

“Innovations in Pricing of Prepaid services adopted by CMSPs (Cellular Mobile Service Providers) and it’s impact on the Revenue Per Minute in Raising their bottom line : A case study of TRUMP¹ MTNL, Mumbai during the 12 month period of 2006.”

*B B Chaudhary, ** Dr. Vijay Wagh, * ** Dr. Pradip Manjrekar, **** Vani Kamath.

ABSTRACT

In March 2008 the number of mobile connections in India crossed 261 million mark. It is now having the second largest number of mobile connections in the world after China. The teledensity² in India is governed by three factors viz. growing household income, innovative price models adopted by CMSPs and telecom regulations. The mobile services market in India is the fastest growing market in the world. There are more than five CMSPs in each circle; it is becoming difficult for them to retain their market share. The mobile services provided by all of them are having almost same features. The CMSPs are making all possible efforts to increase their market share. Most of them have outsourced their non-core business activities. Some of them have tied up with software firms to provide content and niche services. They are adopting competitive strategy to differentiate their services from others. In order to penetrate the market they are offering the lowest call tariffs in the world. The only way to earn profit is by the economy of scales. MTNL has positioned Trump its Prepaid brand as the most affordable mobile service in the market by providing Price Leadership in voice and data services. The competitive strategy of CMSPs is to get the maximum number of customers by reducing prices.

The objectives of this research is to find out the innovative price models adopted by CMSPs and its impact on their bottom line. The ‘incoming free for life time’³ pricing model for prepaid mobile services, which was one of the driving forces behind the explosive growth of mobile connections in 2006, is selected for detailed analysis. A case study of TRUMP, MTNL, Mumbai during the last 12 month period of (January to December 2006) is discussed in detail to further support this hypothesis.

* Deputy General Manager (Customer Service) Mobile Service MTNL, Mumbai. (E-mail : bb.chaudhary@gmail.com).

**Professor, N. L. Dalmai Institute of Management Studies and Research, Mira Road, Dist: Thane, Maharashtra

***Professor & Head-Research and Extension Centre, Dr. D. Y. Patil Institute of Management Studies, CBD Belapur, Navi Mumbai.

****Lecturer, Dr. D. Y. Patil Institute of Management Studies, CBD Belapur, Navi Mumbai.

INTRODUCTION

In spite of an impressive growth, India lags behind the countries like Brazil and China in tele density. The need of the hour is Innovations in Pricing of mobile services, customer focused policy initiatives and inflow of funds to catch up with the leading achievers. The TABLE-1 below gives comparison of tele density in some countries as on December 2005.

Country	Population (Million)	GDP (per capita) US\$2004	Telephones (thousands)	Tele density
USA	298.21	36273	360347	122.71
UK	59.67	26369	94791	158.51
Australia	20.16	25436	29880	148.25
Brazil	186.41	3338	107987	59.78
Mexico	107.03	6328	66974	62.58
Sri Lanka	20.74	1031	4606	22.20
Korea	48.29	14136	62087	128.56
Japan	128.08	31324	153525	119.86
Indonesia	222.87	1156	59682	26.79
China	1315.84	1268	743861	56.53
Pakistan	153.96	614	18049	11.72
India*	1115.59	634	142092	23.81
World	6728.08	5944	3309379	49.45

TABLE-1: STATUS OF TELE DENSITY IN SOME COUNTRIES AS ON DEC, 2005.

* As on DECEMBER 2007, Source: International Telecommunication Union

Objectives of this Research

The objectives of this research are as follows:

- (1) to analyse the innovative price models adopted by CMSPs and
- (2) it's impact on the Revenue Per Minute in raising the bottom line of the CMSPs.

Hypothesis of this Research

The hypothesis of this research is:

H0: the “Innovations in pricing of the Prepaid mobile services adopted by CMSPs is having an impact on the Revenue Per minute in raising their bottom line”.

H1: the “Innovations in pricing of the Prepaid mobile services adopted by CMSPs is not having an impact on the Revenue Per Minute in raising their bottom line”.

The Innovations in pricing model ‘incoming free for life time’ for prepaid mobile services, which was one of the driving forces behind the explosive growth of mobile connections in 2006 is selected for detailed analysis. The impact of the other innovations in pricing was not found to be of any significance.

Challenges in Growth of Mobile Services in India

The mobile services in India were launched in August 1995, after the announcement of National Telecom Policy 1994 (NTP). The growth was slow in initial years because of the exorbitant prices of mobile handsets and unaffordable tariff. The announcement of New Telecom Policy (NTP) in 1999, heralded several innovations by CMSPs which sparked growth of mobile connections in India. The number of mobile connections added in 2002-03 was 6.26 million, in 2003-04 was 20.7 million, in 2004-05 was 18.48 million, in 2005-06 was 40.93 million and in 2006-07 was 71.98 million. The figures in brackets in TABLE- 2 below gives the new fixed and mobile connections added during the years.

Item	Growth during the Tenth five year plan (2002-07)				
	2002-03	2003-04	2004-05	2005-06	2006-07
In millions					
Fixed Lines	41.62 (3.40)	42.84 (1.22)	46.19 (3.35)	48.98 (2.79)	40.77 (-8.21)
Mobile	13.00 (6.26)	33.70 (20.70)	52.18 (18.48)	93.11 (40.93)	165.09 (71.98)
Total	54.62 (9.66)	76.54 (21.92)	98.37 (21.82)	142.09 (43.72)	205.86 (63.77)
Tele density	5.11	7.02	8.95	12.74	18.22

TABLE- 2: GROWTH OF FIXED LINES AND CELLULAR MOBILE TELEPHONES IN INDIA. SOURCE ERU, DoT

The Six Important Agencies Influencing the Prices of Mobile Services

The six important Agencies who influence the prices in mobile service are:

- i) The Government, which formulates the policies.
- ii) Telecom Regulatory Authority of India (TRAI) which regulates telecom business.
- iii) The CMSPs, who operate the services in their licensed areas.
- iv) Telecom Dispute Settlement and Appellate Tribunal (TDSAT) which settles dispute between CMSPs and TRAI.
- v) The OEM vendors who supply telecom equipments and mobile handsets.
- vi) The Value Added service ⁴(VAS) or content providers and
- vii) The distributors to retailers in the market.

India is divided into four service areas namely Metro, Circle-A, B, and C. The license is awarded to CMSPs circle wise, the Circle is almost co- terminus with the geographical boundary of the states. The details of the circles are given below in TABLE-3:

Sr. No	Service Area	States and Metros
1	Circle A	Maharashtra, Gujarat, Karnataka, Tamil Nadu and Andhra Pradesh.
2	Circle B	Kerala, Punjab, Haryana, Madhya Pradesh, Uttar Pradesh (E & N), Rajasthan, West Bengal, Andaman and Nicobar
3	Circle C	Himachal Pradesh, Bihar, Assam, North East and Jammu and Kashmir.
4	Metros	Mumbai, Kolkata, Chennai and Delhi

TABLE-3: THE DETAILS OF CIRCLE AND STATES.

Innovations as Business Strategy Only Way ahead for CMSPs.

Innovation is a process by which an idea or invention is commercially exploited. Innovation implies creating something new that is beneficial. The CMSPs are facing challenges imposed by unprecedented growth. They have chosen innovation as one of their business strategies to sustain competitive advantage and increase the number of customers. They are inventing price models to make mobile services more affordable. A system's approach to innovation is adopted by CMSPs, which is helping them in reducing the cost of mobile services. It is felt that Innovation is needed by them to maintain competitive advantage.

Innovation Models adopted by CMSPs.

Innovation is the most desirable capability that any organization can possess and nurture. Innovation is based upon the relationship between environment and the organizations. The social deterministic school of thought argues that innovation is a result of the combination of social factors and external influences. The argument is that when environment is conducive innovations will happen. The individualistic school of thought argues that innovators who are born with such talents can only do innovations. In organizations, innovation can be 'technology push'⁵ or 'market pull'⁶ or both. In telecom industry innovations are happening both in technology and marketing. In 'technology push' model manufacturer makes the products efficiently and marketing department offers them to customers. Whereas the 'customer driven model'⁷ emphasizes the role of marketing as an initiator of new ideas resulting from close interactions with customers. This model is widely used by CMSPs for marketing mobile services. The service delivery processes dealing with customer business process adopts interactive model also, this is latest approach to creative behavior in organizations. The telecom regulation and customer demands which are outside, the organization are facilitating innovations in the mobile service market.

OVERVIEW OF MOBILE SERVICES MARKETING MIX⁸

The mobile service market in India is crowded. There are more than five CMSPs in each circle⁹ and metro. They are facing intense competition and working hard to gain and maintain their market share. Along with the increase in supply of mobile services, there is an improvement in quality, which has resulted in mobile service being treated as commodity like Fast Moving Consumer Good (FMCG). The tariff of Prepaid service is normally more as compared to Post paid services. The Indian mobile service market is very price sensitive. The CMSPs are inventing price models to attract all segments of customers. The CMSPs are offering activation and deposit waiver and free handsets to postpaid customers and free validity and talk time to prepaid customers. The CMSPs have a well-woven network for retailing the mobile services through - Company branded shops, Distributors, Dealers, Retailers and Direct Sales Agents (DSA). The mobile services are retailed along with FMCGs in the market. The CMSPs have appointed distributors and retailers.

It is the retailers who are common for all dealers who are calling the shots and driving prices. Now, the prices of mobile services can be compared at the click of mouse. The customers are well educated today and take conscious decisions. They are vocal about the deficiencies and are asking for more freebies. The facility to activate the new mobile connections and provisioning is available with distributors. The runner¹⁰ collects Customer Agreement Forms¹¹ (CAF) and submits it to distributor for activation of mobile connections. The second sales channel are Company branded shops, which are owned by CMSPs. These are manned by employees of the company. The CMSPs have made provision in the budget for promoting the mobile services. They have not left any media unexploited to advertise and market their products. They also sponsor cultural shows on occasions of local festivals. They have tied up with leading Bollywood stars and models to promote their products. They have also appointed a number of DSAs who cater to personalized needs of customer and maintain Public Relations. The after sales services to mobile customers are provided by the call centers. The facility to make bill payments is extended by providing drop boxes in public places. The call centre is well equipped to address the grievances of customers. The CMSPs pay special attention to the customer business process so as to provide excellent services to the customers. They are well equipped with latest Information Technology tools to take care of customer needs. The CMSPs pay a lot of attention to the business processes employed for delivery of mobile services. They have employed advanced Billing and customer care systems (BCCS) to cater to the needs of customers. They use the best available architects to build customized shops. The design of all the shops, distributor's offices are standard to communicate the brand image. The employees attending the customers are well dressed and trained to provide customized after sales services. These shops are well equipped to demonstrate Value Added Services (VAS) also. Here the customers can have the real feel of service before buying it. The CSMPs are spending huge sums to build and maintain website which support very user-friendly 'self care' modules.

METHODOLOGY

Legacy system of pricing telecom services

In India two systems for pricing telecom services were used the flat rate and the measured rate. Under the former, subscriber has to pay a fixed monthly rental irrespective of the number of calls made. In the latter, the subscriber is charged a lower rental plus a usage charge per call. The Measured system of pricing still continues. The tariff of the calls was decided depending upon the time of origination of the call, day, distance, duration, more the number of calls made by the user higher the tariff. The rental was decided on the basis of the capacity of telephone exchange from where the customer is served. The rental for the rural connections was low as compared to the urban areas.

Different methods of Pricing

The prices are not an end in themselves, but a means to achieve an end. In India the end is to increase tele density and achieve universal telecom services at reasonable prices. This is driving CMSPs to innovate the price models. The pricing mechanism should encourage efficiency, provide financial viability, promote investment and support new services. It should curb the possibility of anti-competitive behavior in market. It shall ensure stability and predictability of prices in order to promote business confidence.

The Prices are based either on costs or demand. The cost-based price includes a rate of return (or mark-up) together with costs, i.e., they focus on economic costs, which include a normal commercial return. In telecom, there are two basic types of demand, one for accessing the network and other for usage, these two elements is priced separately, and the impact of price on these two types of demand need be considered separately while deriving the price models.

(A) Cost Based Pricing: The cost is equal to the sum of all fixed costs and variable costs; fixed costs are costs which do not vary with changes in traffic and variable costs are costs which change with the change in traffic. Three costs are considered while using the cost-based pricing they are short-run marginal costs, long-run incremental costs and fully-allocated costs. The Short-run marginal costs are those costs which arise due to an increase in the output level these costs are increment to total costs when an additional unit of output is produced. The long run incremental costs cover not just the normal variable costs but also the potential fixed costs. Long run incremental costs are based on forward-looking costs, and would thus incorporate the effects of economies of scale and technical change. The concern that a price based on marginal or long run incremental costs would not cover total costs has led to a consideration of fully-allocated costs. The Fully-allocated costs methodology covers all cost components, i.e. in addition to a consideration of the cost components covered by the long-run incremental costs; this methodology requires a full allocation of common or joint costs to the individual services.

The Mark-Up on Costs is done in three different ways. First way focuses on demand price and aims at minimizing the loss in efficiency that would arise if the price deviates from marginal costs. Second way is to use some uniform mark-up or thumb-rule for mark-up, such as a reasonable commercial return and third way is a two-part pricing which involves levying an access or rental charge while pricing the use of the service at its marginal cost, or pricing different levels or units of the services at different rates. Subsidies in telecom are provided for various reasons. The Ramsey rule states that the mark-up of price over marginal cost should be in an inverse proportion to the elasticity of demand for the product. For example, elasticity of demand of residential subscribers is likely to be more than that of business subscribers, because the demand of the former is likely to be affected much more by a change in telecom prices. Under the Ramsey rule, this would imply that a lower mark-up should be charged to residential subscribers and a higher mark-up to the business customers. The elasticity of telecom demand is affected by changes in the regulation also. The Ramsey rule can only be used as a rough guide for mark-up, while keeping in mind the above-mentioned social implications of this mark-up.

(B) Demand-Based Prices: The demand-based prices are determined independently of costs. A demand-based price reflects willingness of the user to pay for a service, which in turn is an indication of benefit value that the customer derives from the product. Based on these principles, this demand based price focuses not on efficiency in terms of cost, but on efficiency in terms of the value given by a customer.

The Price cap method is used for restructuring the telecom tariff in the markets where the level of competition is high and number of operators are more. Price floor and ceiling are also used to check abuse of market power. Unfair competition is a major concern in the telecom sector, which normally has dominant incumbent CSMPs in the market. Normally the long run incremental cost is used as floor price.

DISSCUSSION AND FINDINGS

(1) Innovations in Pricing.

The innovations in pricing of mobile services are driven by CMSPs. They are offering the services in innovative price models, which are very attractive. These innovations have contributed in the reduction of the cost of ownership and made mobile services more accessible for the low-income group customers.

The following innovative models for pricing new plans are adopted as compared to plain vanilla tariff models used in the legacy system.

- i) 'Incoming free for lifetime' plans. In this plan the free incoming calls are allowed to the customers, if they recharge for a small amount every six months.
- ii) One India tariff plan (1 Rupee/min anywhere in India). This plan is for the customers making heavy subscriber Trunk Dialing (STD) calls.
- iii) One India Roaming Plan. (1 Rupee/min while roaming in India). This plan is for customers using the national roaming services frequently.
- iv) The Pre paid customer can Barter talk minutes for extension of account validity.
- v) The availability and affordability of the Micro refill coupons in various denominations (e.g. small refill of Rs 10 and validity extension at the rate of Rs3/- per day.).
- vi) Bundling of Mobile handset with tariff plans, where the mobile handsets are offered free of charge.
- vii) Attractive Value Added Services which are compatible with less sophisticated handsets e.g. voice based SMS in place of the text based SMS and services on voice platforms for access to services on voice in place of the SMS.

(2) The ‘Incoming free for Lifetime’ price model: The ‘Incoming free for Lifetime’ price model is a departure from the traditional price model, in this rental component is charged only once in the life of the customer. This was an innovative price model invented by CMSPs to attract new customers. ‘Incoming free for lifetime’ price model was first announced by Airtel in December 2005. This was launched after ‘Non-Stop Mobile’¹² scheme launched by Tata Teleservices turned out to be a big hit which allowed customers to receive free incoming calls for two years without recharging. The ‘Incoming free for life time’ was offered to customers on one time payment of Rs 999/-, with the condition that customer shall recharge his account once in every 6 months. In this pricing model the Revenue per Minute (RPM) for out going call charges were kept much higher than the other price model to compensate for the monthly rental component charges. The analysis of the Impact of ‘Incoming free for life time’ price model is done on three vital parameters viz. Revenue per minute (RPM), number of new customers added¹³ and Minutes of usage¹⁴(MOU).

The number of Customers who opted for 'Incoming free for lifetime' price model through out India as on 30th June 2006 after 6 months of launch of this scheme is given in TABLE-4 below

Number of Customers (in million.)	Life time plan	New customers.	Migrated customers.	Customers who recharged per Month
Circle A	6.60	54%	46%	66%
Circle B	4.86	51%	49%	88%
Circle C	1.36	41%	59%	94%
Metro	3.28	51%	54%	62%
All India	16.10	51%	49%	72%

TABLE- 4: MOBILE CUSTOMERS IN 'INCOMING FREE FOR LIFE TIME ' as on 30th June 06.

Source: TRAI Study Paper: No.3/2006 New Delhi 19/12/2006. (All figures in million)

It can be seen from the above that 16.10 Million customers opted for this model. This scheme was a major contributor to the growth of mobile connections in 2006. The ‘Incoming free for life time’ attracted 51% new customers and the rest migrated from the existing plans. The conversion of customers from the Postpaid to Prepaid was also noticed. It is also seen that on an all India average 72% of the “Incoming free for life time” customers recharged every month.

The break up of minutes of usage per customer per month in 'incoming free for Lifetime' price model shows that they made 57 minutes of outgoing calls and received 214 minutes of incoming calls per month. The ratio of Incoming minutes to the outgoing minutes is 79:21, against the generally observed incoming and outgoing minutes of usage pattern of 60:40 in other prepaid price models.

Minutes of Usage	Incoming Minutes	Outgoing Minutes	Total Minutes
Circle A	80%	20%	266
Circle B	77%	23%	271
Circle C	78%	22%	317
Metro	80%	20%	269
All India	79%	21%	271

TABLE -5: AVERAGE MINUTES OF USAGE PER CUSTOMERS PER MONTH IN 'INCOMING FREE FOR LIFE TIME ' price model for the period Jan. 06 to June 06

Source:TRAI Study Paper: No.3/2006 New Delhi 19/12/2006.

The comparative chart of the ARPU of the 'Incoming free for life time 'price model is tabulated below.

Circle	ARPU (Life)	ARPU (other)	RPM (Life)	RPM (other)
A	223	-	0.84	-
B	219	-	0.81	-
C	237	-	0.76	-
Metro	205	-	0.76	-
All India	218	261	0.80	0.77

TABLE -6: The REVENUE COMPOSITION FOR 'INCOMING FREE FOR LIFE TIME ' price plan as 30th June 06.

Source:TRAI Study Paper: No.3/2006 New Delhi 19/12/2006.

The average all India ARPU of the ‘incoming free for lifetime’ price model is Rs.218 per month. The revenue Composition of this model shows that a large portion of revenue is contributed by outgoing calls and other services. This implies that this price model is not different from other pricing models. The revenue per minute ‘Incoming free for Lifetime price model is Re.0.80, which is higher as compared with RPM of Re.0.77 of other price models.

(3) A Case Study of Trump Prepaid brand of Mahanagar Telephone Nigam Limited (MTNL) Mumbai, To further validate the research hypothesis the sale figures of MTNL Mumbai were taken for a period of 12 months.

Year 2006	Sale of Life time Refill	New customer	% of Life time Customers out of new customers	ARPU (in Rs. per month)
January	87,641	57,613	47,326	374
February	39,088	42,821	25,016	185
March	26,489	62,453	12,970	353
April	18,081	35,444	9,943	181
May	15,653	37,187	9,548	166
June	16,936	35,422	8,637	143
August	20,177	35,182	12,913	215
September	16,978	5,457	3,225	216
October	17,479	29,835	10,836	179
November	18,309	29,764	8,971	207
December	16954	27,611	9,155	210
Total	3,13,471	1,61,494	56,304	2663/12

TABLE-8: The number of the new customers added in ‘incoming free life time’ price model during the last 12 months for the period of 2006 for Trump Prepaid services of MTNL Mumbai.

The average revenue per minute of 'Incoming free for life time' price model during the last 12 months period was found to be Re 0.79. The average ARPU Rs 222/- of Trump MTNL was found to Rs 222/- which conforms the all India trend.

Impact on the Bottom line (inclusive of all taxes) =

{Sales of the Refill Coupons + New Customers added X ARPU}.

{3.13 lacs X Rs 1008 + 1.61 lacs X Rs.222} = Rs. 34 crores approximately.

This study was also done on three vital parameters viz. revenue per minute, new customers' added and average revenue per user. It was found that the 'incoming free for life time' pricing model increased the number of new customers for which MTNL was looking for desperately. The average revenue per minute for incoming free model is Re. 0.79 which is more as compared to the Re 0.77 RPM of other prepaid schemes. In this case study the ARPU is Rs 222/- which is more than the average ARPU of the prepaid customers in other schemes. Hence on the basis of the matrices it can be concluded that this pricing model has increased the bottom line of the companies significantly by adding new customers with higher RPM and the research hypothesis is TRUE.

CONCLUSIONS

The CMSPs have chosen Innovation as one of their business strategies to sustain competitive edge. They are working on innovations in the mobile services products and processes. The 'Incoming free for life time' Pricing Models for prepaid services adopted by them is having an impact in raising their bottom line significantly by attracting new customers, higher revenue per minute per customer and the Average revenue per user.

Hence the research hypothesis the "Innovations in pricing of the Prepaid mobile services adopted by CMSPs is having an impact on the Revenue Per minute in raising their bottom line" is proved and accepted.

ACKNOWLEDEMENTS

1. Shri J Gopal, Executive Director, MTNL, Mumbai.

Librarian, Dr.D.Y. Patil Institute of Management Studies, CBD Belapur, Navi Mumbai

REFERENCES.

[²] TRUMP is the prepaid brand launched by Mahanagar Telephone Nigam Limited.

[²] The number of the telephone connections per 100 persons.

[³] Incoming Lifetime free is a pricing model offered by the CMSPs in India.

[⁴] VAS-Value added service providers such as Ring Back Tone, etc.

[⁵], Dr C S G Krishna & Dr R Lalitha Innovation Management, Himalaya Publishing house Mumbai, 2007.

[⁶] Dr C S G Krishna & Dr R Lalitha, Innovation Management, Himalaya Publishing House, Mumbai, 2007.

[⁷] Dr C S G Krishnamacharyulu & Dr R Lalitha, Innovation Management, Himalaya Publishing House Mumbai , 2007.

[⁸] C Bhattacharjee, Service Sector Management: An Indian Prospective, Jaico Publishing House Mumbai, 2007.

[⁹] India is divided in to small geographical areas for granting licenses.

[¹⁰] A person who is employed by the retailer of the CMSPs who collects the CAF from the customer and arranges for the activation of the mobile connection.

[¹¹] Customer Agreement form this is used by the CMSPs to register the request of the customer for new mobile connection.

[¹²] ARPU(average revenue per user) is a parameter used to calculate performance of mobile services .

[¹³] New customers ,this is very significant for the CMSPs as the revenue depends on the number of the customers.

[¹⁴] MOU (Minutes of usage) is the average number of total usage of the customers divided by the total number of the customers.

[16].Study paper 3/2006 TRAI dated 19/12/2006.

[17].Report of the working group on the telecom sector for the Eleventh Five Year Plan(2002-07) dated Oct 06, 2002.

[18].<http://www.trai.gov.in>.