Review of Literature and Basic Concepts

The chapter is an effort to compile the literature related to the consumer preferences of mobile phones and service providers. The history of cell phones, concept of consumer, models of consumer behaviour and possible side effects due to the excessive use of mobile phones and findings from other studies related to the objectives are reviewed in this chapter.

2.1. Origin of Cell Phone

The evolution of cell phones could be traced back to the period of 1950s. The period of evolution is almost over and it is a saga of revolution in the mobile industry. Currently, many places in the country are on the threshold of the 3G mode. It was Martin Cooper who was the pioneer of the cellular phone and is universally acknowledged by many as the father of the cellular phone. Hired by Motorola in 1954, Mr. Cooper worked on developing portable products, including the first portable handheld police radios, made for the Chicago police department in 1967. He then led Motorola’s cellular research.

On April 3, 1973, at a public demonstration using a heavy 30-ounce phone, Martin Cooper placed the first cell phone call to his rival at AT&T Bell Labs from the streets of New York City. Mr. Cooper commented, “As I walked down the street while talking on the phone, sophisticated New Yorkers gaped at the sight of someone actually moving around while making a phone call. Remember that in 1973, there were no cordless telephones or cellular phones, I made numerous calls, including one where I crossed the street while talking to a New York radio reporter - probably one of the more dangerous things I have ever done in my life.”

This first cell phone call made by Martin Cooper laid the foundation for a change in the fundamental technology of telecommunications making a paradigm shift in the field of communication. It also created another vision for Martin Cooper. His vision was for personal wireless communications. ‘People want to
talk to other people - not a house, or an office, or a car. Given a choice, people will
demand the freedom to communicate wherever they are, unfettered by the
infamous copper wire. It is that freedom we sought to vividly demonstrate in

2.2. History of Cell Phones

A cellular phone is a wireless phone used for the purpose of
communication. The cell phone has slowly gained much importance that it has
become a part of everyone almost, so to say being without a cell phone is as bad as
being without a limb is the feeling of the present generation. People have become
so dependent on it, that without it one feels terribly handicapped. It gives us the
impression that mobile phones have been used by people for ages. In 1843,
Michael Faraday tried to see if space could conduct electricity. It was this great
scientist who paved the way for the development of cell phones. In the year 1865
Dr. Mahlon Loomis Was the first person to communicate through wireless
atmosphere. He came up with the idea of transmitting and receiving messages
through atmosphere as conductor.

In 1973 Martin Cooper came up with the Motorola cell phone. In 1977 the
first cell phone was made in Chicago. When it made its debut 2000 people were
given a free trial. The early cell phones were huge in size. The technology to
manufacture cell phones of compact size was unknown to them. In 1988 many big
companies forayed into the production of cell phones in 54 places all over the
world. (Liu, 2002)

2.3. Future of Cell Phones

From the year 1843 up till now a lot of changes have taken place in
telephones. Recently Mobile phones have become the main stay in the
telecommunication market. Unlike landlines it is difficult to know the number of a
particular person as there is no mobile phone directory. In the years to come,
people may be able to surf for the number of a person whom they wish to contact.
Presently it is the 3G era. 4G is in the offing. The cell phone companies have been
so successful that they have sidelined the significance of landlines.
Mobile phone markets are one of the most turbulent market environments today due to increased competition and change. Thus, it is of growing concern to look at consumer buying decision process and cast light on the factors that finally determine consumer choices among different mobile phone brands.

Although mobile phones have become a fundamental part of personal communication across the globe during the past ten years, consumer research has devoted little specific attention to motives and choice underlying the mobile phone buying decision process. There are numerous complex factors that need to be taken into account when exploring mobile phone buying decision process, including both macro and microeconomic conditions that affect the evolution of mobile phone market in general and individual consumer’s motives and decision making in particular. Moreover, it is important to distinguish between buying behavior of customers in their choice of mobile phones and brands and the buying behavior in their changing of mobile phones and brands.

As the mobile phone market is a typical technology push driven market where products are created ahead of the recognition of existing recognized consumer needs (e.g., Gerstheimer and Lupp, 2004), mobile phone development is based on consumers’ possible future needs and thus companies that best hunch the technologies and services of future will be the leaders in the discipline (for discussion of technology push see, e.g., Brown, 1991; Hamel and Prahalad, 1991; Kumar, 1997; Nagel, 2003).

Mobile phone development has been rapid and new models are introduced in the markets almost every week. Especially 3G networks and smart phones are expected to affect the evolution of the mobile phone market in the near future (e.g., Slawsby, Leibovitch and Giusto, 2003) as shown in the following figure.
### The Beginning of the Smart Phone Era

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<td>Legacy phones</td>
<td>Text, rings Simple bitmaps SMS push/ Pull Simple Web Clipping</td>
<td>Colour bitmaps Simple animations EMS, SMS push/Pull Wap Pull Smart Phones, PDAs GPRs Trials J2ME, MIDP Simple Location-Based Services</td>
<td>MMS xHTML Real Smart Phones Real GPRS M-Commerce 3G Trials Micro Moves</td>
<td>Mobile Video/ Audio Location Integration Voice recognition Real wireless PDA Broadband access 3G networks Hybrid WLAN/3G PAN</td>
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#### 2.4 Functions of Cell Phone

Cell phones have become popular today. It is indeed used by people of all classes of society. When cell phones were introduced, it was used by people to speak to each other. The only thing that people needed to know was how to make a call to someone and to store numbers. The functions of cell phones have changed from mere voice to text message, music, internet and other value added services. Another great personality connected with cell phones was Samuel Morse who was a man of vision. His vision and dreams, had paved the way for what is now known as the information superhighway. The leading technology in the evolution and progress of this telecommunication spectacle is the fine tuning of cell phones and its derivatives. It is no wonder that what Samuel Morse developed as a prototype has been turned into a highly advanced device of great utility and facility.

Dr. Mahlon Loomis of Virginia, a dentist, might have been the first person to communicate through a wireless device via the atmosphere in 1865. Between 1866 and 1873 he transmitted telegraphic messages between the tops of Cohocton and Beorse Deer Mountains in Virginia covering a distance of 18 miles. He developed a method of transmitting and receiving messages by using the earths atmosphere as conductor and launching kits enclosed with copper screens that were linked to the ground with copper wires. Over the next thirty years, most
inventors and developers concentrated on wire line telegraphy suspending wires between poles, which eventually came to be known as telephone poles. Telegraphy, however, did produce a good understanding of wireless by induction since wires ran parallel to each other and often induced rogue currents into other line. People had come to know that electromagnetic messages could travel through the air.

At present the majority of new mobile phones purchased are low-cost handsets without the latest technological features. Whereas colour displays has become common, with sales of over fifty percent in 2003 income Countries, eg., in Finland (Poropudas, 2003), phones with a built-in camera reached globally below 15 percent of the total sales in the last quarter in 2003 (Gartner Dataquest, 2004; Strategy Analytics, 2003). However, more and more users are acquiring camera phones and learning how to take, send and print photos.

In terms of technology, the mobile multimedia market had remained in its infancy during 2004, but companies and analytics expected that the demand would continue to develop for mobile imaging, games, music and other media services as users become more aware and familiar with the services and their different purposes of use (see, eg., Gartner Dataquest, 2004; Nokia, 2004; Strategy Analytics, 2003). But as the Internet finally finds its way to mobile phones the basic need to acquire a mobile phone might expand from communication to gaining Internet access. This in turn is expected to bring mobile phones one-step closer to personal computers.

2.5 Concept of Cellular Phone

The concept of cellular phones was conceived in 1947. It was devised by a team of researchers at Bell Labs in 1947. Motorola holds the U.S. patents for cell phones. The earlier cell phones which were rolled out in the 1960s were of analogue type. Commercial models were introduced in Japan (by NTT) on December 3, 1979. They were introduced in Scandinavia in 1981, in Chicago, U.S.A. in October 1983 by Motorola and in Europe in the 1980s.
2.6 Studies Related to Cell Phones and Service Providers

Gary Stein (1964), a marketing analyst with Jupiter Research, agrees when he says, “there seems to be a natural match between teenage girls and telephones. It’s like peanut butter and jelly.” Boost Mobile, a prepaid cellular company majority-owned by Nextel, was the first to unveil a phone targeted at teenage girls who like to to hang out with their friends, surfing and snowboarding. Their phones came with nearly 500 ring tones, and featured pop-music songs such as “Girls Just Wanna Have Fun”, “Like a Virgin”, “Funky Town”, “California Dreaming”, and “Wake me up before you go-go.” It sounded like the old transistor radios which were used to hear around the beach.

The above statement of Gary Stein is proved by the researcher also on the basis of the data collected by him. Meanwhile, Japan, the ever leading competitor in the electronics market, was also in the mobile market race. JASRAC, the Japanese Copyright Organization had collected more than $113 million in royalties for the ring tones on cell phones in 2003.

Motorola and MTV came together to develop a wireless menu interface for cell phones. The effect of the partnership was the introduction of wall papers, screen savers and free cell phone ring tones. Motorola has developed a technology called Moto Mixer, which provides mobile and online mixing capabilities to create unique ring tones. Geoffrey Frost, was the Vice-President of global marketing for Motorola, when Motorola went for a tie up with MTV for the innovation of value added services.

Roger (1993) observed that there has been an evolution in mobile phones in every decade. The First Generation (1G) cell phones were based on analogue technology. 2G cell phones are digital systems comprising GSM (Global System for Mobile Communication) and CDMA (Code Division Multiple Access) used mainly for voice communication. Now 3G phones have emerged and the technology is the convergence of communication and computing. Besides voice, 3G also provides video telephony, video games, multi-media, net-browsing, network games, e-mail and download. 4G is an evolving concept and the
technology may be the convergence of communication, computing, broadcasting, etc.

2.7 Socio-Economic Status of Cell Phone Users

The Indian telecom industry has become the poster boy of India’s economic growth. The Economic Times, 2007 states that young consumers are the real drivers of growth in a wireless industry. It is to some extent true as youngsters below the age of 25 years, constitute 32% of the total market in the telecom industry. Besides, there is also a bright future for cell phone manufacturers and service providers since this age group constitutes 50% of the total population with a high purchasing power. (Ian, 2007)

Lack of money puts constraints in the purchase decision of consumers who will otherwise be free to engage themselves in a buying mood. Even though, lack of money does not prevent the motivated consumers from information processing or decision-making, it does constrain a person by puffing him in a fix whether or not to engage himself in a monetary exchange with marketers (D Wayne, 1999). Individual or family income is another socio-economic factor, frequently used to approximate social class standing.

According to Inter media’s 2009 Urban Survey, education seemed to have a greater impact on mobile phone use than income. The substantial differences that do exist between income groups, primarily, reflect the fact that high-income users have greater access to better data services. Around a quarter of high income mobile users stated that they were able to access the web through their phone.

Ian (2007) had conducted a study on both land line and cell phone users of Thai telecom industry to find out the perceptions and expectations of service quality. The study showed no significant difference among the various companies.

Jagdish N. Sheth (1983) studied consumers’ intention to use different network services. The study aimed at inquiring into the perceptions of network services, experiences of test use and intention to use the services again. The study
concluded with a finding that the perceptions of users, got from testing mobile services affect their intention to those kinds or similar services in the future.

R C Natarajan (1994) made a study to identify the different factors which influence students when selecting a service provider. The study revealed that three factors were considered by students in the choice of service providers. They are economy, performance and value added services.

A survey was made on mobile cellular customers in Hong Kong by Woo and Fock, (1999) which states that transmission quality and network coverage are the most important requirements in the choice of service providers.

A study conducted by Leon (1990) states that the features like user friendliness and competency dominate all other factors even more than the parameters like clear voice or time taken by an operator to respond to a user by using regression analysis.

Srinivasan (1987) made a study on the usage pattern of users on the basis of occupation. The study revealed that on an average businessman make the maximum use of cell phones and professionals the least. The study did not find any significant difference in the service provided by various service providers of different brands and found the service to be more or less of the same quality.

Wilska (2003) suggested five reasons for owning a mobile handset. The reasons are: convenience, social stimulation, experiential learning, escapism and purchase information and advice.

Srinivasan (1987) made a study in Finland on consumer purchasing motives and the factors affecting operator’s choice. The results of the study highlighted that price and properties are the most influential factors affecting the purchase of a mobile handset, whereas audibility, price and friend’s opinion on operators are regarded as the most important factors in the choice of a service provider. In another study on Customer’s perception on Telephone, the study
found that efficient service, special offers and multi-usage are the most important factors which influence the users in the selection of service providers.

Srinivasan (1987) made an experiment with 94 customers to identify the amount of self knowledge that the consumers have when choosing a service provider. The study reveals that consumers with experience about a product can predict their choices easily. It further stated that consumers tend to over-estimate the importance of features, call rates and free calls and under estimate the importance of a monthly access fee, mobile-to-mobile rates and connection fees.

Liu (2002) studied the factors affecting the brand decision in the mobile industry in Asia. His study concluded that the choice of a cellular phone is characterized by two distinct attitudes to brands: attitude towards the cell phone brand and the attitude towards the service provider brand. While price and service regulations were the leading factors in the choice of a service provider it was high capability and large screens which were the dominant factors in the choice of a mobile hand set.

R Srivasan et al. (2006) in their study proved that the price plays and important role in the growing market like telecom sector and subscribers switch from one operator to another if cheaper price is offered.

David (2002) in his study on the recent buyout of Hutch by Vodafone says that Vodafone has evolved an effective rebranding strategy and effected many changes in the external identity and the promotional strategy of the brand. The study is aimed at changing the brand to meet its global image and also to stay relevant in the competitive scenario in the Indian telecommunications market. His article explores the various efforts made by Vodafone and its implications for the brand.

According to Mazzoni V et al (2007) Cell phones is not just a substitute to land line phones but something more than that. Cell phone users can use their cell phone for calling and messaging and also for sending pictures, updating themselves with sports and news, playing games, listening to music, watching
movies, taking photograph, transferring of data and pictures, doing calculation, reminding oneself of important matters and organizing their day to day activities.

Consumer choice behaviour has some important prevailing conditions that must be taken into account while studying choice. In the light of the classical problem solving buying behaviour, consumers engage in information search before making the actual choice. Consumer decision-making process is usually guided by already formed preferences for a particular alternative. This means that consumers are likely to make the choice between alternatives based on limited information search activity (Beatty and Smith, 1987; Moorthy, Ratchford and Talukdar. 1997) and without detailed evaluation of the other alternatives (Alba and Hutchinson, 2000; Chcrnev, 2003, Coupey, Irwin and Payne, 1998; Slovic, 1995.

2.8 Gender and Mode of Communication

Any mode of communication treats men and women differently, Wilska (2003) observed in his research work that the use of cell phones are not an isolated part of young people’ s life style but it forms part of general consumption pattern. The study revealed a significant gender difference in the usage pattern of cell phones. Girls do not use cell phones as much as the boys do. They are more suspicious to adopt any new technology than the boys. Though the number of women users has increased, still a significant difference exists in the usage pattern between male and female users.

Bennett, Peter D and Harold H. Kassarjian, (1988) made a study on “The Diffusion of Mobile Technology among Norweigian Teens: (A Report from and after Revolution”, presented at ICUST in Paris, France). In the study, he found that teenage girls spoke more on mobile phones than the teenage boys. However, the number of calls made in a day is almost the same for teenagers. Frequency of using mobile phones differs when they cross 20 years of age. At this stage, the gender difference is statistically significant in many functions.

A study was made by Chisnall, Peter M (2005) to discern the behaviour of cell phone users (BPL) changing from prepaid to post paid and vice versa in
Ernakulam and Thiruvananthapuram. According to him the factors which influenced a shift from post paid to prepaid were 1. General perception that the prepaid is economical. 2. Controls expenditure. 3. Attractive schemes. 4. Reference group influence 5. Enhanced limited usage. 6. Advertisements.

An objective study on Customer Behaviour in BPL Mobile Cellular Ltd in 2005 revealed that factors that influenced a change from prepaid to postpaid: 1. Scheme and tariff plans. 2. Increased use of mobile connections. 3. A need for additional service. 4. Lower air time rates of postpaid than prepaid at the time of purchase. 5. Reference group influence and 6. Availability of corporate connection.

The telecom landscape has gradually moved from the network of billions of callers to a network of trillions of devices. It is predicted that voice services that account for 65% of revenues will take a backseat with data services becoming the primary demand of consumers. (Voice & Data April 2010).

Cox and Enis, (1969) in his study on “Customer Preference and Customer Satisfaction of Cellular Services” has found that call charges, SMS charges, talk time and roaming charges are the most influential factors in the choice of a cellular service provider. Regarding the customer preference towards the use of cell phones, he has found the following factors as the main reasons: a) providing global link as the main social factor followed by easy accessibility as the main functional factor. b) Convenience of contact as the main benefit factor and c) mobility and portability as the overall main factor to prefer a cell phone over landline.

The analysis of the users’ preferences about the various characteristics of cellular mobile phones reveals that the users assign the highest priority to instant connectivity and low call rates in the selection of service providers.

2.9 Handset Preferences Influenced by Age and Income Factors

Akilesh Singh (2010) says that the quality and coverage of a mobile operator’s network remains an important differentiator. He further adds that the
total mobile service will exceed $1tn. In 2013, data services would drive this growth. The global subscription is said to reach 92% in 2014 according to Informa Telecoms & Media. “Indeed consumer preferences for mobile handsets vary widely and are heavily influenced by demographic factors, particularly age and income”, said Greg Sheppard, Chief Development Officer for iSuppli Corp.

2.10 Mobile Phone Usage Across Cultures

Consumer infatuation with the cell phones is universal. Yet individual needs and preferences are shaped by culture, which importantly influence purchasing decisions. The study conducted by JMR sought to determine cultural differences regarding consumer cell phone preferences. They chose among purchase factors that included service provider, price, phone features, phone design and the brand of the phone. (Myers; 2003)

Consumers of Japan, China and U.S. agreed on the high importance of their cell phone in daily communication- over 95% of Japanese and over 90% of Chinese and U.S. consumers said that their cell phone was central to their daily communications.

The survey supports the view that Americans value their cell phones as a convenient communication device but in a limited range of situations and applications. For Japan and China markets cell phones can be produced with loads of features and prices to match it. Americans do not require bells and whistles for their cell phones but they are needed in the Asian market.

When a product is designed, there are a lot of trade-offs and it is crucial to prioritise between them according to the users’ needs and values. In other words, establishing and understanding of culture in each country can give the designers good guidance and lead to the most optimal choice. “Those brands that consumers believe offer superior value are most preferred brands and chosen often”.

Mason and Bequetteee (1998) said that perceptions on product performance based on salient attributes are more important in influencing the consumer purchase behaviour than actual product attribute performances.
Mobile phone and Smart phone brand preferences vary from country to country, says IDC (2006). The relative influence of brand on product choice especially in China and India—suggests that many people seek out global brands for the prestige that they carry. Chinese subscribers look more at the brand and style rather than being concerned with the underlying technology and product features. In India, consumers tend to prefer high-end phones to show off how wealthy and successful an individual is.

The phone brand (model) one chooses depends upon one’s personal choice and preferences. If one is a music lover, then no brand can give him/her the unmatchable sound quality provided by Sony Ericson handsets. Nokia is a brand name which offers sturdy and durable handsets and has an amazing collection of cell phones to choose from. Nokia phones have an extremely simple user interface and even a school student could operate it without assistance.

Motorola is a company which produces stylish looking cell phones every now and then. It is the best brand for the person who wishes to flaunt a new cell phone for a few months and then switch to the new model. The results of the study reveal that brand identity, personality and image together with self-image congruence have the highest impact on brand preference. Liking towards the brand itself can influence liking for the brand. (Hawkins, Best & Coney 1992)

A study on ‘Empirical analysis of consumer preferences for mobile phones and mobile contents in the presence of indirect network effects’ by Yuri Park, et al. (2009) observed that consumer’s preferences are for specific features. In fact consumers had shown preferences for mobile phones with slide/bar/swing forms with a touch screen input system to a QWERTY input system.

People seek products with certain attributes that will solve their problems and fulfill their needs (Mowen & Minor, 1998). Understanding why a consumer chooses a product based upon its attributes helps marketers to understand why some consumers have preferences for certain brands. (Gwin & Gwin, 2003)
2.11 Correlates of Mobile Phone Use

Various factors have been proved to be significantly related to the patterns of mobile phone use. Past researchers have focused on the relationships of personal factors such as sex, age, and self-esteem with mobile phone use. To date little is known on the extent of the relationships between familial factors such as parents’ age, education, and family income and mobile phone use patterns and problem among the younger generations. Thus the following review of literature focuses mainly on the relationships of personal factors and young people and mobile phone computing behaviour.

Past research has shown that male users are more attracted to the technical application and features of the mobile phone such as games and MP3 player while females use the mobile phone as a socializing tool (Ling, 2001; Bianchi & Phillips, 2005). Adolescent girls do tend to develop the skills required to maintain their social networks as they attain their adult position in society.

Bianchi and Philips (2005) in their study found that females use the mobile phone for social reasons while males called more people on a regular basis. They assumed that males used their phones frequently for business purposes and not for socializing. However, they did not find any significant relationship between gender and the patterns of mobile phone (i.e. SMS usage and time spent). Bianchi and Philips concluded that gender did not predict overall use of the mobile phone. They claimed that the mobile phone was a gender-neutral device and both genders seemed to have embraced mobile phone technology equally.

Researchers studied the connection between age and mobile phone patterns of adolescents. Bianchi and Phillips (2005) found that age played a role in determining the total time spent on the mobile phone during the week. Older respondents were found to use the mobile phone more for business purposes while younger students used it to socialize. According to Bianchi and Phillips, this may be because the sample of the study contained older and working respondents thus, explaining the reason behind the patterns of mobile phone for this study sample.
Further findings from their study revealed that younger users were more addicted to the mobile phone as indicated by high scores on the Mobile Phone Problem Use Scale. Ito and Okabe (2004) found similar findings.

Japanese adolescents were preoccupied with their mobile phone because they had flexible time, energy and mobility compared to older users. Adolescents used the mobile phone for emotional and social communications specifically in building and sustaining relationship with friends (Ling & Yittri, 2002). Furthermore, adolescents viewed the mobile phone as an impressive and liberating personal tool that allowed them to have a better social position in life.

Researchers have also shown interest in studying adolescents’ level of self-esteem and its influence with mobile phone usage. Individual with high self esteem are assumed to use less of the mobile phone for communication compared to those with low self esteem Low self-esteem users were assumed to use the mobile phone for reassurance and not mainly for social purposes. However, Bianchi and Phillips (2005) found that low self-esteem did not contribute to the overall use of mobile phone.

2.12 Side Effects due to the Excessive Use of Mobile Phones

A survey conducted in the year 2008 by the Malaysian Communication and Multimedia Commission (MCMC), revealed that Malaysia ranked second in ASEAN in terms of the number of mobile phone users. Malaysia recorded a total of 26 thousands users during that year. More than half (56.4%) of the users were males and the rest (43.6%) were females. The survey further revealed that the main users of the mobile phone were those ranging in age from 20 to 49 years. While pre-teens and students below 19 years old make up 20.9% and the elderly consists of 12.3%. Thus, it seems that young adults are significant mobile phone users in Malaysia.

In a study (Abdullah, 2004), Malaysian youths claimed that owning a mobile phone is an essential part of their life. This is not surprising as the younger generations are digital natives (i.e., individuals born in the technological era) and will naturally be easily attracted to any technological gadgets. The younger
generations furthermore, took the mobile phone not just as a tool for communication but, also as a way to express themselves (Ito and Okabe, 2004) and, more importantly to look hip and cool (Ling, 2001). This is in contrary to older generations or also known as digital immigrants (i.e., individuals born before the technological era), who used the mobile phone mostly for their social or business purposes (Bianchi & Phillips, 2005).

Mobile phones are equipped with various features that enable communication and entertainment for its young users. Previous study found that the most popular feature used among young users were text messaging (Nurvitadi, 2003; Lie, 2004; Madell & Muncer, 2004; Ling, 2001; Eldridge & Grinter, 2001). Adolescents preferred text messaging because the service was quick, cheap and convenient (Grinter & Idrige, 2001). Eldridge and Grinter (2001) predicted that teenagers used text messaging to arrange time to chat, adjust arrangements already made and chat or gossip. Teenagers also used text messaging to coordinate with both friends and family.

Lie (2004) found that the patterns of text messaging among adolescents peaked significantly between the ages of 16 and 24. Nurvitadhi (2003) in her study of mobile phone usage of adolescents in Japan and USA found that a large proportion (69.53%) of Japanese adolescents preferred using the text messaging service while American adolescents (35.5%) favoured the game features of the mobile phone. Japanese adolescents (40.21%) were also found to use more of MP3 (MPEG-I Audio Layer 3) features of mobile phones as compared to other features.

Ling (2001) in his study on female adolescents and young adult men found that female adolescents sent more text messages compared to adult men. Ling further noted that there was a transition period in patterns of mobile phone use among adolescents. Text messaging was found to be gradually replaced by voice calling when the adolescents were in their early 20’s. Supporting Ling’s findings, Lie (2004) found that there was a certain pattern in mobile voice telephony among young adults.
Men seem to use their mobile phones more compared to women. They additionally make more business oriented calls since they are more often in managerial positions. On the other hand, women used the fixed line telephony more than men do to maintain their social network and other social co-ordination task. Women choose the fixed line telephony to socialize because it is more cost effective compared to mobile phones. Similar findings were seen in a study investigating patterns of mobile phone use amongst secondary-school students (Madell & Muncer, 2004). Out of a total of 1340 students, a majority (91.9%) used their mobile phones to make calls, testing messages (89.4%) and receiving phone calls (80%). The findings seem to indicate slightly higher preference for conventional call features than the SMS system among younger sample. However, one of the limitations of the study was that the sample was not randomly selected, thus lack ecological validity and generalisability.

The mobile phone was designed to allow communication between family members and peers. Research has shown that adolescents frequently contacted their family followed by friends. This is corroborated in the study- Mobile Phone use amongst Students in a University in Malaysia: Its Correlates and Relationship to psychological Health which states easy contact with parents and vice versa is very important for adolescents (Australian Psychological Society, 2004), as it makes them feel safe and always connected to significant people in their life.

Cell phone is extremely helpful during emergencies. According to Wale and Gillard (1994) the mobile phone in general helps build family relationship by maintaining open communication and substituting for human contact. Adolescents and their families could communicate via mobile phones without much difficulty at any time and place. Both adolescents and their families could be in constant contact. Besides family members, adolescents have reported using their mobile phones to regularly contact their peers to chat, gossip and share stories with each other. Thus, the mobile phone also provides an avenue to improve and maintain their social relationships (Australian Psychological Society, 2004). Therefore the
study substantiated that mobile phone could enhance relationships between adolescents and their family and friends.

2.13 Problems of Mobile Phone Use and Psychological Health

Although the mobile phone has brought many benefits in its users’ life, intense use of this communication device may cause harm to user’s health including his or her psychological well being. Studies from different countries such as Thailand (Kawsaki et al, 2006), Korea (Jee Hyun, Doo-I-Ieum, Seung-Ho & Jaehak, 2008), Norway (Ling, 2005) have found that students who are preoccupied with their mobile phones tend to experience psychological disturbances. Jee Hyun et al. (2008) in their recent study involving 595 Korean students found that excessive use of the hand phone caused students to have depression, higher interpersonal anxiety, and lower self esteem.

In an earlier study, Van den Bulck (2003) reported that addictive mobile phone usage could cause disturbance in students’ sleeping pattern. Students tend to get engaged in text messaging and feel anxious when not receiving replies from their friends even during the night when they are supposed to be sleeping (Kamibeppu and sugiura, 2005). This addictive behaviour tends to cause students to stay awake late at night and thus disrupting their daily routine. Several studies have shown that addictive behaviour and lack of sleep is detrimental to one’s psychological health and functioning (Fredriksen, Rhodes, Reddy & Way, 2004; Moore, Kirchner, Drotar, Johnson, Rosen, Ancoli-Israel & Redline, 2009; Roberts, Roberts, & Chen 2001).

One of the articles in The Hindu News (2008) reported that electromagnetic radiation from base station antennas of mobile networks and mobile phones could pose serious health hazards to people, particularly children below 16 years of age, pregnant women and those using medical aids. The same report says: “The studies of possible hazards to human health from exposure to radio frequency electromagnetic fields suggest that there is a need to control the unwanted exposures as per World Health Organization guidelines”. The tissues of children are tender, and therefore they are likely to be more affected by the use of mobile
phones. Children below 16 years should be discouraged from using mobile phones. Studies on excessive use of cell phones report the following side effects.

2.13.1 Cancer: Radiation is not strong enough to break chemical bonds in the body. But heavy use may enhance the risk of brain cancer.

2.13.2 Tumors: Scientists link up long-term use to brain tumors. The risk of ear tumors is believed to go up four-folds.

2.13.3 Degeneration: Radiation may break the protective blood brain barrier as seen in diseases like MS, Alzheimer’s or Parkinson’s.

2.13.4 Deafness: Long-term use, especially on one ear, may damage tissues in the inner-ear and lead to deafness.

2.13.5 Sterility: May affect male fertility. Long-term users can face lower sperm count.

2.13.6 Pregnancy: Pregnant women who regularly use mobile phones are more likely to affect the child in the womb that causes children with behavioural and physical problems.

2.13.7 Cellular Phone Causes Symptoms including headaches, earaches, blurring of vision, short-term memory loss, numbing, tingling, and burning sensations, bad sleep, fatigue and anxiety.

Professor Elisabeth Cardis (2008), who led the study on side effects of mobile phones, said that to underestimate the risk would be a complete disaster.

The WHO study on the risk of cancer from mobile phones in 13 countries confirms increased risk of brain tumours. Scientists discovered that the chances of developing a malignant tumour are significantly increased for people who use a mobile phone for 10 years. They found that a type of brain tumour called glioma is more likely in long-term mobile phone users.
Dr. Arnetz (2008) said that those who were exposed to radio frequency of 884 MHZ wireless signals reported headaches and it took longer time for them to fall asleep and the quality of sleep considerably decreased.

Dr. Lennart Hardell (2007) from Orebro University in Sweden, reviewed the published epidemiological papers (wiki pedia.com.) and found that cell phone users had an increased risk of malignant gliomas. Brain tumours are more likely to occur on the side of the head where the cell phone is used, one hour of cell phone use per day significantly increases tumour risk after 10 years or more.

There are two sources of radio frequency exposure from the mobile phone system: base station antennas and the mobile phone or handset. Exposure from the antennas is continuous but very low, irradiates the whole body and exposes an entire community. Exposure from the handset to the head is more intense, is only for intermittent periods and tends to be of concern to the user. RF radiations can cause physiological changes in brain, brain cells and cause other biological damage through heating effects. This can lead to headaches, blurring of vision, short-term memory loss, burning sensation and bad sleep (Lai and Singh, 1995, 1997; Hamblin and Wood, 2002).

The Consumers who excessively use mobile phones would also experience psychological problems. This finding tends to suggest that addiction or degree of attachment towards the mobile phone would cause students to experience symptoms such as anxiety, depression or even lack of sleep, which would interfere with their overall psychological functioning. This study concurs with other studies on the negative impact of addictive behaviour and inadequate sleep on one’s psychological health (Fredriksen et al., 2004; Moore et al., 2009; Roberts et al., 2001).

2.14. Indian Consumer

In applying the theories of consumer behaviour one has to be cautious to understand the behavioural dynamics of the Indian consumer. Most of the buyer behaviour models and findings have been developed on the behavioural patterns of western buyers. But to understand the peculiarities of the Indian consumer and to
construct his buying profile, he has to he studied in relation to his environment, his
culture and tradition, his educational and economic status, his level of exposure,
and the degree of his sophistication Academic institutions and individual
researchers have conducted a few studies on isolated aspects of the buying
behaviour of the Indian consumers.

Indians as a class present a striking contrast to the people of the West. By
and large, they are not extroverts and skeptical of anything. Basically, they are
conservatives and tradition bound people. They are contended with the little things
in the family or community. These are some general characteristics of the Indian
consumer. It does not mean that Indians are a homogeneous group, fitting into a
common characteristic. Due to the diversity in religion and caste, languages and
cultural style, it will be more practicable to classify the Indian consumer on the
basis of his economic status, as the rich class consumer, the middle class consumer
and the lower class consumer. It is the middle class that constitutes the largest
consuming segment for the manufacturing goods in the country today. For any
marketer in the country, this group offers the maximum scope and the maximum
demand potential.

In contrast to the above class distinction, the researcher has shown in his
study that ‘income’ is not a determinant to the purchase of mobile phones. In the
analysis, the researcher has shown that persons belonging to all income groups
own mobile phones.

2.15 Buyer Behaviour Models

There are many Buyer Behaviour Models, A few important models of
buyer behaviour are given below:

2.15.1 Howard Model

This theory is an attempt to explain the brand choice behavior of the buyer.
Most of our buying behavior is more or less repetitive. For some products, such as
durable products the process of buying behavior is lengthy and infrequent. When
he makes repetitive brand-choice decisions, the consumer simplifies his task by
storing relevant information and establishing a routine in his decision process. The
aspects of search and the use of consumer information are often treated as part of complex buyer behaviour or decision making models. Howard made the first articulate attempt to associate human behaviour with the buying process. He viewed buying as a process of learning. In choosing products and brands, an individual tends to rely strongly on his experience, (i.e. on what he has learned) but due to the dynamically changing environment, the individual is required to continuously adapt his behaviour to these environment changes by engaging in new learning. Depending on his experience, a buyer is positioned in various phases of the learning curve.

2.15.2 Nicosia Decision Model

Nicosia’s decision model includes a greater number of variables, and it is considerably more complex than that of Howard. His model attempts to establish links between the marketing firm and its consumers. The model describes a circular flow of influences where each component provides input to the next. The utility of the model is to understand how the activities of the firm influence the consumer in his decision to buy. The model is viewed as representing a situation where a firm is designing communications to deliver to consumers and consumers’ Responses will influence subsequent actions of the firm. The exposure of an individual to an informational cure (e.g. an advertising message) may induce him to form certain attitudes. Search and the evaluation of means - end relationships, may motivate him to make the virtual purchase decision. In the process, consumers “attributes” are transferred from predisposition, to attitudes and to motivations. The transformation occurs through a combination of messages from various information sources, environmental situation and experience. As per the Nicosia Decision Model the researcher has found that there are various sources of information which influence brand preference.

2.15.3 Engel’s Purchasing Decision Model

Engel’s purchasing decision model is quite similar to Nicosia’s model and includes different stages for the search and evaluation of alternatives (i.e. information seeking). At each stage of the process, a consumer faces a new decision, and he makes these decisions in the light of the information which he
passively receives or actively seeks, and then compares it with his internal information (i.e. experience). The entire decision process takes place in what Engel calls the “central control unit”. These models are intended to explain certain key aspects of buyer behaviour.

In studies concerning the usefulness of consumer information, the experimental approach has been widely employed. The studies found, first, that as the number of brands in a purchase decision increases, the consumer becomes less aware of and less sensitive to changes in any of the brands involved in the decision. Secondly, they found that with the increasing number of brands, the information for each item appeared to decline. They concluded that as the number of choices increases, the purchase decision becomes more difficult. That is, the added advantage of new sources of information for a purchase decision is outweighed by the disadvantages of added time and effort involved in the decision.

2.15.4 Risk and the Bayesian Approach

Edwards reported several experiments that dealt with the acquisition and use of information. He attempted to compare the “real with ideal” performance based on the Bayesian decision model and found that the subjects tended to show a “qualitative correspondence” with the Bayesian model. Paul Green conducted experiments in which he also related “information buying” to the Bayesian model. He found that the consumers were sensitive to difference in prior probabilities, but their behaviour was relatively insensitive to differences in information reliability and pay-offs. When there was no conflict between prior ad sample information, subjects consistently chose products in accordance with the Bayesian model. The experimental results of both Edwards and Green would seem to indicate that too much information can be as dysfunctional as too little information.

2.15.5 Bauer’s Model

Closely related to Baysian approach is Bauer’s view of the product choice process a risk-taking situation where the consumer can obtain information at a cost in order to reduce his perceived risk of making a wrong decision. The higher the
degree of perceived risk, the greater the likelihood of additional pre-purchase information search, and more the consumer is willing to expend in money, time and effort for additional information. Similarly, Green’s experiments indicated that consumers tend to relate their cost of securing additional information to the weighted value of reducing the perceived cost of uncertainty.

2.16 Nature of Information Source

Many authors have studied the effect of the nature of the source of information on consumer behaviour. Wilding and Bauer reported an experiment to test favorableness of attitude towards a communication source as related to personality variables. Engel and others have studied the influence of information on the adoption of new self medication products and it was reported by them that the degree of influence depend on the seriousness of the ailment. The television advertisements and discussion with friends were important sources of information at the bottom of their sickness scale where minor ailments were involved.

Hempel (1979) conducted experimental studies on the effect of different types of information sources on consumer product evaluation. Using two different brand shirts, he divided his subjects into a group, which expressed a preference for one brand name, and the second group preferring the other brand. He then presented each group with two divergent communications.

a. One message confirming prior preferences

b. Another message conflicting with it, from each of two information sources, consumer reports and a recorded sales talk. The members of each group, who were administered any two of the four possible message information source combinations, were randomly selected. From the resulting data, Hempel (1979) concluded that when both the messages confirmed the preferred brand, neither information source showed a significantly greater influence on the decision outcome. When one or both communications conflicted with prior brand preference, consumer reports appeared to have stronger effect on product choice than the recorded sales talk. Apparently, consumers tend to evaluate a piece of information not only by its content but also by the truth/worthiness of its source.
From the study the researcher has found that the relevance of the study of Hempel (1979) in that the Reference groups have also influenced the consumers in their decision to purchase mobile phones.

There were several pieces of evidence available to support the possibility of distinctive search patterns. It was suggested that cognitive needs and styles led to clarifiers and simplifiers. Mueller noted that their findings seemed to indicate feature substitution through attention to some aspects of deliberation and limited attention to others. It was found that differences in search pattern was found by comparing numbers of stores visited with number of brands considered. At the individual buyer level, Cox reports, that there are clear differences in shopping patterns.

Davis, Kieth (1975) in his article, presented his research focusing on the problems of measuring a consumer’s past information about brand attributes. A procedure for assessing consumer’s prior brand information was discussed and observations were made with a sample of husbands and wives. Finally, suggestions were offered for the improvement of the assessment procedure. The findings suggested that a consumer’s prior information could be segregated by brands and attributes. However, separating prior information by attributes may be difficult, since his information about each brand or attribute is likely to be different. It was also suggested that measurement of consumer’s prior information could be used effectively for a basic research on business, consumer and communication process. He has also given some examples of typical questions to be asked for such researches.

a. Which sources of information generally have the greatest impact on consumer groups’ interest?

b. What impacts do different kinds of appeals generally have on consumer brand decisions?

c. Which information sources are more effective for each kind of appeal?

The research conducted by Douglas J (1984) and others, employed numerical taxonomic analysis as a method for summarizing the ways in which shoppers gather information in purchasing durable goods specifically furniture and
appliances. In this study, taxonomic numerical analysis proved to be useful for classifying buyer pre-purchase shopping behaviour. The primary purpose of the study was to analysis measures of pre-purchase search with a view to identify patterns of information gathering and to assess the factors associated with differences in these patterns.

The classical model economics theory assumes that a consumer can state his preferences; he is consistent in his choice, and is rational in his behaviour. Endowed with perfect knowledge of the offering of the market, this type of consumer of economic mindset is capable of maximizing his subjective utility function with mathematical precision, subject only to his budget constraint. Frank Knight introduced risk and uncertainty into economic thinking, and Von Neumann and Morgenstern formally incorporated these concepts into the theory of consumer behaviour. The consumer now maximizes not merely utility, but he maximizes expected utility.

The probabilistic model of Von Neumann and Morgenstern clearly implies imperfect knowledge on the part of consumers. But Stigler treated information explicitly on cost in applying marginal analysis to the search process. In his theory on the Economics of Information, Stigler hypothesized that an individual will continue his information search as long as the incremental value gained per unit of search is greater than the marginal cost associated with it.

The optimal information point is established when the marginal value of information equals the marginal cost of search. The consumer, in terms of lower prices and better quality from which he presumably obtains grater utility, qualifies the value gained from each search effort. The cost of information is measured in time units, effort, and money associated with the search. Stigler’s theory would predict, for example, an individual with high income would spend less time and effort on information than another with low income. Studies have shown that neither the high nor low income brackets will seek much information in buying durable products but the middle income groups are acquiring information most actively.
The Swedish economist, Staffan Linder explains this seeming contradiction by noting that with rising income the number of consumption decisions increases too. High-income people have also greater demand on their scarce time. The combination of these simultaneous phenomena leads, Linder to the thesis of a declining quality of decisions, which fits the high-income earners well. As regard the poor, their low level of education means a low yield on time Spent in the collection of information. Economic thinking has come a long way from the early models of economic man, although some of the classical notions seem to persist. But with Stigler and Linder, the stage is set for a closer looks at the role of information in the marketing literature.

2.16.1 Availability and Choice of Information

When studying situations in which a consumer is exposed to information, it is necessary to consider the availability of different kinds of information. Consumers can be exposed to many different kinds of information, but for the individual consumer, the narrow environment in which he lives limit the information he will face. The forced learning situations he will experience are biased to the extent the environment is biased, and the same applies to the information to which he can attend in situation where he is actively acquiring information. Similarly, the consumer is not likely to have experience with all possible products and brands.

The environment may also affect the consumers, in a narrow sense, as to which information sources to utilize. The alternatives to be considered depend upon the particular situation, and each situation has its own sources upon which the consumer must rely Normally, if one wants to make use of other sources, he must choose an alternative that involves search outside a particular environment and such an alternative will be chosen only when a certain amount of perceived conflict has been aroused, and when no other sufficiently attractive alternatives are available.

How a consumer will react to the information depends upon the relationship between the source and content of the message and the receiver’s
salient cognitive disposition. A particular piece of information is chosen according to the individual’s experience with regard to that information. However, when a consumer is exposed to any information, it may look completely different or it may turn out to be more or less in agreement with his expectation. This implies that the consumer’s choice of information must be examined; depending on his expectations and that the effects of the information must be seen in relation to actual content of the information.

Selectivity implies that people are biased in the material to which they become exposed and to which they attend, in what they read and understand, and in what they learn and remember, many studies of selectivity have suggested that two kinds of selectivity occur. Many authors suggest that consumers are selective in what they seek out and what they are interested in; while others suggest that people prefer information that supports whatever views they already hold. In some instances, these principles may make some predictions, as and when the supportive information happens to be the information in which the consumer is also interested.

Regarding the consumers interest in pre-purchase information, Thorelli (1970), in his study on 93 Norway sample districts, found that those with more education might be more information-minded than those with less education. Actual or potential buyers or owners of a product were more likely to be better informed than other, and one might expect that higher income or wealth was accompanied by greater product information There might be elites who were highly informed of products and hence a concentration of information power among consumers, after all knowledge is power.

In their scholarly study, Newmann and Staelin (1972), made the findings that lend support to the hypothesis that purchase of a product resulted in learning, which later influences buyers behaviour, their results, as well as those of earlier studies indicated that the amount of information sought by many buyers was small, but it did not necessarily mean that buyers were ill-informed.
In another useful study, Rao (1972) examined the relationship between the amount of explicit information and brand perceptions and the effect on perceptions of brand image (conjured up by the brand name alone) though other sources of information were available. Twelve brands of 1970 automobile models (cars) were chosen as stimuli in the study. Description of the twelve stimuli was developed from literature published by the manufacturers and consumer union reports.

In their revealing attempts, Roering and Block (1976) surveyed the following predictions as the focus of their investigation. The consumers living in high and low density areas will differ with respect to their pattern of pre-purchase information search, and consumers generally would differ with respect to the pattern of pre-purchase information search associated with the decision to buy various types of products. The data used for the above study were collected via structured personal interviews with 102 household representative samples in the central Missouri area in and around the city of Columbia.

The main result of the study was that the two consumer groups did differ with respect to pattern of information search. The pronounced variations in information search patterns observed in these two consumer groups suggested that other consumer groups might also show substantially different information search. Thus, this research effort had attempted to enhance understanding of pre-purchase information search by comparing the reported information search pattern of two market segments.

O’Brien (1977) examined, the four factors—demographic, personalities, source and message and product class and their effects on information handling. The products chosen for the study were cars and breakfast. It was found that the factors had varying effects on information handling. Search ignition had no effects on these variables, nor did education, sex, product class or psycho-social classification; expect knowledge increased more for cars than instant breakfast. As demographic variables, sex and education affected search ignition. Higher educated subjects were more likely to go in search of information probably because they were more familiar with sources and benefits of such search. Males
were more likely to go in such a search in difference being greater for the presumably higher interest product class of automobiles. The psychological variable, a personality measure has no effects, no search or decision making but was found to influence the way information was asked.

Another important finding of the study was that since most of the available information was favorable towards a particular brand, unfavorable messages would be especially valuable in that damaging information could terminate purchase consideration.

In his study of choice process and automatic responses, Wasson (1979) found that the general focus of consumer behaviour models on the search process seemed to have relegated the complex of automatic responses and unconsidered choices to the purchase behaviour of established products. Automatic responses meant the learned complex of habitual procedures, of those habits of thought called perceptions and habits designed as class behaviour, culture and life style. The automatic responses played a major role in the adoption and diffusion of innovative new offerings, and were the determining factor in the degree of ready acceptance of the product on introductions.

In a fine and fruitful attempt, Westbrook (1979) made a study to determine whether distinctive patterns of information source usage measures in connection with selected explanatory variables proved useful distinguishing four different patterns. The products chosen for the study were refrigerators, freezers, washing machines, cloth dryers, ovens and dishwashers. The findings of the study indicated that major appliance buyers could be classified according to distinctive patterns of pre-purchase information source usage, which were understandable in terms of various explanatory variables.

Yet another commendable study was made by Crites. Shaw and Onkvisit (1979) on information sources usage among home buying consumers. The main purposes of the study were: what were exactly the steps involved in the home search process? And what were the types of information sources used by consumers to locate potential homes for Purchase consideration? A field study was
organized to examine the information search patterns of purchase and post-purchase home buying sample consumer’s of 2314 were determined out of the population of 18,517.

There were five classifications on the level of interest with regard to the purchase of a home slightly involved, involved, very actively involved, post-purchase, and not involved. The findings of the study indicated that for most Americans the purchase of a home represents the single largest purchase a family would make in its lifetime. The data gathered in this study indicated that changes did occur during the search process and it might be of interest to determine how the changes occurred and what influenced the consumer to change the search pattern.

A model was developed by Ratchford (1980) expressing the relation between gains to search and a consumer’s reference function. For four of five appliances air-conditioner, refrigerator, washing machine, canister vacuum and range to which the model was applied, extensive search would not be worthwhile for a consumer whose preference approximates the market hedonic price function. He had made a reference of other studies (Claxton Fry and Ports, 1974, Newmann and Staelin, 1972), which suggested that substantial number of consumers failed to engage in extensive search prior to purchase. But unlike previous research, his study focused on incentives for information seeking for a given product, how much would a utility-maximizing consumer with a given preference gain from search.

Another informative study was undertaken on information seekers and information system by Thorelli and Engle Dow (1980) Consumer information systems in general and independent consumer information programme in particular was seen as indispensable elements of consumer policy, both private and public. In open market democracies, information had inherent merit relative to consumer protection by direct regulation.
In a comprehensive study of the behaviour of consumers which correlates the seeking of information by Australian new car buyers, the researcher Keil and Layton (1981) examined three dimensions of information seeking- a source of information dimension, a brand dimension, and a time dimension. Cluster analysis was used to develop consumer taxonomies of search behaviour based on measurements of each of the dimensions. The resulting taxonomies were a high search group, a low search group, and three clusters collectively styled selective information seekers.

The findings of the above study were that the Australian consumers like their U.S counterparts, differ greatly in their use of alternative information seeking behaviour studied, the results indicated that some consumers undertook substantial activity. 36% of respondents had reported, making two or few trips to inspect cars, whereas 20% reported making six or more such trips. The relationship between price and search behaviour was positive, indicating that the greater the net price paid, the longer the search time period.

In another belief-oriented survey of 164 recent purchasers of colour television sets, Buncan and Olshavsky (1982) showed the importance of consumers’ belief about the market place in the purchase of colour television set. The type of brand (domestic, foreign, or private) and the type of store (national, regional, or local) considered by consumers were found to be significantly related to the belief they held about the market place.

The main objective of this research was to study the degree of relationship between market place related beliefs and pre-purchase external information search behaviour. The extent of external search for information exhibited by consumers prior to purchase typically had been found to be very limited; in some cases little or no external search occurred. Another enlightening study by Malhotra Jain and Lagakos, (1982) reviewed the information overload controversy and presented a methodology for investigating the effects of information load on consumer decision making process.
A comparative study of consumer information seeking between two countries-Singapore and U.S. was taken up by Tan and Dolich (1983) The result of the study revealed that contrary to the belief that foreign consumers might utilize different information sources, it was found that the U.S. and Singapore respondents to be quite alike in their usage of information sources. In general, personal sources such as observing or seeking advice from friends, neighbours and family members were used quite frequently by both the groups. Seeking information from retail outlets appears to be common among the U.S. consumers.

However, the present study is limited to the Mobile industry of Indian market, and that too limited to Thiruvannamalai district alone. The comparative study was not carried out on the basis of markets but by brands. It is proved that there is stiff competition between Nokia and Reliance. Nokia has nearly 40% of the market share in India.

2.16.2 Position of Consumers in the Market

Consumer may be defined as any person or individual who is using goods and services for the satisfaction of his needs and wants. This definition depends on the usage and not on the act of purchasing power, or on income, age, sex, or social class. Since all persons living in a society are dependent on one another for the provision of necessities of life (as well as luxurious goods) and all individuals are using up something, i.e. consuming at least the minimum, some food, clothes and shelter, all are included in the consumer category. Engel and others defined consumption as “those acts of individuals directly involved in obtaining and using economic criteria goods and services, including the decision process using economic that precede and determine these acts.”

The entrepreneur who behaves irrationally will presumably be driven out of business and will then no longer be a ‘producer.’ Even government is somewhat obliged to act rationally, at least in the eyes of the majority of risk of loss of reelection. An irrational consumer, on the other hand, even if driven to bankruptcy, cannot stop consuming unless he is no more.
The inclusion of the consumer in the market system is, of course, as old as the history of exchange based economies. His role in this system as a performer of marketing activities and his strength related to other market forces, however, has changed. On the macro level, consumers seem to have gained in relative market position. More discretionary income has enabled consumers to afford more luxuries, more travel, and more recreational activities. Increased leisure time has encouraged consumers to partake in these amenities of life in larger numbers.

2.17 Factors Influencing the Consumer in the Decision Making Process

Consumers, before making any purchase decision takes in to consideration certain criteria to make a good purchase. After the consumer has decided the criteria to be considered, he evaluates various alternatives, and then makes a choice between different products. In this process, he is influenced by motivation.

Motivation can be described as the driving force within individuals that impels them to action. Successful marketers define their markets in terms of the needs of the consumers they are trying to satisfy, rather than the products they sell. This need appears to be closely related to the needs of the ego, in that many individuals experience increased self-enhancement when they exercise power over objects of people. A number of products lend themselves to promises of power Superiority for users, and durable goods are the best example for it.

The following are some of the findings from studies related to the consumers using cars and automobiles. The researcher intends to use the factors for the car preferences which would also contribute for the preference for mobile phones. The findings would show that there are factors for the preference for a product.

A significant research work was carried out by Peters (1970) who introduced a study on the combination of family’s income and occupation as a new explanatory variable, but earlier studies focused either on income or occupation alone. He chose a representative sample of 2453 families, which consisted of those that had recent model cars and those that did not have five classes of car compact, inter-mediate sized, medium-sized, large and foreign
economy-cars were selected for the study. The above study revealed that the average income-class, regardless of occupation, own foreign cars, and intermediate-sized and compact cars than expected. Moreover, the over-privileged group (regardless of occupation) owned more medium-sized and large cars.

The concept of social class in marketing was introduced in 1950. A noteworthy study by Myers, Stanton and Hong (1971) compared social class and income as correlations of buying behaviours for a variety of low-cost packaged goods. The objective of this study was to determine whether social class or income best explains which products are found in homes. One thousand households were selected by multi-stage area probability sample. The social class was found basically inferior to income as a correlation of buying behaviour for the consumer packaged goods covered in their study.

What goes on in the minds of a consumer as he forms a purchase decision was marvelously studied by O’Brien (1971) in his novel study on consumer decision making. He used a relatively new methodology with a computer for setting up and interpreting multiple time-period survey data. The significant cross-legged and multiple correlation differences indicate that word-of-mouth influenced subsequent intention to purchase. Further, it was significant to note that commercial information has no direct influence on ultimate purchase. O’Brien’s research is a revealing one indeed.

Settle (1972) made a study, examining consumers’ preferences for four kinds of information sources in order to subjectively validate attribution about four types of products. Totally 24 products were chosen for the study like stereos, chairs, watches, bracelets, cookware’s electric hair rollers, oven-toasters, electric blenders, etc.

Lambert (1972) to test whether behavioural differences existed among consumers who selected items, priced differently within the same product. The products chosen for the study were tape recorders, portable stereos, moulded luggage, tooth paste, coffee, suntan lotion, and tennis rackets. The findings revealed that persons who chose the high-priced items perceived large quality
variation within the product category and saw the consequences of a poor choice as being undesirable. They were confident that quality was related to price and saw themselves as good judges of product quality. Their perceived experience in purchasing the product was often high and they thought that brand choice was likely to affect other people’s social judgment of them.

Bogart and Lehman (1973) in their psychological study of unaided brand recall by female household heads, examined some factors related to brand salience. Their findings indicated that brand recall was a complex and dynamic process.

Newman and Warble (1974) were much interested in some new findings on automobile brand loyalty. Though brand loyalty is a subject of high interest to marketers, the empirical research on it has been limited especially to consumer durables. A new measure of loyalty was compared with the traditional repurchase definition, and significant influences on loyalty were identified by multivariate analysis.

The data analysed for the above study were from 217 households which had bought a new car in 1967 or 1968. The respondents were adults from a probability sample of 1300 households in the United States, excluding Alaska. The findings revealed that the probability of loyalty was higher than average for persons who attended but did not graduate from either high school or college who were in occupations of low to medium skills who bought cars frequently; who tended to be optimistic and who were satisfied with their cars.

A remarkable study was made by Parker and Copley (1974) to examine the relationship which existed between consumer brand preference, attitudes, brand attributes, importance and perception. The data were collected from the twin cities of Lewiston, Idly and Clarkson, and Washington. Information on preferences towards seven car brands, perceptions of the attributes of these cars and attribute satisfaction scores were obtained from the sample consumers. Eleven-car attributes-economy of operation, power, warranty, style, size and dependability-were included in the analysis.
A comparative study on qualitative and quantitative models was made on brand loyalty by Wheeler (1974) which threw light on many behavioural aspects like brand-switching. Consumer behaviour was more accurately predicted by means of quantitative models than qualitative ones. The study also emphasized the quantitative taxes because a brand loyal customer purchases a particular brand not only very often but the brand under consideration has positive psychological preferences also for the brand loyal customer.

Fear can also be an important factor of motivation. In this regard, a study was undertaken by Tsars, (1974) in the case of electric car, the need for which was felt by citizens of America due to the fear of air pollution. Metropolitan areas were the hardest hit. People were forced to change their attitudes due to a change in the environment. The electric car is pollution-free and does not require petrochemically based fuel. While speaking in the Third International Electric Vehicle Symposium, James A. Meclore, United States Senator from Idaho, expressed the opinion that the electric car was one of the few realistic solutions to the transportation problems.

Parker and Anderson (1974) examined the consumer’s preferential expectations concerning attributes on objects and their postural perceptions of the attributes. The findings suggested that differences did exist among individuals in terms of the appropriateness of various preference models.

Hempel (1975) studied the significance of family role structures in house purchasing decision. A sample of 206 households was selected and both husbands and wives were interviewed. The findings of the study revealed that the role structure in family house buying decisions was affected by household characteristics. There was variation in the relative importance of determinants—sex, culture and role structure measure.

A significant culture study was made by Henry (1976) to support the general theory that culture was a determinant of certain aspects of consumer behaviour. Value dimensions developed to study the cultural orientations within American society were found to correlate with the ownership of generic
automobile categories. Culture generally is accepted by marketing theorists as one of the underlying determinants of consumer behaviour.

The psychological implication in the consumer behaviour, when a change of agency is effected was brilliantly studied by Nordstrom (1976) who had assumed that changes in market structure variables could affect consumer loyalty behaviour. This research work presented supportive evidence from an expo facto experiment showing that a change in business ownership was related to significantly altered brand and store loyalty patterns. It made a reference to Ford agency. These findings highlighted a need to recognize that loyalty was dependent on factors outside the physical product as motivation and that to hold the loyal buyers, from the viewpoint of dealers, there must be continuity of operation.

In another in-depth study, by Paul and Rayn (1976) perceived risk at the brand level was investigated. Perceived risk was conceptualized in terms of expected negative utility associated with automobile brand preferences. Empirical evidence supported the notion that importance of loss was more useful as a segmentation variable than as a component in a multiplicative model.

A study was undertaken by Tankersley (1977) with the objectives to investigate the association between attitude and brand loyalty behaviour. To compare two attitude models’ were used to identify the association of attitude to brand behaviour. This study threw light on the relationship that existed between attitude and brand loyal behaviour.

Whether customers behave rationally or irrationally while taking decision to buy was a unique study made by Markin (1979). The study examined several aspects Including the typical models and assumptions inherent in consumer decision process models and to develop the psychological concept of rationalization and examine the existential support for the concept. The findings revealed that the consumers were rational only at sometimes and not always. Consumers did nationalize their decisions, searching and information processing activity was largely a normative rather than a positive model.
Golden (1979) in his relative study, investigated the influence of comparative and non-comparative advertising on purchase intention ratings, perceptions of believability, credibility, quantity of information, and usefulness of information. The impact of the advertisers’ competitive position and claim was considered.

A remarkable study on family decision making was undertaken by Qualls (1981). The main purpose of the research was to discover the effects of family members’ sex-role orientation on influence patterns for several household decisions. The comparison of sex-role modern and sex-role traditional revealed that family members’ sex-role orientation affects the degree to which families interact and the perceived pattern of influence for various family decisions.

A study on quality was made by Rexeisen (1981) to scrutinize the influence of price on products evaluations. The result of the influence of the study was quite contrary to earlier studies that no significant price effects were found. There were significant interactions between place of purchase, information levels and the ordering of price presentation.

Eden and Bible (1982) made a study to examine whether tenure status and socio-economic status were associated with housing attribute preference. One hundred and fifty five home owners were selected as sample. The findings revealed that tenure, status and socio-economic characteristics affected the housing choice.

A consumer involvement study was undertaken by Laurent and Kapferer (1985). The researchers measured the involvement profile rather than a single involvement level. Fourteen product categories—durables, food, textiles, drugs, etc., and 100 housewives were selected as sample. It was found that when consumers were involved in buying decisions they were engaged in a number of behaviour (active search, extensive choice process, active information processing, etc.,) and when not involved, they were not engaged in these behaviour.
An analytical study was conducted by Bitta, Monrose and McGinnis (1986) who dealt with the issue of comparative price advertising from a behaviour perspective. The study by Srinivasan (1979) examined two aspects, cognitive-rational and hedonist aspects, as forming two distinct but consecutive stages of the consumer process. The findings revealed that cognitive-rational and hedonist aspects were not two mutually exclusive elements in consumer’s scheme of things.

Hill (1987) made a study on the mood of consumer with the objectives of looking at the mood literature and its development there of Ravichandran (1988), in his praiseworthy research work, examined information sources used, choice-making and discrimination between urban and semi-urban population with reference to purchase of durable goods with 550 sample consumers from Chennai city and 4 other towns. The products chosen were refrigerators, televisions, ceiling fans and domestic mixers. The fruitful findings revealed that urban consumers made use of commercial sources, and semi-urban, personal sources. They showed significant differences in the time taken for decision.

The study finds in the analysis how the respondents have made use of commercial and personal sources of information in the purchase of mobile phones.

2.18 Buyers and Users

The person who makes the actual purchase is not always the user or the only user of the product in question, nor is the purchaser should necessarily be the person who makes the product decision. A mother may buy a product for her children (who are the users). Buyers are not always the users or the only users of the products; users may neither buy nor may necessarily be the persons who make the product selection decision. Consumers are highly involved in a purchase when it is expensive, bought infrequently and risky. Products involve a decision-making unit, which consists of more than a single person.

To illustrate this point, consider the selection of a durable product in a family. The suggestion to buy a new television might come from the oldest child (initiator). A friend might advice the family on the kind of durable products to buy (influencer). The husband might choose the make (decider). The wife might have
definite desire regarding the durable products look. The husband might make the final decision, with the wife approving (buyer). The wife might end up using the durable products more than the husband does (user). A company must identify these different roles as they have implications for designing the product, determining messages, and allocating the promotional budgets.

2.19 Evaluative Criteria in Purchase Decisions

In almost every product, there are a number of alternatives for a consumer; be it a day to day consumer product like grocery, butter, bread, tea, coffee, or consumer durables like television, refrigerators, air conditioners, motor bikes, scooters, cars, houses, insurance policies, courier and other services. In India, till the processes of liberalization started in 1991, a consumer had a very little choice, and he had to buy what was offered to him. For instance, before Maruthi Udyog Ltd. started producing cars, there were only three car models in India, and the supply was also limited. Hence, one had to buy what was offered to him. Today, there are over 30 models from a number of companies and more in the offering. Hence a consumer can decide which one is the best alternative to him. Similarly, in the case of television, refrigerators, air conditioners, washing machines and other products a number of alternatives are available, and the consumer has to make a choice out of them, after assessing their relative merits and demerits. Thus, “alternative evaluation can be defined as the process by which a choice alternative is evaluated and selected to meet consumer’s needs”. In other words, it is the study of processes by which consumer makes a final choice to buy a particular brand of bread, butter, cheese, tea, coffee, milk, car or other in some durable goods or services.

A consumer studies various factors to help him to evaluate. For instance, in the case of car, he considers price, fuel consumption, durability, and reputation of manufacturers, besides colour and shape. The selection of costly durable items is done with great care; one collects the information in various models available. Then he eliminates those, which are beyond his budget or that do not suit him. In the next stage, he shortlists two/three models, and studies them in depth for which he may consult his friends, relatives, and those who have some technical
knowledge about the product, and finally he selects one model. The number of stages for the selection differs from product to product, and for some items like property and insurance a consumer may even seek the help of a consultant before taking a decision.

According to psychologist, needs, wants, or desires are positive drives, and fear or aversions are negative drives. The consumer is usually positive-drive-oriented when his choice for a particular product is based on purely objective criteria such as size, weight, price or miles per gallon. When some product is avoided in preference to some other product, subjective criteria, such as the desire for individuality, pride, fear, affection, and status operate. Usually drives based on objective criteria are emotional and negative. Motives can come into conflict with each other, and thereby affecting consumer behaviour. The conflict would occur between two desirable alternatives (approach-approach conflict), or between two undesirable ones (avoidance-avoidance conflict), or between two undesirable ones (avoidances-avoidance conflict), or between a positive and a negative one (approach-approach conflict). It has been distinguished between positive driving forces which direct want towards objects, and negative forces which lead wants away from objects. Motives of fear may cause some people to avoid air travel unless alternative methods of transport are not available.

2.20 Section Summary

The literature review has highlighted among other things the studies related to Cell phones and service providers, important theories of buyer behaviour, the concept of consumer preference and consumer behaviour and the side effects due to the excessive use of mobile phones. The findings of related studies have contributed for the formulation of hypothesis and supported the study of the specific objectives.