



Rural Telecom in India: Marketing Issues and Experiences from other countries

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ABSTRACT

Rural markets are an important and growing market for most products and services including telecom. The characteristics of the market in terms of low and spread out population and limited purchasing power make it a difficult market to capture. The Bottom of the pyramid marketing strategies and the 4 A's model of Availability, Affordability, Acceptability and Awareness provide us with a means of developing appropriate strategies to tackle the marketing issues for marketing telecom services in rural areas. Successful cases like the Grameen Phone in Bangladesh and Smart Communications Inc in Philippines also provide us with some guidelines to tackling the issue.

Keywords: Rural, Telecom, Marketing, BOP.

1. Introduction

Rural markets in India constitute a wide and untapped market for many products and services which are being marketed for the urban masses. There is a demand for telecommunication services to be provided to in these areas. Till now it was government which was trying to reach the villages through various initiatives, but the rural tele-density is very poor and can be improved only through the introduction of modern and suitable technology along with participation from the private operators. The paper here would like to make a strong case for the use of mobile technology for rural areas versus the land line, and that the initiative has to come from the private telecom operators rather than the government end. The various marketing issues related to marketing of telecommunication services in rural areas are seen through the 4 As framework and the experiences of other countries studied for learning.

The structure of paper is as follows, the first section would give a brief introduction to rural markets in India and the current status of telecommunication services. Section two talks about the linkage which exists between the telecommunication services and development, followed by a detailed section on the Bottom of the pyramid and 4 As model to address rural telecommunication issues. Next section looks at the successful experiences of four countries in rural telecommunication in rural areas. In the conclusion the implications are brought out for the Indian market.

2. Indian Rural Market

India lives in villages, close to 72 percent of Indian population lives in rural areas. In the country we have 6.36 lakh villages out of which only 13 percent have population above 2000. The rural economy

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contributes nearly half of the country's GDP (ETIG 2002-03) which is mainly agriculture driven and monsoon dependant. More than 50 percent of the sales FMCG and Durable companies come from the rural areas. The McKinsey report (2007) on the rise on consumer market in India predicts that in twenty years the rural Indian market will be larger than the total consumer markets in countries such as South Korea or Canada today, and almost four times the size of today's urban Indian market and estimated the size of the rural market at \$577 Billion.

Census of India defines rural as any habitation with a population density less than 400 per sq. km., where at least 75 percent of the male working population is engaged in agriculture and where there exists no municipality or board, and the same definition being accepted for the paper here. A marketer trying to market his product or service in the rural areas is faced by many challenges; the first is posed by the geographic spread and low population density in the villages in the country. The table below gives us the population and village size details in the country.

Table 1: Rural Population Statistics

Population	Number of Villages	Percentage of total villages
Less than 200	114267	17.9
200-499	155123	24.3
500-999	159400	25
1000-1999	125758	19.7
2000-4999	69135	10.8
5000-9999	11618	1.8
10000 & above	3064	0.5
Total	636365	100

Source: Census 2001

The second challenge is from the low purchasing power and limited disposable incomes in these parts of the country. But this has been changing in the last few decades with agricultural growth rate faster in the 1990's and 80's than the 1970's (CMIE 1996). Green revolution through the introduction of hybrid seeds, fertilizers and systematic irrigation had a major impact on agricultural productivity, and combined with it was a price policy which ensured minimum support price, and in turn insulated the farmers from market risk, cheap input policy and a stable demand (Vyas 2002). These all lead to a quantum jump in the incomes of farmers in the country. Initially the impact of green revolution could be seen only in the prosperous agricultural states of the country but now slowly its influence has spread across the country with the increase in irrigation (Bhalla & Singh 2001). Though the income levels overall are still very low there are many pockets of prosperity which have come up in the rural areas in the country.

According to NCAER 2002, the number of rural middle class house holds at 27.4 million is very close to their urban counterpart at 29.5 million. The improvement in the support prices being offered to farmers also has an impact on the disposable income with the farmers. And between, 1981-2001 there has been tremendous improvement in the literacy levels, poverty and rural housing in the villages of the country. Rural literacy levels have improved from 36 percent to 59 percent, the number of below poverty houses have declined from close to half to 46 percent and the number of pucca houses have doubled from 22 percent to 41 percent. These figures provide us with a clear picture that rural India with the increase in agricultural income and improving standards is on the verge of becoming a large untapped market which marketers have been aspiring for a very long period of time. Thus the current status of rural markets makes it an attractive market for marketers. The next section specifically looks at the current status of rural telecom and the technology perspective.

3. Rural Telecom, current status in India

According to the NCAER Rural Infrastructure Report (2007), the demand for telecommunication services are surging across rural India, as middle class and upper classes are growing in most villages but the tele-density levels are very low 1.67 per 100 residents compared with average of 8.59 overall and 25.90 in Indian cities. Table below gives us the details of the urban rural divide,

Table 2: Rural Urban Divide

	Rural	Urban
Mobile Phones	0.01 mn	75.685 mn
Fixed Lines	13.9 mn	36.988 mn
Private Operator share	0.01%	53.54%
PCO's	Approx 20 Lakh	Approx 35 Lakh
VPTs	533,000 villages (as of Sep2005)	
VPTs Target	Another 53,800 villages (by 2008)	
Total Number of Phones	Approx 14 mn	Approx 112 mn
Teledensity	Approx 2%	Approx 31%
Teledensity Targets	15% (by 2007)	43%

Source: Gupta (2006)

The characteristics of the rural areas, low population density and spread out population, difficult topographical and climatic conditions make it difficult to provide telecommunication service of acceptable quality by traditional means at affordable prices (CDOT, 2007). But with the development of new appropriate technology like wireless technologies have been accepted that it is possible to overcome these difficulties. Wireless technology has been proposed to be the first viable infrastructure to rural and underdeveloped areas (Pentland et.al, 2004) and Gunasekaran and Harmantzis, (2007) have therefore recommended that villages near a larger town can take advantage of the fiber backbone; a remote village can be connected via VSAT link. From the fiber backbone, a point-to-point or point-to multipoint WiMAX link can be used to connect one or more villages near the town, thus enabling WiMAX to distribute locally among all rural community groups in a given village using long distance Wi-Fi technology The technology angle to providing telecom services has been not been given much attention as it has been written on by many authors and the focus of the current paper is marketing issues related to marketing if telecom services.

Till recently it was the government which made an attempt at providing the services in rural India. The Government of India, Bharat Nirman Initiative, 2005-09, plans every village in the country to be connected by November 2007. The aim is to provide every village in the country with a Village Panchayat Phone (VPTs) by the year end. But the status and maintenance of the VPTs have been found to be lacking, and a large number of them have been found to be out of order and disconnected due to the non-payment of bills as villager perceive them as a free service provided by the government (Bhatnagar, 2000). And proviosn of one phone per village might not be abele to address the tele-density issues. The private telecom operators have been occupied with the urban market, India being the fastest growing mobile market in the world, but they have to take interest in the rural markets owing to the size and the fact that the rural markets are the ones that would provide them with the growth in future. Thus the government as provider of telecom services can only be a part of the solution and the major thrust has to come from the private operators. Lots of studies have found a positive linkage between telecom and level of development; the next section is about the same.

4. Linkage between Telecom and Development

Core sectors of the economy which includes telecom are said to have a direct bearing on transforming consumers into producer and promote economic development. A number of studies have documented the

positive impact of mobile phone adoption on rural development (Bhatnagar 2000, Waverman et.al, 2005). Telecom services would fall in the mid-space of the matrix of development versus profitability by serving low income consumers (Beshouri, 2006). Need for community based solution has been advocated by many; by tapping into local networks companies can serve low-income markets profitability (Beshouri, 2006). The successful examples of telecom in rural areas also points to the same direction, the Grameen Phone which has been successful has tapped the Microfinance network, and various ICT initiatives have taken the help of either successful cooperatives or have tied-up with a local NGO.

Experiences like the Grameen Phone have shown that provision of phone connectivity to a village serves two purposes, first leads to the economic development by helping individuals and business gain economic efficiency through communications, and promoting social and economic development for individuals who own and operate the telephone enterprises (World Resource Institute, 2001).

5. Marketing Issues in Rural Telecom

To address the issue of the urban and rural gap and reaching to the rural masses can be addressed by falling back on the Bottom of the Pyramid (BOP) marketing strategies as advocated by Prahalad (2004) and the 4 A's Availability, Affordability, Acceptability and Awareness (Anderson and Biliou, 2007, Kashyap and Raut, 2005). The BOP marketing strategies basically talk about aggregating the demand of consumers who have low individual purchasing power and are spread out. The basic commercial infrastructure suggested by Prahalad and Hart (2002) for the bottom of the pyramid markets constitutes of four things, creating buying power, improving access, tailoring local solutions and shaping aspirations.

The 4 As model described in Figure 1, is explained in the context of rural telecom. Each of the As is detailed out below.

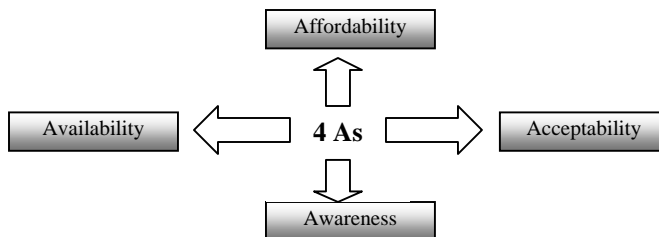


Figure 1: 4 As Model

Availability the first A is about making the product reach the consumers and in the case of telecom services studies have shown this to be the biggest barrier to be overcome (Anderson and Biliou, 2007). It has been acknowledged by many that distribution systems are the most critical component and a barrier which needs to be overcome (Prahalad & Hammond 2002) for success in marketing in rural areas. The task of distribution in these areas is considered to be more difficult than in urban areas (Mandira, 1977), low density of population and inaccessibility makes the problem of servicing villages individually difficult and often uneconomical. Direct delivery of goods even to the top one percent of villages cost twice as much as servicing urban markets (Ganguly 1985). To overcome the difficulties posed in distribution a phased spread of the services is recommended, wherein bigger villages can be targeted first, then the ones which are near a small town and connected and last would be the remote villages. In the distribution the importance of small town markets cannot be ignored and need to be given importance as besides being a point of distribution they can also be used for promoting products as villagers tend to come to the town frequently for either purchase of agricultural inputs or sale of their produce.

Acceptability issues would include issues needed to be addressed to improve the willingness to consume,

distribute or sell a product. It would also include how the product or service could be made more acceptable to the rural consumers by incorporating features which would make it attractive to them. With a telecom service there are two basic components of the service one being the handset and second being the recharge coupons. Innovation is needed at both the ends to be able to tackle both the issues. Affordability issues in telecom would include two sets of issues, the first being a fixed cost and an initial barrier for a villager to start with the service needs to be brought down and many companies including the market leader Nokia are working on low cost handsets which could be of use in rural areas. Within the product there is a need for customization in terms of language and user friendliness. The rural population where illiteracy is very high needs to be taken into consideration before coming out with the product and the feature which would be included in the product need to be rethought; the needs of rural consumer need to be taken into consideration. In a rural area a radio combined with a mobile might make more sense to the rural consumer than perhaps a camera. And while designing the phone one needs to keep the problems related to the power shortages in the villages.

The second component of recharge also needs to be tailored according to the needs of rural masses. The availability of disposable income in rural areas is cyclical relate to agricultural cycles and thus the recharge coupons provided in the urban areas might not be suited to the needs to farmers and the promotions and schemes to be used in these markets also need to be in accordance with the agricultural cycles. And it has been shown through the success of single use small packs that the cost per-use is more important than the cost of the overall product or service. The last A, Awareness is linked to the issues of promotion of telecom services in rural areas. The promotion of the services also needs to be adapted to the village environment; the language and means of communication used should be in the local language. The best places to promote the services could be the local haats and melas which is frequented by the villagers, the local festivals should also be included in the promotional plan, so should be the agricultural cycles.

Studies have shown that the communication needs of rural consumers are limited, in a study done by ICICI (1998) they found that nearly 70% of the outgoing traffic from rural areas is meant for a destination within the district. Of this 40% remained within the Taluka. Only 20% traffic goes to another district and hardly 10% to another State. International calls represent less than 1% of the traffic. The needs would go beyond basic commutation needs and initiatives like one by Reliance Telecom services which helps farmers ascertain market prices (Beshouri, 2006) should provide us with a pointer.

Lastly, issue of proper segmenting and targeting of village consumers should also be addressed. Rural India is not a homogenous mass, but there are pockets of prosperous villages and areas in the country and within villages the purchasing capacity of the villagers vary and the products to be offered need to be tailored to their needs. The next section looks at experiences of other countries which have been successful in rural telecom.

6. Successful Experiences in Rural Telecom

The table below summaries the four experiences of success rural telecom services provided in rural areas. The first one if the Grameen Phone experience in Bangladesh which is based on a share access model and has been successfully extended to other countries also. Second is the experience of Smart Communication Inc and how it adapted its services in rural areas if Philippines and improved the penetration of mobile services in the country. Third is the experience of rural communication in Chile and the constructive role that the government played in the scripting the success story there and last is the experience in Africa, the success story which has been documented by many researchers.

The Grameen Phone experiences show the importance of relying on a existing institutional infrastructure of the Microfinance helped it in succeeding and the use of a share access model. Similar initiatives on tying up

the rural telecom initiative in the country to some exiting Institutional Infrastructure like cooperatives or Microfinance institutions and NGOs would ensure more sustainable success of the launch of the services. And the Experience of Smart Communications Inc in Philippines reemphasizes the importance of making the services affordable by innovations in both service delivery as well as pricing of services. Learning form the Chile experience shows us that government too needs to play a constructive role, and the African experience highlights the importance of low cost handsets in the expansion of services.

Table 3: Rural Telecom Success Stories

Example	Salient Features	Reasons for success
Bangladesh – Grameen Phone (Grameen Foundation 2005, World Resource Institute, 2001)	<ul style="list-style-type: none"> - Captured 63% of the country’s Mobile market - Average of 60 customers use each phone and average monthly bills amount upto \$144.02 in 2000. - Model has been extended to Uganda 	<ul style="list-style-type: none"> - Share access business model - A cadre of phone entrepreneurs - Effective use of the Microfinance network for promoting Grameen Phone. - Use of GSM Technology - Significant subsidy being given to the service
Philippines – Smart Communications Inc (Anderson & Billou, 2007, Anderson et.al, 2005).	<ul style="list-style-type: none"> - Mobile penetration at 30% by 2004 and expected to reach 70 % by 2008. 	<ul style="list-style-type: none"> - Use of Innovative over the air payment system to overcome the availability problems -Developed smaller denominations of recharge -Use of used handsets reduced barriers to ownership.
Rural Communications – Chile (Wellenius, 2002)	<ul style="list-style-type: none"> -From 1995-2002 reduced the population living without access to basic voice communication from 15 to 1 percent 	<ul style="list-style-type: none"> - Reliance in market forces and minimum regulations - Simple and relatively expeditious processing - Effective Government leadership
African Experience in Mobile Telephony (Vodafone 2006, ITU 2006)	<ul style="list-style-type: none"> - 15 million mobile subscribers added to subscriber base in 2004, equivalent to total number of telephone subscribers in 1996 - Mobile penetration three times the land line at 9.1 per 100 inhabitants - 75 % of all African telephone subscribers are Mobile 	<ul style="list-style-type: none"> - Use of Mobile technology to leap-frog the older technologies -Ability of Mobile operators to provide mobile coverage rapidly - High degree of liberalization and competition in the mobile sector - Reduction in Tariff combined with “ultra-low-cost” Handsets and availability of prepaid service

7. Concluding remarks

The paper was inspired by the fact that even though the market attractiveness of rural markets has been accepted but very few of the private operators have actually made a success entry into the market. An attempt has been made to understand the marketing issues underlying marketing of telecom services in rural areas and why private operators have been not entering rural areas in a big scale. Various issues which need to be addressed in terms of pricing, product features both the mobile as well as the recharge which needs to be addressed to make rural telecom services a success in rural areas in the country have been brought out and so is the importance of use of existing institutional infrastructure. Thus for success in rural telecom operators have to be innovative in both product which they offer and the ways in which they tackle the challenges posed by rural markets.

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