program is managed by Grameen Telecom in cooperation with Grameen Bank and Grameen Phone covering 50,000 villages through 260,000 village phone operators which is providing the rural poor with new, exciting income-generating opportunities with upgraded social status of women in the community.

Objectives

This paper will explore the factors influencing the growth of ‘village phone based mobile entrepreneurship’ in Bangladesh. And our specific objectives are as follows:

- To conceptualize the village phone model activating in Bangladesh;
- To identify the role of core parties and determine the entrepreneurial factors influencing the growth of village phone model;
- To measure phone ladies’ satisfaction toward the core parties’ support and services;
- To evaluate the influence of social and entrepreneurial factors that are turning phone ladies into change agents;
- And finally, to determine the success rate of village phone model and giving guidelines for further improvement.

Methodology

The study has initially focused on qualitative research to conceptualize the model and to determine the factors which

are influencing the model. And then through survey method under quantitative research, the proposed model has been tested. To conduct the study, primary data were collected through personal in home interviews of phone ladies unstructured questionnaires (Malhotra, 2005).

In this study, to evaluate the factors affecting the growth of village phone model in Bangladesh, the level of scale was interval and the technique was five point likert type scale anchored at the numeral 1 with the verbal statement 'strongly disagree' and at the numeral 5 with the verbal statement 'strongly agree'. (Elbeck, 1987; Steiber, 1989). Multiple items were used to establish appropriate measurement properties (reliability and validity) of the selected constructs. The scale was reliable as the cornbach's alpha was evidenced as .819. The questionnaire was pretested several times to ensure that the wording, format, length, and sequencing of questions were appropriate.

In designing the sampling process, the target population includes all the village phone operators of Grameen Phone. As a technique, simple random sampling (Zikmund, 2004) was applied as the samples elements were collected from pre specified list. In this case, sample units were 4 and sample size was 130 in total. A total of 124 surveys were completed. Of the total number of completed surveys, 4 were considered problematic due to excessive missing data. The data from these surveys were not included in the data set. Thus, a total of 120 surveys were analyzed.

Structured questionnaire were used using the existing village phone village phone model. The model has been developed through depth interview and focus group discussion with experts. To conduct data analysis, one sample t-test under SPSS program has been applied to measure all the dimensions of village phone model.

Simultaneously, to make this paper more informative different published text books, related journals, reports, seminar papers, magazines and research works have been consulted. Literatures were generally collected from said sources and the Internet. As a result, a through review of literatures enabled us to make a consistent presentation of the theme of study.

Thus the paper is fine tuned into the following several rhythms: The first one after the introduction and objectives focuses on the literature review to determine the factors pertinent to the model development process, the second one proposes the model on factors affecting the growth, the third one describes the hypotheses to test the model, the fourth one provides the results of the hypothesis, the fifth one measures the rate of success and finally we provides recommendations along with conclusions.

Literature Review

"...In the developing world, things are very different. Mobile phones are increasingly recognized as powerful tools in the fight against poverty, since they reduce transaction costs, facilitate entrepreneurship and substitute for slow, unreliable transport and postal systems." (The Economist, October 1st-7th, 2005)

" Delora Begum's home office is a corrugated metal and straw hut in Bangladesh with a mud floor, no toilet and no running water., yet in this humble setting, she reigns as the 'phone lady'. A successful entrepreneur and a person of standing in her community. It's all due to a sleek Nokia cell phone. Mrs. Begum acquired the handset in 1999. Her telephone "booth" is mobile: during the day, it's the stall on the village's main dirt road; at night, callers drop by her family hut to use the cell phone. Once the phone hookup was made, incomes and quality of life improved almost immediately for many villagers. This new channel of communication allows villagers to learn the fair value of their rice and vegetables, cutting out middlemen notorious for exploiting them. They can arrange bank transfers or consult doctors in distant cities. Besides, a villager who is owner of a mobile phone earns about \$600 a year which is about twice the annual per capita income in Bangladesh."(Jordan, Wall Street Journal, June 25, 1999).

Like delora begum, Grameen phone now owns 260,000 village phone subscribers who are playing the role of a change agent in the rural parts of Bangladesh by connecting the community with their fingertips. And all these members who are mostly women have broken the vicious circle of poverty, elevated their social, economical and family status, quite well known in the locality and attained importance in the society, "Phones have helped elevate the status of the female phone operators in the village. Surveys have found that the Village Phone Operators become socially empowered as they earn an income, gaining participation in family decisions in which, in rural Bangladeshi society, women usually have no say"(WRI:2002). They are solving real problems and as a result, "the BOP

consumers get products and services at an affordable price but more important, they get recognition, respect and fair treatment”(prahalad,2005).One of the studies conducted by the TeleCommons Development Group (TDG) of Canada for the Canadian International Development Agency highlighted that "The Village Phone Program yields significant positive social and economic impacts, including relatively large consumer surplus and immeasurable quality of life benefits, The consumer surplus from a single phone call to Dhaka, a call that replaces the physical trip to the city, ranges from 264 percent to 9.8 percent of the mean monthly household income. The cost of a trip to the city ranges from 2 to 8 times the cost of a single phone call, meaning real savings for poor rural people of between BDT 132 to BDT 490 (USD 2.70 to USD 10) for individual calls," noted the TDG multi-media case study on the Village Phone Program."(www.grameenphone.com)

According to Dr. Muhammad Yunus, “Village Phone fosters meaningful, lasting change in people’s lives. It brings economic benefit to the local entrepreneurs who run the service like a public pay phone system, gives their communities greater access to government services and markets for their products, and connects them with friends and relatives living in other areas” (Keogh and Wood, 2005). This journey of such mobile entrepreneurship started in 1997 in Bangladesh and continued its dramatic growth till 2006 by connecting 60 million people and 61 zillas through it mobile entrepreneurs whom we are calling ‘phone ladies’. This unique program of Grameen phone paves the way for remote rural villagers to access into telecommunication facilities where no such services were available before. The Program enables mostly poor village women to own a Village Phone subscription and retail the phone service to her fellow villagers while providing them with a good income-earning opportunity. It is administered by Grameen Telecom in cooperation with Grameen Bank, the internationally renowned micro-credit lending institution.

Village Phone and its genesis

Village phone is the name of an information umbrella in rural Bangladesh to empower the rural community to access into telecommunication facilities and to solve their day to day problems. The business model is standing on a profitable partnership among the village Phone Company, telecommunication provider, and micro finance institute and phone users to present a win-win situation. By leapfrogging fixed infrastructure and leveraging existing wireless infrastructure, Village Phones offer a viable strategy for increasing teledensity in developing countries and helping the poor lift themselves out of poverty. (Keogh and Wood, 2005)

Village phone model and its Mechanism

In Bangladesh most of the people live in rural villages and until recently they were disconnected from urban cities and deprived of modern amenities due to lack of telecommunication facilities. With the advent of mobile communication, the situations improved a bit but telecommunication facilities remained beyond the reach of general people. In that critical situation Grameen village phone came up with a unique and solid business model to bring the village people under the communication network by facilitating entrepreneurship. To implement the model successfully, Grameen Bank (a micro finance organization) played a crucial role to interact with the customers at the bottom line, selling airtime and making financial transactions. These deep links into the community are essential for introducing new services which act as channel to market telecommunication services to the rural people. By utilizing microfinance institutions as a channel to market, Grameen phone in Bangladesh was able to tap a market that was previously inaccessible because of the prohibitively high cost of developing and maintaining a channel to this enormous market. As a member of a microfinance institution (Grameen Bank), a potential Village Phone Operator uses a loan to purchase everything needed to start their business. The Village Phone starter kit costs approximately US\$200-US\$250 and includes a mobile phone, prepaid airtime card, external Yagi antenna, charging solution, signage, marketing collateral, and other materials necessary to get started. The Starter Kit is created by the “Village Phone Company” (Grameen Telecom) which establishes relationships with microfinance institutions to bring this product to their customers. The Village Phone Company negotiates wholesale airtime rates from the Telecommunications Provider (Grameen phone) who provides access to existing telecommunications infrastructure for the Village Phone Operators. Individual villagers in rural areas can then visit their local Village Phone Operator and make an affordable phone call. With proceeds from the business, the Village Phone Operator contributes to their loan repayment and also purchases additional prepaid airtime cards. The microfinance institution earns money from the loan and also a percentage of the revenue from airtime sales. The Telecommunications Provider earns money through volume sales of airtime, and the Village Phone Company earns enough money to continue to promote and

expand the program. There are no subsidies in this model. It works because it is designed so that all parties in the partnership “win” (Keogh and wood, 2005).

Win-win situation among the parties (Keogh and wood, 2005)

partner	Essential service provided	Winning strategy
Telecommunication company	Communication structure coverage to the rural areas	New revenue generated from airtime sales from a previously inaccessible market.
Microfinance institution	Provide loans to village phone operators so they can purchase equipment to start a village phone business.	Income from loans and airtime sales and a new product to market to clients.
Village phone operator	Affordable telecommunications to members of their community.	Profitable business which earns a steady income.
Community members	Customer base for village phone operators.	Access to affordable telecommunication.
Village phone company	Crafts and manages relationships, facilitate supports, manage overall program.	Sustainable operation.

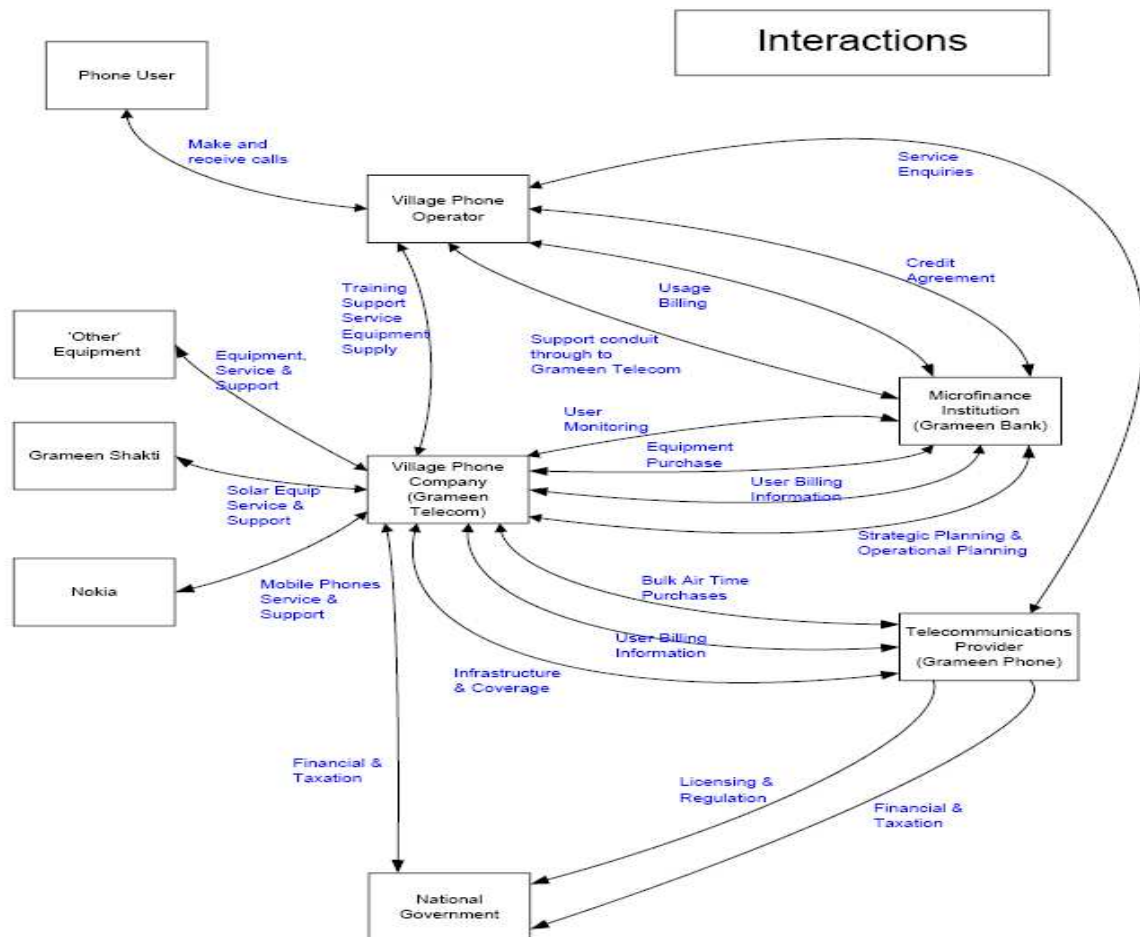


FIG1: INTERACTION AMONG THE PARTIES OF VILLAGE PHONE MODEL (KEOGH AND WOOD, 2005)

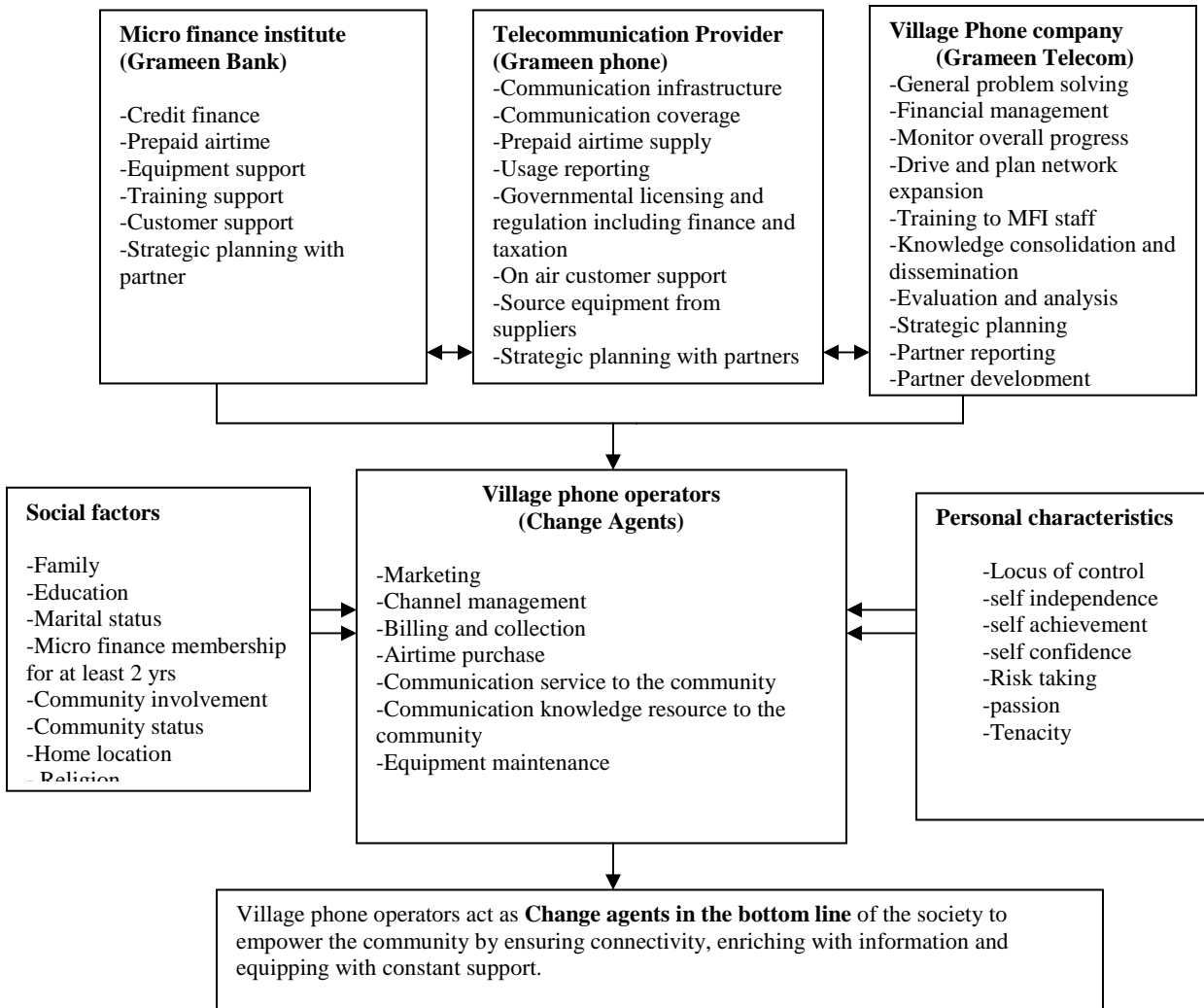
Mobile entrepreneurs and their personal characteristics analysis

“Entrepreneurship is the pursuit of opportunity beyond the resources you currently control.” (Stevenson 1983, 1985, 1990). Examining history and culture in more than 40 countries over the last two decades, some findings (Baum and Locke, 2004) emerge as follows:

- Entrepreneurship flourishes in communities where resources are mobile;
- Entrepreneurship is greater when successful members of a community reinvest excess;
- Capital in the projects of other community members;
- Entrepreneurship flourishes in communities in which success of other community members is celebrated rather than derided;
- Entrepreneurship is greater in communities that see change as positive rather than Negative.

Personality traits, organizational factors, and environmental factors have been studied by entrepreneurship researchers as causes of new venture success; however, from 1961 to 1990, research about entrepreneurs' traits found only weak effects (Aldrich & Wiedenmayer, 1993). The weak results for traits were surprising because new venture financiers and entrepreneurs themselves pointed to entrepreneurs' personal characteristics as dominant reasons for success (Sexton, 2001; Smith & Smith, 2000). Recently, a growing cohort of psychology-based researchers has renewed interest in entrepreneurs' personal characteristics as predictors of success by moving beyond the past focus on traits to study competencies, motivation, cognition, and behavior. More complex models, better research tools, and concepts that are closer to performance in terms of causality have been used (Baron, 1998; Baum, Locke, & Smith, 2001; Busenitz & Barney, 1997; Mitchell, Smith, Seawright, & Morse, 2000). Early entrepreneurship research focused on finding general traits and motives of successful entrepreneurs (Brockhaus, 1980). Researchers hoped that personality screening could help entrepreneurs avoid personal disappointment and could help nations avoid wasted resources (McClelland, 1965). To cope with these challenges, we believed that entrepreneurs had to genuinely love their work and be tenacious about pursuing their goals given the many obstacles they would face. Thus, *passion* and *tenacity* seemed most promising in terms of leadership and entrepreneurship theoretical support (Locke, 2000; Yukl, 1989). Besides, passion and tenacity, in our case, we will analyze *locus of control* in entrepreneurship as there is a positive correlation between venture success and internality (Jennings and Zietz, 1966), *need for independence* as he has a desire to be his own boss and to do things in his own way (Hisrich and Brush, 1985), *need for achievement* refers to psychological characteristics moving toward recognition (McClelland, 1965) and *risk taking intention* is a part of entrepreneurial process whether financial, social or psychological (Hisrich and Brush, 1985). If we think about personal characteristics of women entrepreneurs, then females are motivated by the same need for money, wish to be independent, and identification of business opportunities as their male counterparts (Garritson, Beyer and Namaki, 1986). In fact, when traditional personality tests are conducted, no significant differences emerge with regard to achievement motivation, autonomy, persistence, aggression, independence, non-conformity, goal-orientation, leadership, or locus of control. On only one important factor do males and females appear to differ significantly: self-confidence (Chaganti, 1986).

Model Development (on factors affecting the growth of mobile entrepreneurship)



It is quiet evident that the key parties which are moving the wheels of the model are microfinance organization, telecommunication provider, village phone company and village phone operators. The implementation of the model depends on successful execution of responsibilities of the key parties. Besides, village phone operators are also influenced by some social and personal factors which are influencing the growth of the business at the bottom line.

Hypotheses development:

H1: phone ladies' are satisfied toward the micro finance organization

H 1.1: Credit finance is adequate to buy village phone

H 1.2: Interest rate is within the tolerance level

H 1.3: Training is helpful to operate the business

H 1.4: Customer support GB is helpful to operate the business

H2: phone ladies’ are satisfied toward the telecommunication provider

H 2.1: My village phone is under the network coverage

H 2.2: I can connect to the network at any time

H 2.3: Customer support of GP is satisfactory

H3: phone ladies’ are satisfied toward the village phone company

H 3.1: Mobile set is satisfactory

H 3.2: Antenna can capture the network

H 3.3: Any Problems of set is fixed up promptly

H 3.4: we can gain profit after paying the bills

H4: phone ladies are possessing some specific entrepreneurial factors.

H 4.1: I have control over my business

H 4.2: I want to be self independent

H 4.3: I have a desire to achieve my goal

H 4.4: I have confident to reach my target

H 4.5: I have a passion for success

H 4.6: I will be stick to my business in any difficulty

H5: social factors influence the growth of village phone model

H 5.1: my family is supporting me to conduct my business

H 5.2: my primary education is helping me to operate my business

H 5.3: I am not facing any religious restrictions from my community.

H 5.4: I have got recognition in society.

H 5.5: other ladies want to follow me.

H6: overall, phone ladies are satisfied with their present venture.

H 6.1: village phone operators are satisfied with their venture

H 6.2: village phone operators recommend others to undertake this venture.

Results of Hypotheses Testing

TABLE 1: PHONE LADIES’ ARE SATISFIED TOWARD THE MICRO FINANCE ORGANIZATION

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
to determine the attitude toward credit finance	17.195	119	.000	1.233	1.09	1.38
to determine the attitude toward interest rate	31.795	119	.000	1.450	1.36	1.54
to determine the attitude toward training	31.795	119	.000	1.450	1.36	1.54
to determine the attitude toward service	11.317	119	.000	.908	.75	1.07

Through this analysis we have tried to figure out the role of grameen bank in facilitating the village phone program. It is evident from the analysis that the phone ladies are very much satisfied with the support of the grameen bank because here all the hypotheses have been accepted according to our one sample t-test.

H 1.1: Credit finance is adequate to buy village phone

Here the hypothesis is accepted since the calculated value (.000) is less than the critical value (.05). So we can conclude that Phone ladies are satisfied with the amount of credit provided by grameen bank to be an owner of a village phone.

H 1.2: Interest rate is within the tolerance level

Here the hypothesis is accepted since the calculated value (.000) is less than the critical value (.05). So we can conclude that Phone ladies are satisfied with the interest rate provided by grameen bank to be an owner of a village phone.

H 1.3: Training is helpful to operate the business

Here the hypothesis is accepted since the calculated value (.000) is less than the critical value (.05). So we can conclude that Phone ladies are satisfied with the training provided by grameen bank to be an owner of a village phone.

H 1.4: Customer support GB is helpful to operate the business

Here the hypothesis is accepted since the calculated value (.000) is less than the critical value (.05). So we can conclude that Phone ladies are satisfied with the customer support provided by grameen bank to be an owner of a village phone.

Table 2: phone ladies' are satisfied toward the telecommunication provider

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
to determine the attitude toward network coverage	16.353	119	.000	1.108	.97	1.24
to determine the attitude toward instant connection	16.279	119	.000	.992	.87	1.11
to determine the attitude toward customer support	13.362	119	.000	.892	.76	1.02

The above output clearly says that phone ladies are satisfied with the services of grameen phone (telecommunication provider) in terms of network coverage, instant connection and on air customer support. So this hypothesis is accepted as all the items' calculated value (.000) is less than the critical value (.05).

H 2.1: My village phone is under the network coverage

Phone ladies are satisfied with the network coverage set up by the grameen phone. So the hypothesis is accepted since the calculated value (.000) is less than the critical value (.05).

H 2.2: I can connect to the network at any time

Phone ladies can easily access into network whenever they want to meet up their clients' demand. So the hypothesis is accepted since the calculated value (.000) is less than the critical value (.05).

H 2.3: Customer support of GP is satisfactory

Phone ladies have expressed their satisfaction with the on air customer support of telecommunication provider (Grameen Phone). So the hypothesis is accepted since the calculated value (.000) is less than the critical value (.05).

TABLE 3: PHONE LADIES' ARE SATISFIED TOWARD THE VILLAGE PHONE COMPANY

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
to determine the attitude toward mobile set	22.024	119	.000	1.342	1.22	1.46
to determine the attitude toward antenna	14.037	119	.000	1.117	.96	1.27
to determine the attitude toward services of grameen telecom	27.671	119	.000	1.675	1.56	1.79
to determine the attitude toward profit	31.670	119	.000	1.442	1.35	1.53

Village Phone Company, that is, Grameen Telecom assists the village phone operators with mobile set, network connecting antenna, billing on calls and overall services. Our analysis says that phone ladies are satisfied with the village phone company from all dimensions.

H 3.1: Mobile set is satisfactory

Phone ladies are satisfied with the mobile set provided by the village phone company which is reflected in our hypothesis testing in which the calculated value (.000) is less than the critical value (.05).

H 3.2: Antenna can capture the network

Network connecting antennas provided by the village phone companies working well and assisting phone ladies to connect with the network at any time. This hypothesis is accepted as the calculated value (.000) is less than the critical value (.05).

H 3.3: Any Problems of set is fixed up promptly

Village Phone Company serves phone ladies promptly with their sales representative who are closely connected with the customers for dealing with the credit issue. So this hypothesis is accepted as the calculated value (.000) is less than the critical value (.05).

H 3.4: we can gain profit after paying the bills

Village phone operators are satisfied with the profit amount after paying their bills to the village phone company. And it is reflected in our hypothesis testing as the calculated value (.000) is less than the critical value (.05).

TABLE 4: PHONE LADIES POSSESS SOME SPECIFIC ENTREPRENEURIAL CHARACTERISTICS

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
to determine the attitude locus of control	22.809	119	.000	.992	.91	1.08
to determine the attitude toward self independence	30.860	119	.000	1.325	1.24	1.41
to determine the attitude toward self achievement	31.553	119	.000	1.433	1.34	1.52
to determine the attitude toward self confidence	16.572	119	.000	1.000	.88	1.12
to determine the attitude toward risks	31.296	119	.000	.892	.84	.95
to determine the attitude toward tenacity	30.017	119	.000	.883	.83	.94

At this phase of analysis, we have evaluated all the entrepreneurial factors which are influencing the growth of village phone based entrepreneurship in Bangladesh. Here it is clearly evident that phone ladies who have been proved as successful entrepreneurs by possessing some specific personal characteristics like locus of control, self independence, a strong desire of self achievement, self confidence, an easy mentality of taking risks and an aggressive mind to stick with the business in any difficulty.

- H 4.1:** I have control over my business
(Hypothesis is significant as calculated value .000 is less than .05)
- H 4.2:** I want to be self independent
(Hypothesis is significant as calculated value .000 is less than .05)
- H 4.3:** I have a desire to achieve my goal
(Hypothesis is significant as calculated value .000 is less than .05)
- H 4.4:** I have confident to reach my target
(Hypothesis is significant as calculated value .000 is less than .05)
- H 4.5:** I have a passion for success
(Hypothesis is significant as calculated value .000 is less than .05)
- H 4.6:** I will be stick to my business in any difficulty
(Hypothesis is significant as calculated value .000 is less than .05)

H5: SOCIAL FACTORS INFLUENCE THE GROWTH OF VILLAGE PHONE MODEL

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
to determine the attitude toward family support	34.233	119	.000	1.558	1.47	1.65
to determine the attitude toward community support	8.792	119	.000	.558	.43	.68
to determine the attitude toward primary education	3.802	119	.000	.108	.05	.16
to determine the attitude toward religious restriction	-2.087	119	.039	-.200	-.39	-.01

In addition to entrepreneurial factors, we have also analyzed the social factors which are fostering the growth of village phone model in Bangladesh. Here in our case, we have evidenced positive support from family, community, primary education and religion which are accelerating the growth of village phone in Bangladesh.

- H 5.1:** my family is supporting me to conduct my business
Phone ladies are satisfied with the support from the family which is reflected in our hypothesis testing in which the calculated value (.000) is less than the critical value (.05).
- H 5.2:** my primary education is helping me to operate my business
Phone ladies are expressing their positive intention toward primary education as it is helping them to run their business successfully. And it is reflected in our hypothesis testing in which the calculated value (.000) is less than the critical value (.05).
- H 5.3:** I am not facing any religious restrictions from my community.
Phone ladies are not facing any religious restrictions from the community to run the business as local NGOs are creating a lot of awareness programs over the issue. And it is reflected in our hypothesis testing in which the calculated value (.000) is less than the critical value (.05).
- H 5.4:** I have got recognition in society.

Phone ladies have got recognition to elevate their status in society which is reflected in the hypothesis testing as the calculated value (.000) is less than the critical value (.05)

H 5.5: other ladies want to follow me.

Phone ladies have become 'a role model' to others in the society and they also want to follow them. This is supported by our hypothesis testing as the calculated value (.000) is less than the critical value (.05).

TABLE 6: PHONE LADIES ARE SATISFIED WITH THEIR PRESENT VENTURE

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
to determine the attitude toward satisfaction	24.818	119	.000	1.550	1.43	1.67
to determine the attitude toward recommendation	16.553	119	.000	1.008	.89	1.13

Finally we have determined the level of satisfaction of village phone operators toward their ventures. It is clear that village phone operators are very satisfied with their business and they are ready to recommend others to undertake this venture and become successful entrepreneur.

H 6.1: village phone operators are satisfied with their venture

Phone ladies have expressed their utmost satisfaction toward their venture which is reflected in our hypothesis testing as the calculated value (.000) is less than the critical value (.05).

H 6.2: village phone operators recommend others to undertake this venture.

Phone ladies are also ready to recommend the venture mechanism to others to follow the way of development. And it is also reflected in our hypothesis testing as the calculated value (.000) is less than the critical value (.05).

Rate of Success in Bangladesh:

One of the greatest success stories in international development has been Grameen Village Phone program in Bangladesh. "... [Grameen Village Phone] has had considerable development benefits. It has reduced the cost of communications relative to other services such as transportation...the program has enabled the village pay phone entrepreneurs, poor by most standards but among the better-off in their villages, to turn a profit" (The World Bank Group Report: 2000) .

- The poor, disconnected and deprived people are now empowered with instant information to solve their problems. Now they don't need to make a costly physical trip to go to the city rather they can get the prompt support of phone ladies at their next doors. And in this way, the phone ladies are acting as change agents to shape the fates of their families and their neighbors.
- The typical "village phone lady" has an average income three times the national average. The most obvious benefit of the Village Phone program is the economic and social impact that this communications tool brings to the entire village.
- The local farmers are no more victims of unscrupulous middlemen, parents are no more worried about their kids' health and education and local community are no more afraid of the sudden attack of disasters, "Farmers from the villages use the phones to call the city markets to find out prices for their produce. Previously they were a little bit short-changed by their middlemen. The middlemen would say a lower price than what the actual market price was. So now they can call the market themselves to find out what the actual price of eggs or whatever their produce is. An independent study found that half the people who use the phones regularly, traders in rice or bananas for example, make more money from their business and they save 10 hours in travel time" (NPR: 2002).

- According to Prof. Iqbal Qadir(Cofounder, Grameen Phone), “If the Grameen Telecom experience is a reliable guide, then providing phone service yields powerful social and economic benefits in rural communities....Empowering poor communities by providing a wide range of digitally enabled self-help tools – via the private sector – could become a crucial part of an effective rural development strategy ... Business is a proven method of solving their [poor individuals] problems in a sustainable way.” (Keogh and wood, 2005).
- In a Canadian International Development Agency (CIDA) commissioned study, the consumer surplus for a single phone call ranges from 2.64% to 9.8% of mean monthly household income. The cost of a trip to the city ranges from two to eight times the cost of a single phone call, meaning that the real savings for poor rural people is between \$2.70 and \$10.00 for individual calls (Keogh and wood, 2005).
- The income that Village Phone Operators derive from the Village Phone is about 24% of the household income on average – in some cases it was as high as 40% of the household income. Because the phone operators are typically female and the phones are in their places of business, women who might otherwise have very limited access to a phone feel comfortable using Village Phones. Furthermore, as these phones become important for the whole village, the status of women in the communities where they work is enhanced.

Overall Findings and Recommendations:

Village phone program is an integrated model of development at the bottom line to turn the inactive workforce into successful entrepreneurs with the help of microfinance organization and mobile phone operators. Through our analysis it is clear that this dynamic entrepreneurship is not a one way journey, rather it is impacted by the personal characteristics, social factors and the pertinent organizations who are paving the way for this revolution.

- Since micro finance organization initially provides the credit to be a village phone owner, so they are in charge of selecting capable phone ladies which can be justified by our entrepreneurial factors of locus of control, self independence, self achievement, self confidence, tenacity and mentality to take risks.
- Village Phone Company can create social awareness programs highlighting the success of phone ladies and positioning them as ‘role models’ for others for development. They can also handle positively all social factors like the importance of primary education, religious flexibility the support of family and community to smooth the growth of village phone.
- The village phone company can target un-served and under-served regions and provide support for acquisition of quality market appraisal knowledge and market data through market research in the field.
- The Village Phone programme appears to be the best available technical solution for rural universal access under current regulatory and commercial circumstances. The Village Phone programme is the best solution to rural telecommunication access partly necessitated by a regulatory environment that is not conducive to advancing rural telecommunication infrastructure. So regulatory bodies can reduce taxes over this venture to smooth the growth of root level development.
- Finally, since phone ladies are acting as change agents, so we can turn them into information hub by linking with contend providers to a large extent. In this way, we can create a knowledge based community for radical development of society.

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