Rural marketing is the most significant and promising component of Indian marketing system. With the majority of population residing in villages, rural markets offer tremendous opportunities to the marketers not only in durables but in services also. Indian rural market is wide and untapped in respect of many products and services, including telecommunication means which are being marketed in urban areas. Access to information and telecommunications is essential for the development of rural areas and it leads to the economic development of the country. Before liberalization, universal service objective has been met by the Department of Telecommunication, Government of India through a series of programs like Long Distance Public Telephone Program (progressively increasing the scope to the provision of a public telephone within 5 kms of any habitation one telephone in a hexagon of size 5 square kilometres), Gram Panchayat Phone (one phone in each Gram Panchayat), and Village Public Telephone Program (one phone in each revenue village) to provide access to voice services (TRAI, 2004). While liberalizing the access segment, the post National Telecom Policy’ 1994, the roll out obligations of Village Public Telephone was specified to licenses. With the announcement of the New Telecom Policy, 1999, cellular operators were allowed to operate in the market with opening of competition in basic services segments. Initially, the price of the mobile services was kept high due to less number of subscribers; however, with the expansion of markets and competition, the prices tend to decline.

Till now it had been the government which was trying to reach the villages through various initiatives such as creation of Universal Service Obligation (USO) Fund, ITC e-chaupal, e-seva in Godavari District of Andhra Pradesh, Jagriti in Punjab etc, but now private service providers have also been left with no alternative but to enter the untapped rural market as the urban markets are on the verge of saturation in mobile telecommunication. With the emergence of intense competition, most of the service providers have been trying to venture successfully into rural markets. For example, Reliance communications with CDMA (Code Division Multiple Access) technology, distributing mobile phones along with connection for Rs. 500 boosted the mobile sales
to sky soaring limits, was one of the examples of strategic entry into the market where the call rates were forced to be reduced day-by-day by the service providers to increase the usability.

Rural and Urban Tele-density Divide

Penetration of telecommunication services into rural market is not an easy task; however, it is a challenge for service providers who are thinking to enter or already prevailing there. Admittedly, the diverse nature and characteristics of the rural market are quite different from their urban counterpart. The mobile phone services in urban market has shown phenomenal spurt in the growth of tele-density and has surged over 100 percent teledensity in 2010. The rural teledensity, on other hand, is increasing but at a slow pace resulting into the widening gap between urban and rural teledensity.

Though the Indian telecom infrastructure in rural India is increasing day-by-day yet it is lagging behind the expected levels. Despite several measures undertaken by the Government of India to improve the rural telecom infrastructure, the slow pace of increasing rural teledensity and the widening gap over the years between rural and urban teledensity (from 9.23 percent to 95.44 percent) is a matter of serious concern. The two major reasons for this widening gap are the low cost and the low demand (i.e. limited subscriber) in the rural areas. To accelerate the growth in rural areas, the mobile service providers are constantly facing certain challenges in confronting the rural market, in understanding the rural consumer and communicating with the heterogeneous rural audience.

It is pertinent to mention here that the fast technological developments with advance mobile services have become a critical issue for the rural areas. The advance technological systems have been offered for spread into the rural market for the manufacturers/policy-makers, but it creates problem from the lower end to adopt. It requires efficient policy development at the government and corporate level, and at the same time, the actual conditions at the ground level for the effective penetration of mobile market in rural areas cannot be neglected.

Hence, the present need is to focus on the ground realities of slow penetration of teledensity in rural areas. The study, primarily, focuses on the adoption and diffusion of
mobile services in rural areas. It covers the diffusion process of mobile services, the problems of rural people while adopting mobile services and the role of service providers in rural areas.

Objectives of the Study

The specific objectives of the study are:
1. To study the determinants of diffusion process of mobile services in rural areas.
2. To identify the factors affecting the rural people in selecting mobile service provider in rural areas.
3. To study the factors affecting the adoption of mobile services in rural areas.
4. To investigate the current and desired use of mobile services and current and desired level of activities initiated by service providers in rural areas.

Data Base and Research Methodology

The present work is, primarily, based on primary data collected from 450 respondents from the rural areas of Punjab. The respondents were interviewed through a non-disguised structured questionnaire. However, secondary data has also been used to emphasize the distinct features of the rural market in India. The main sources of collected secondary data were the publications of TRAI (Telecom Regulatory Authority of India), DoT (Department of Telecommunication), COAI (Cellular Operators of India), CMIE (Centre of Monitoring Indian Economy), Punjab Statistical Abstract, Economic and Statistical Organisation, Punjab. These sources were used as supporting evidence to justify the significance of the study.

Universe of the Study

The present study is focused on the consumers residing in the rural areas of three economically significant districts (viz. Amritsar, Jalandhar and Ludhina) of Punjab state. Punjab has been selected because it has the highest rural tele-density (5.32 percent as against the national average of 1.77 percent) among all states of India and the region has been regarded as the most densely populated networks for mobile telephony in the country with 54 lakh subscribers in the year 2006 (Economic Times, 2006). The service providers like Spice, Bharti Tele Ventures-Air Tel, Tata Indicom, BSNL, HFCL, Hutch and Reliance companies are offering mobile services to the region and milking every possible opportunity. The service providers are offering pre-paid and post
paid connections to the rural areas after proper verification of the residential addresses and identities of the connection applicants. Apart from incoming outgoing calling and SMS facility, the service providers offer value added services like gaming, mobile internet, music, alerts of agricultural prices & commodity prices, new updates, daily horoscope, ring tones downloading and weather reports.

**Sample Size and Sampling Design**

To collect data, the present study used a survey method where a sample of 450 respondents was collected from the rural areas of three economically significant districts from Majha, Malwa and Doaba regions of Punjab viz. Amritsar, Jalandhar and Ludhiana.

Amritsar District has four tehsils viz. Ajnala, Amritsar-I, Amritsar-II and Baba Bakala. Besides these, there are five sub-tehsils namely Attari, Lopoke, Ramdas, Tarsika and Majitha. There are eight community development blocks namely Ajnala, Chogawan, Harsha-Chhina, Majitha, Verka, Rayya, Tarsika and Jandiala Guru.


Ludhiana, the Manchester of Punjab, has seven tehsils, viz. Ludhiana West, Ludhiana East, Jagraon, Khanna, Payal, Raikot and Samrala followed by six sub-tehsils, viz. Dehlon, Koom Kalan, Macchiwara, Malout, Mullanpur and Sidhwan Bet. The district is divided into 12 development blocks namely Ludhiana-I, Ludhiana-II, Doraha, Dehlon, Jagraon, Khanna, Macchiwara, Pakhowal, Raikot, Samrala, Sidhwanbet and Sudhar.

Out of each district, three community blocks were considered on random sampling and from each block five villages were taken on judgement basis covering ten families per village on convenience cum judgement sampling. It is pertinent to mention here that two or more members in a family had been found using mobile phones separately. The survey was conducted by taking one family as a unit. A member who was using mobile services (being nominated by others members collectively) was
selected for the survey. However, other family members’ opinion was also taken into consideration, but the responses of the survey were restricted to the nominated adopter of the family who answered the questions. The exact number of schedules that was responded to by the respondents of Jalandhar District was 153 but three respondents were not found to be serious while giving responses. Hence these three schedules were not taken into consideration and 150 schedules were selected for the final analysis. Rest, all the respondents co-operated in a satisfactory manner.

**Construction of Schedule and Data Collection**

The present study is, primarily, based on primary data and to collect the data, survey method was selected through a non-disguised structured schedule in Punjabi and English comprising questions of dichotomous type, multiple choice, ratio scale and Likert scale. The questions in the instrument were based on the information initially gathered from the twenty villagers of the rural areas in a pilot study aimed out procuring the basic knowledge about the problems faced by the rural people e.g. what is their perception about and what are their expectations from the operators of mobile services. With the help of conceptual framework, the dimensions already identified were categorized according to the existing established constructs. Some of the dimensions had been adapted with modification as per the requirement of the rural people. The sources from where the items had been taken were already well established are as follows:

Dimensions in the perceived ease of use and perceived usefulness constructs were taken from the previously validated record (Davis, 1989; Davis et al., 1989, Rose & Straub, 1998; Grover & Ramanlal, 1999; Venkatesh, 1999; Gefen et. al., 2003, Li et al., 2007). The items to measure behavioural intentions were taken from previous inventory of Technology Acceptance Model (Venkatesh & Davis, 1996; Agarwal & Prasad, 1999, Davis 1989). Perceived financial resources were measured by three dimensions adapted (Mathieson et al., 2001; Wang et. al., 2006). Facilitating conditions was measured from the previous study (J.C. Gu et. al., 2009) and perceived credibility was measured and adapted from Wang et. al., (2003), Wang et. al., (2006). The service providers’ support had been partly adapted from the earlier studies (Kiesler, 1971; Pritchard, 1999; Arkin et. al., 1976; Bendapudi, 2003). Likert scales (1-7) ranging from
‘Strongly Agree’ to ‘Strongly Disagree’ were used for these dimensions in the study and the items to measure relative advantage, compatibility, complexity, observability, trailability were adopted from Rogers (1995) and were measured on ratio scale ranging from 0 percent to 100 percent. Time represented the number of years an individual is using the mobile services.

To assess the construct validity of the various scales being developed and taken from previous studies, three colleagues were taken from the marketing field and were asked to sort the various items based on the underlying constructs of service provider choice and adoption of mobile services and similar results were found from all the three colleagues in arranging the items to the given constructs. Then, the instrument was pretested on 20 rural respondents and the reliability of the dimensions was assessed (Cronbach Alpha) which was found to be in the range of 0.70 to 0.80. This method of pre-testing is to ensure the understanding of the respondents about the statements used in the questionnaire, whether addition or deletion of the items is required, whether changing of words would make the clarity of the dimensions or changing of an order of the statement would ensure greater coherence.

Commensurate with the objectives of the study to study the adoption and diffusion of mobile services in rural areas, the survey was analysed and categorized by using descriptive statistical tools. Paired t-test, regression analysis, correlation, exploratory factor analysis, confirmatory factor analysis and structural equation modelling were used for statistical analysis. Descriptive statistics was used to organize and summarize the data at hand to make it more intelligible (Singleton & Straits, 2005). Combination of figures and numerical methods was put in to explore possible patterns and the data characteristics.

9.1 FINDINGS AND RECOMMENDATIONS

9.1.1 Determinants of Diffusion Process

The study was made to explore the significant dimensions influencing the diffusion process of adoption of mobile services in rural areas. The four basic elements of the diffusion process (i.e. innovation attributes, channels of communication, social system and time) were examined in the context of rural areas of Punjab. Based on the
literature, the hypotheses of these four parameters were developed to test the significance for rural areas. The results demonstrated that

- The null hypothesis regarding no significant impact of perceived relative advantage on adoption of mobile services was rejected ($\beta = 0.693, p=.000$) at 0.05 level of significance. It expresses that rural consumers are relatively in a more advantageous position by using mobile services, regardless of place, as compared the traditional telephones.

- The null hypothesis regarding no significant impact of perceived compatibility on adoption of mobile services was also rejected ($\beta = 0.161, p=.000$) at 0.05 level of significance. It appeared that mobile services were found to be compatible and fit well with all aspects of their work. The result shows that rural consumers are concerned about the compatibility of mobile services with their tasks such as inquiring about the prices of the agricultural products and fertilizers etc from the urban market and social calling.

- For null hypothesis regarding no significant impact of perceived complexity on the adoption of mobile services was rejected ($\beta = 0.044, p=.048$) at 0.05 level of significance. It expresses that complexity matters and affects the adoption of mobile services negatively. The negative value of beta specified that with the increase of complexity, there was a reduction in the adoption. Hence, the rural people required special consideration to lower the complexity and to make the system easy to adapt. It can be stated that once the rural consumers start using their hands on the system, it will lower the complexity. The inference can be drawn that rural consumers are not quite educated and the mobile services system should be user-friendly to use. The service providers have to coordinate with the manufacturers of mobile phones for its customisation according to the users’ ethnicity.

- The null hypothesis regarding no significant impact of observability or communicability on the adoption of mobile services was also not accepted ($\beta = 0.477, p=0.000$) at 0.05 level of significance. It appeared that observability and communicability has significant impact on the adoption of mobile services. In rural areas, the communication through word of mouth is more powerful than the communication through media.
The null hypothesis of ‘trialability’ demonstrating no impact of trialability on adoption of mobile services was also rejected ($\beta = 0.320$, $p=0.000$) at 0.05 level of significance. The result expressed that the rural consumers, if found satisfied with their interaction to the innovation, are more likely to adopt mobile services. It showed that the exercise of giving trial to the rural consumer to interact with the innovation before buying made them confident that they can use the mobile services.

The null hypothesis that there is no impact of perceived trust on the adoption of mobile services was also found rejected ($\beta = 0.057$, $p=.010$) at 0.05 level of significance. The rejection of the null hypothesis is similar to the previous literature where it has been argued that perceived trust has significant impact on the adoption (Wei et al., 2009; Cho et al., 2007; McKnight, 2002; Lee & Kim, 2007; Gefen, 2002; Black et. al., 2001).

The null hypothesis regarding no significant impact of time on adoption of mobile services was not accepted ($\beta = 0.449$, $p=.000$) at 0.05 level of significance. It demonstrated that the rural people are adopting mobile services with the passage of time. It can be concluded from the hypothesis that once the rural people get familiar with operating the system, they start using the other services over a period of time.

The hypothesis that there is no significant impact of social system on the adoption of mobile services was also rejected ($\beta = 0.232$, $p=.000$) at 0.05 level of significance. The results showed that the influence of friends, relatives and dealer recommendation on the adopter would have significant impact on the adoption of mobile services. The results were similar to the existing literature (e.g. Laura, 2003; Gupta and Chundawat, 2002) that had shown the significant impact of family on the adoption of product or services.

The hypothesis regarding the relationship of demographics of the respondents with the adoption of mobile services was conducted with the help of Pearson’s Coefficient of Correlation. Two demographic variables viz. Educational Qualification and Occupation was found significant at 0.05 level of significance with $r = -0.827$ and $r = -0.814$, respectively. The negative coefficient of correlation of education qualification could be interpreted as the dominance of low education
level in the sample with majority of the respondents belonging to below matriculation educational level. The negative coefficient of occupation could be interpreted as the dominance of the farmers in the adopters category.

Implications for Marketers

Need of the hour is to find the significant dimensions of diffusion process of mobile services particularly, in rural areas and the present study shows that in diffusion process, rural people are demanding in nature from the system due to the limitations associated with the rural areas. Low literacy, low income, lack of appropriate infrastructure and basic amenities etc. are the major drawbacks associated with the rural areas. No doubt, the government has taken and is taking initiatives to improve the limitations of rural areas, it becomes pertinent to find out the ground realities of rural areas with the emergence of new technology innovation. The present study explores the dimension of diffusion process in rural areas and has certain implications for the marketers and service providers who are attached to the rural areas in telecommunication field.

Rural people have been finding the usage of mobile services as complex in nature and the hypothesis was not supported. The service providers should coordinate with the manufacturers of mobile phones to make the mobile system according to the needs of the specific region. They are giving more preference to the persons who are close to them in adopting the mobile services. No doubt, the advertising and promotional campaigns cover a wide range, but due to the psyche of rural people to believe the person nearer to them, the service providers or operators of mobile services should focus on their sales force who can meet the villagers, make them aware about the features and benefits of the mobile services to increase the adoption rate.

To conclude, service providers must understand the psychology of the rural consumers and take the measures, accordingly. The village chaupals, myriad rituals, celebrations, festivals, melas and other activities where rural people assemble in large numbers are much prevalent in villages, and the service providers can use them to get in touch with the villagers to make them aware about the services. Future is very
promising for those who can understand how to clear the above mentioned clouds of confusion in rural areas that may arise if these are not tackled efficiently and effectively.

### 9.1.2 Factors affecting the selection of mobile service provider

Based on an intensive interaction with rural folks, this study presents and validates a comprehensive model to explain and predict the inclinations of the rural people when they make a choice of service provider. The findings of this study strongly support the feasibility of using the proposed model to understand the acceptance of mobile service providers in rural areas. Knowledge Resources, Customer perceived value and facilitating factors were observed to have positive influence on behavioural intentions. The main findings of the study are as follows:

- It indicated the most crucial issue that had to be taken into account at the initial stages while applying mobile services in rural areas i.e. the knowledge and information dissemination initiatives taken by the service providers and captured by the local elite. Since it’s a known fact that the rural folks are not enough educated, it was observed that they require assistance and guidance to operate the mobile phone services on constant basis till they became user friendly with the system. Also, the hypothesis emphasizing on the knowledge resources over behaviour intention was considered more significant ($\beta = 0.89$) than the other hypotheses. It was observed that the content of the services and customer support services, preferably in their regional language, should be prepared in such a way that made it easily accessible for the rural people. The mobile service provider should display the list of compatible regional language mobile phones to make their services user friendly.

- From the analysis, it was also observed from the customer perceived value construct that rural people were desirous to adopt more value added services with less paper formalities and also intended to have close eye on the offerings of the service provider. Even though, the services in rural areas are provided at the lesser rate than the urban areas, yet the rural people were more concerned about the benefits gained from the amount spent which showed that they have the analytical power to compare the services provided by service provider. The hypothesis of knowledge resources not having significant impact on the perceived value was rejected expressing that knowledge resources must be provided to the rural people so that
they can take full benefit of their money spent and the service providers need to stress upon the cost benefit ratio for the rural people.

- However, the low network connectivity, and disturbed voice clarity were the most common drawbacks found to be in existence in rural areas. The knowledge resources having positive significant relationship ($\beta = 0.29$) with these facilitating conditions reflected that only the knowledge resources would help in making the conditions better for the rural people. Though the facilitating conditions relationship with behavioural intention was found to be lowest ($\beta = -0.21$) among all others, but it is positively significant expressing that facilitating conditions are also considered to be an important element in making choice to adopt mobile service provider. Hence, the service providers need to create efficient facilitating conditions to grab the market share in rural areas.

In terms of practical implications, the findings provide mobile operators and content developers with various strategies to sustain the use of mobile services in rural areas.

- First, in order to attract more rural users and encourage the use of mobile services of a particular mobile service provider, it is believed that merely introducing mobile services in rural areas may not be sufficient; the service providers may focus on improvement of constructs or attributes that affect the users’ intention to use m-commerce (Wong and Hiew, 2005). Similarly, the mobile service providers should properly assist the rural users by giving more attention on distribution of pictorial pamphlets in regional language, attracting customers via various social networks and channels such as informal seminars (Lu et al., 2008) and also conducting training sessions during festival seasons where large number of rural audience can be attracted, to improve the customer care system by reducing waiting time and giving emphasis on proper guidance to the rural people to use the services. By keeping these in mind, mobile service providers can create good image in the mind of the rural people.

- Secondly, mobile service providers should develop a hassle-free system by having less paper formalities and the forms should be in their regional language. No doubt, the services offered to rural areas are at lower prices as compared to urban areas, the
service providers should continuously assess value delivery mechanism, where benefits should be more than the cost incurred by the rural people.

- Thirdly, the mobile service providers should try to give quality services by strengthening their network, voice quality by installing more towers in rural areas, by opening more outlets so that the mobile connections should be made easily available and there should not be any problem in paying the mobile bills or recharging the connections.

It is worth noting that the effects of knowledge resources on facilitating conditions and facilitating conditions on behavioural intention are least significant. These findings may occur as the result of initiatives taken that were inordinately delayed by the mobile service providers and the government. But still, there is an immense need to improve the facilitating conditions in rural areas. Also an appropriate intervention might very well be an inexpensive education campaign, rather than a system redesign (Mahieson et al., 2001).

### 9.1.3 Factors affecting adoption of mobile services

Before presenting the findings of this study, it is pertinent to record that the rural areas of Punjab are still far from realizing the full potential of mobile technology. The study presents and validates a comprehensive model to express and predict the rural people intentions to adopt the mobile services. The findings of the study strongly support the feasibility of using the proposed model to understand the adoption of mobile services in rural areas. Perceived service provider support, perceived ease of use, perceived financial resources, perceived usefulness and perceived credibility emerged as significant factors to have positive influence on the behavioural intentions to adopt mobile services in rural areas. These results provide several significant implications for practice.

- Most consumers in rural areas perceive that using mobile services is complex in nature as compared to the traditional telephones. Therefore, the telecom companies prevailing in the region need to ease this perception through assistance initiatives. It is pertinent to reiterate that while making choice of service provider, the rural people emphasized on the service provider assistance and guidance. In the similar manner, while adopting mobile services, they showed their concern about the
service provider support. From a managerial viewpoint, this means that behavioural intention to adopt mobile services depend significantly on perceived service provider support. Mobile telecommunication operators and service providers operating in rural areas should take this into account if they want to distinguish themselves in a highly competitive market.

- The usage of mobile services is completely voluntary and the rural group consists of people with heterogeneous nature with diverse backgrounds. Based on these facts, the finding of this study suggest that making the mobile services application easy to interact with will be crucial for attracting more rural users to the mobile services. With the proliferation of wireless telecommunication in rural areas to shorten the widening gap between urban and rural tele-density, no doubt that the efforts have been made by the policy makers, but it has been observed that rural people find it difficult to figure out what kind of mobile services are provided and how to use them, because they need more multimedia displays and assistance. Thus, telecommunication companies should cooperate with the mobile phone manufacturers to design the customised mobile phones for rural areas to make the operation of mobile services easier to learn and use as perceived ease of use has been conveying significant impact to behavioural intention to adopt mobile services.

- Increasing the perceived usefulness of mobile services system by rural customers has been regarded as a significant factor for the mobile service practitioners and policy makers. Mobile service providers should take advantage in promoting perceived usefulness to the rural people by displaying them how the mobile service system is more helpful and enhance their job performance. For example, mobility can help people get timely information from the urban areas about price quotes, latest agrarian technologies used in field, weather forecast etc. that increase their competitive advantage in job.

- Since the mobile services are provided at economical rates to the rural people, they are not facing any difficulty in respect to the cost of mobile services. From a managerial viewpoint, it is regarded that the cellular operators should not increase the cost of mobile services as the present perceived financial resource has shown significant impact on the perceived usefulness, perceived ease of use and
behavioural intentions to adopt mobile services. Consistent with prior research, it also confirms the perceived credibility has a significant effect on perceived usefulness. That is, perceived credibility will increase usefulness of mobile services by increasing the benefit of privacy protection.

- It can be worthwhile for the management practitioners to focus their attention on the development of effective support system for the rural people. Mobile service practitioners need to facilitate the creation of wireless information infrastructure specifically for rural people to increase the adoption of mobile services. In addition, organising educational training courses, seminars etc. to provide knowledge resources to rural people can facilitate their familiarity with mobile services application and help them develop positive beliefs in mobile services, which, in turn, influence the perceived usefulness, perceived credibility and behavioural intentions for using these mobile services.

9.1.4 Current and Desired use of Mobile Services and Activities of Service Providers in Rural Areas

- Rural users are using a variety of mobile services to the extent of their capabilities and available resources. It has been observed that the each mobile service has been used once or twice in a day by 32 percent of the rural respondents. Messaging, social and work related calls, updates of agriculture/commodity prices are the most common mobile services among the low usage.

- Advance value added service like mobile internet was adopted by 21.11 percent of respondents who were using it once or twice a day. But 62 percent of the rural respondents had never used the mobile internet due to the complexity of the system.

- There was overwhelming number of respondents desiring to use mobile services several times a day. They had opted highly for getting alerts of agriculture/commodity prices (59.33 percent) among the other mobile services, followed by social calls (59.11 percent). Every mobile service to be used several times in a day had been desired by more than 50 percent of the respondents.

- Null hypothesis that there is no significant difference in the means of current and desired level of mobile services was rejected at 0.05 level of significance expressing the significant difference between the current and the desired level of mobile
services usage. Null hypothesis about the mean of the respondents who desired the future use of mobile services being less significant than the mean of the current usage of mobile services was also rejected. The results specified that the number of rural people who desired the future use of mobile phone services significantly exceed the number of the rural consumers who are currently using the mobile phone services with p-value of 1.000.

- The results showed the negligible role of service providers to make rural people aware about the use of mobile services. The rural people need more support from service providers. The rural respondents perceived that service provider’s support was not adequate for mobile service usage. The survey data showed that majority of the respondents regarded that the pictorial pamphlets in their regional language, visits of representatives, special seminars and customer care to operate mobile services are hardly available for support in rural areas.

- Majority of the respondents desired the visit of representatives (78.44 percent) and distribution of pictorial pamphlets (77.33 percent) to them to make help in operating the mobile services. This exercise may be performed once in a month.

- Null hypothesis that there is no significant difference in the means of current and desired level of mobile service providers’ initiative to get rural people aware was rejected at 0.05 level of significance expressing the significant difference between current and desired level of mobile service providers’ initiatives. Null hypothesis about mean of the respondents who desired the activities of mobile service providers’ in future are less significant than the mean of current activities initiated by service providers was also rejected. The results specified that the number of rural people who desired the activities of mobile service providers in future significantly exceed the current activities adopted by service providers to make them aware about the services with p-value of 1.000.

- Service providers should attempt to capitalize on the emerging opportunities in terms of expanding rural demand for mobile services by assisting rural users to the maximum extent. Rural behaviour leaves a clear message to service providers to focus more on making the mobile services delivery system easy with appropriate measures of giving awareness through arranging seminars/workshops, visits of
representatives and pamphlets distribution to use mobile services. Thus the major strategies are to be confined to promotion and distribution of system effectively. It has to be improved to meet the challenges faced in rural areas. Syndicated activities to reach closer to rural audience by taking into account the regional variations, suitable local promotional activities and improvement in service delivery system are some of the needed strategic interventions.

9.2 Conclusion
Every effort has been made to make the implication fruitful for the marketers to know the reasons for low teledensity in rural areas. The study provides the insight into what will create sustained value for the rural adopters – benefits, removing complexity to use system, product design, delivery system, and cost effectiveness. The study reveals that educating the rural mass is the more critical factor for rural development. The rural people feel reluctant in using the complex systems of mobile services and require assistance from the service providers to guide them whenever they stuck into while using mobile services. While selecting a service provider at the time of purchasing a connection, they keep in their mind the assistance and guidance activities of the service providers. Moreover, the print media with their regional language and inter-personal influence in social system has also been regarded as the appropriate way to educate them. However, the rural folk rely more on the dealers/representatives who are in the market, in comparison to the advertisements. So, service providers can organise regular meetings in association with local bodies such as panchayats, to discuss mobile services, innovations, problems etc. and also conduct some special training sessions during festival seasons to attract larger groups as the rural people are desirous to adopt and use the system and want to take full advantage of mobile services, but the lack of infrastructural facilities and support from the service providers forbid them to enjoy the full potential of services. If this type of activities are carried out, the service providers will succeed in creating a place in the brains and hearts of the rural people and will enlarge their subscriber base.

Through this study, the determinants of diffusion process, the factors affecting the adoption of mobile services, the factors affecting in making choice of mobile service provider, current and desired role of service providers in rural areas were determined.
and validated. The importance of measuring these factors would be to use the results to plan the implementation and diffusion of mobile service in rural areas. The overall advantage of doing this would be the faster implementation of managerial innovations/reduction in the widening gap between rural and urban teledensity and strengthening of the rapid growth in teledensity of rural areas. The goal is to highlight the ground reality of the rural market in mobile telecommunications so that the service providers can concentrate on the right track to tap the rural market by keeping in mind the findings of the study. By understanding these underlying factors associated with the adoption and diffusion of mobile services, policies can be designed on the desired lines and also implemented smoothly so that rural areas begin to reap their full potential.

9.3 Limitations of the Study

1. The present study is based on Punjab State only and the findings and their implications suffers from limitations with respect to the geographical size, location of the population, socio-cultural and economic differences.

2. Need based items from the established constructs in literature were identified and adopted in the study. Only the items specified by the rural people during initial interaction were taken from the established constructs.

3. Only three districts: Amritsar, Jalandhar and Ludhiana have been selected. These may not be representative of the whole of Punjab.

4. The study is more or less likely to reflect the low income group and farmers and may not be applicable to the other income classes and occupations.

5. While conducting the survey, the selected respondent was the nominated adopter member among other members of the family and his/ her responses may be affected by subjectivity.

9.4 Scope for Further Research

1. Since the study is confined to Punjab only, the researchers may focus on the other parts of the State and country to continue the research to generalize the findings of this study.

2. Interested researchers may concentrate on marketing mix to have more in-depth knowledge of the rural areas.
3. Since the majority of the adopters are not frequent users of the services and more or less they face problem in operating the mobile services, so their technology perception is negative. But once they lay hand on the system after a gap of time, technology perception can be included in diffusion process for rural market.