

Measuring the Competitiveness Factors in Telecommunication Markets



Md. Nekmahmud and Shafiqur Rahman

Abstract Telecommunication sector has emerged as the fastest growing tech market in the world. This chapter measures the competitiveness of factors in telecommunication markets and focuses on service quality and customer satisfaction in telecommunication markets. Moreover, this chapter is mainly descriptive in nature and, is conducted based on a mixture of primary and secondary data. It proposes an approach to develop the conceptual framework of service quality, competitive factors of customer satisfaction and loyalty in the telecommunication markets. It is also proved in the constructed model and hypotheses development on the six-independent competitive factors and those are value-added service (VAS), price and tariff, conveniences, customer care which has a positive significant influence on customer satisfaction, communication and coverage and sales promotion which has a negative influence on customer satisfaction in telecommunication markets. It emphasizes on emerging telecommunication markets where having seven features as emerge from the change in technology, change in Government law and regulation, change in value-added service, change in social media demand, change in sales promotion, change in user behaviour and change in market competition. A summary of the main findings of the study has been presented with addressing managerial implications and recommendations in telecommunication markets. The chapter can help researchers to generate new thoughts and service provider of telecommunication operators to retain the customer on the basis of findings.

M. Nekmahmud (✉)

Department of Marketing, Begum Rokeya University, Rangpur, Bangladesh

e-mail: argonmkt@yahoo.com

S. Rahman

Australian Academy of Business Leadership, Minto, NSW, Australia

e-mail: Shafiqur.Rahman@aabl.com.au

1 Introduction

The telecommunication sector is playing an important role in the economic development of any country because of increased progress in technology and a massive competition among all service providers in telecommunication sector (Roos and Edvardsson 2008). Due to privatization and liberalization of policy, telecommunication sector is experiencing phenomenal global change all over the world (Beard and Hartmann 1999).

In the age of information communication technology (ICT), usage of mobile phone or cell phone is increasing and business environment of developing country is becoming more competitive day by day. Mobile phone or cell phone is the most lucrative weapon that helps to keep in aware of the changes of information (Huq et al. 2015). Mobile or cell phone is such a device that has made the communication easier, even for the countryside people (Lee et al. 2001).

Telecom sector has emerged as the quickest rising telecom market in the world. With more reasonable services, expanded penetration and a supportive government, alongside the regular drop-in tariffs in the sector have brought significant changes in a number of consumers and usage of mobile telecom services (Sinha and Wagh 2008). Today's telecommunication is an inseparable part of our everyday life. Besides, nowadays cell phone is becoming more popular and user-friendly device due to its convenient using and availability of low-cost to communicate with all classes of people. Gender, occupation, education, and income level of the consumer have a strongly significant influence on attitudes towards the usage of smartphone (Nekmahmud et al. 2017). It is projected that Bangladesh will be the third biggest telecom market in Asia after China and India (Uddin and Akhter 2012; Hasan 2008). According to The Mobile Economy Report 2017, 65% of the world's population had a mobile subscription—a total of 4.8 billion unique mobile subscribers at the end of 2016. The total is set to reach five billion in mid-2017. By 2020, almost 860 million new subscribers will be added, taking the global penetration rate to 73%. Regional penetration rates are forecasted to range from 50% in Sub-Saharan Africa to 87% in Europe. Total mobile revenues reached \$1.05 trillion in 2016, up 2.2% in 2015, marking the second consecutive year of rising revenue growth.¹

The mobile platform is emerging as the single most powerful way to extend economic opportunities and key services to millions of people, said World Bank economist (Qiang 2009). The telecommunications industry is one of the leading contributors to economic growth, mainly in developing countries. In addition to the economic contribution, the telecom industry also influences the growth and advancement of many other sectors including education, health, e-governance and rural development. In 2016, mobile operators and the ecosystem provided direct employment to more than 11 million people globally. In 2016, around 17 million extra employments were indirectly supported in this way, bringing the

¹The Mobile Economy 2017, website at www.gsma.com

aggregate effect (both direct and indirect) of the mobile industry to more than jobs.² This excessive economic activity produced a further \$430 billion, in 2006. Furthermore, the utilization of mobile technology also improves the productivity for workers and businesses, which was 1.85 trillion in 2016. Finally, if we consider the total impact of mobile phone productivity, directly and indirectly, it accounts for 3.3 trillion in 2016 equal to 4.4% of global GDP. Agribusiness is the main contributor to GDP in emerging markets and the biggest employer. Mobile technology is uniquely situated to deliver the critical information quickly that rural smallholder farmers require, empowering them to make better decisions and investments that increase their productivity and profit. Telecommunications operators help to achieve the SDGs. The ubiquity and affordability of mobile technology provide a unique platform for improving and enhancing social and economic development. The GSMA 2016 Mobile Industry Impact Report, which evaluates the performance and impact of the telecommunication (mobile) industry on the SDGs, fields that mobile is already contributing to all 17 SDGs to changing degrees. Globally, the industry has already connected 4.8 billion people, where including 3.6 billion people in developing countries, as long as access to tools and applications that a wide range of socioeconomic challenges in vulnerable communities and also empowering new technologies and innovations for building all the more effectively and environmentally sustainable societies.³

The spread of information and communications technology and global interconnectedness has great potential to accelerate human progress, to bridge the digital divide and to develop knowledge societies (p. 5).⁴

Telecommunication core service usually comprises of networks to use mobile phones, broadband etc. and support service usually support and facilitate the core service (Vargo and Lusch 2004a, b). “The most important thing for telecommunications companies has to be developed for achieving customer’s loyalty, quality and satisfaction” (Roos and Edvardsson 2008, pp. 87–107). A global research identified that higher service quality gives customer’s satisfaction and loyalty, greater willingness to commend to someone else, improve customer retention rates and reduce complaints (Danaher 1997; Mägi and Julander 1996; Levesque and McDougall 1996 cited in Dhandabani 2010). The mobile telecommunication companies in Bangladesh are aiming at providing cost effective and quality services to the customer (Neogy 2014). Consumer satisfaction and loyalty is long-term agenda for each mobile telecom company. Without the customer’s satisfaction, the mobile telecom operator companies can’t run long term with successfully. Customers’ fulfillment relies upon the distinctive service, which shows the mobile telecom operator companies for their customers. Customers’ satisfaction has now become a major concern of the mobile service providers (Hossain et al. 2012a, b).

²GSMA Intelligence Analysis.

³Mobile Industry Impact Report 2016: Sustainable Development Goals, GSMA, 2016.

⁴Transforming our world: the 2030 Agenda for Sustainable Development, United Nations (UN).

The chapter basically highlights the competitiveness of factors in telecommunication markets. At the same time, however, we measure the service quality and customer satisfaction on telecommunication markets in developing countries. The chapter addresses the attributes of service quality that affects the users in the selection of the different mobile phone operators in developing country of Bangladesh. This finding of the chapter helps the telecommunication operators to manage their business and improve their service quality.

In this chapter, we focus on the present scenario of telecommunication markets in the world. The literature review includes reviewing some important theories such as service quality, customer satisfaction, and loyalty on telecommunication markets of the previous study is presented. It attempts to differentiate the present study from the past studies in telecommunication markets.

Our approach explores some factors that are affected by emerging telecommunication market. We also measure some competitiveness of factors in telecommunication markets, which have a significant influence on customers' satisfaction and loyalty. Then the methodology deals with the selection of a sample of respondents, sources of data, methods of data collection, research questionnaire, measurement techniques, and processing and analysis of data in perspective in Bangladesh. The chapter proposes an approach to develop the conceptual framework of service quality, competitiveness factors of customer satisfaction and loyalty in telecommunication markets. It is also proved in the construction of model and hypotheses development.

A summary of the main findings of the study has been presented. At the end, the chapter will be concluded by addressing a set of recommendations and suggestions with a view to improving customers' satisfaction towards the service and competitiveness factors in telecommunication markets.

2 Present Scenario of Telecommunication Markets in the World

A recent GSMA's 'Mobile Economy' global edition report of 2017 revealed that the five billion-subscriber milestones are expected to be achieved by mid-year 2017 and 5.7 billion by the end of this decade, globally. Asian markets such as India is predicted to add 310 million new unique subscribers by the end of this decade.

GSMA Intelligence and Ericsson report slightly differ for both unique users and active mobile connections, total the unique number of mobile users is 4.9 billion and mobile connection is 8.0 billion. According to Ericsson mobile report, at present, there are 5.1 billion of unique individual mobile users and 7.5 billion

mobile connections. So, the overall trend is clear: mobile phones have become an indispensable part of today's life for most people globally.^{5, 6}

The recent data also strongly indicate that over half of the world's inhabitants use the smartphone, which is yet another major milestone included in this year's report. However, the number of the mobile user varies from country to country and region to region. South Asia and Africa are having the world's lowest levels of connectivity compared to the populations. On the other hand, people in Eastern Europe are enjoying the highest number of active mobile connections.

The top ten telecommunications companies of the world, each having a market value of over \$50 billion. To serve world's fast-growing telephone and wireless connection demands, the telecommunications industry is expected to expand further. Increased number of individuals in emerging markets is subscribing telephone and internet connection day by day. Also, new telecommunications technologies in developed nations are expanding among the pre-existing customers. Although several companies' can distinguish the top telecommunications companies globally, market value aids as the determining factor that arranges the list of the top ten companies in this sector (Table 1).^{7, 8}

Bangladesh enters the mobile telecom world through the Citycell (Pacific Bangladesh Telecom Limited) in 1993. At present, there are six (Grameenphone, Robi, Banglalink, Airtel, Citycell and TeleTalk) mobile telecom operator companies in Bangladesh. The total number of mobile phone subscriptions and internet subscribers has reached 129,584 and 67,245 million at the end of February 2017. The mobile phone subscribers of different companies are Grameenphone (59,306), Banglalink (31,309), Robi Axiata (27,017), Airtel (8219), Teletalk (3733).⁹

3 Literature Review on Customer Satisfaction

Marketing scholars have thoroughly studied customer satisfaction (e.g. Oliver 1980, 1999; Johnson et al. 2001; Anderson et al. 2004; McQuitty et al. 2000; Eshghi et al. 2008). "Satisfaction as a person's impression of pleasure or dissatisfaction resulting from comparing a product's perceived outcome in relation to his/her anticipations" (Kotler and Keller 2009, p. 128). Many other studies have supported this definition, for example, Tse and Wilton (1988) and Oliver et al. (1997). Other scholars defined

⁵GSMA Intelligence report, web site at <http://gsmaintelligence.com/>

⁶Ericsson report, web site at <https://www.ericsson.com/mobility-report>

⁷Investopedia, The World's Top 10 Telecommunications Companies!Investopedia website at <http://www.investopedia.com/articles/markets/030216/worlds-top-10-telecommunications-companies.asp#ixzz4mXnU2Rko>

⁸Web site at <http://alert-komunikacije.com/2016/10/31/top-10-telecom-companies-world-2016/>

⁹Bangladesh Telecommunication Regulatory Commission (BTRC) Report 2017, website at <http://www.btrc.gov.bd>

Table 1 Top 10 telecommunication companies list in the World and its subscriptions

Rank	Company	Country (main market)	Total Subscriptions (in million)	Country origin
1	China mobile	China Mobile operates over four countries: Mainland China, Hong Kong, Pakistan, Thailand	859.9 (April 2017)	China
2	Vodafone	Vodafone has a reach of more than 150 countries	469.7 (September 2016)	United Kingdom (UK)
3	Airtel	Airtel serves more than 21 countries	372.4 (March 2017)	India
4	America Movil	America Movil has a reach of 18 countries in the Americas and 7 countries across the Europe	279.8 (March 2017)	Mexico
5	Telefónica	Telefónica has a present from over 22 countries	274.1 (March 2017)	Spain
6	China Unicom	China Unicom provides services in the chain	267.3 (April 2017)	Chain
7	Veon	Veon provides services more than 18 countries	237.7 (March 2017)	Netherlands
8	MTN Group	MTN operates in over 20 countries	236.8 (March 2017)	South Africa
9	China Telecom	China Telecom operates in the chain	224.1 (March 2017)	Chain
10	Orange	Orange is present in about 28 countries in the Europe	203.5 (March 2017)	France

Source: Wikipedia

customer satisfaction as the feeling of customers toward a product/service once it has been used (Solomon 1996; Wells and Prensky 1996; Hansemark and Albinsson 2004).

A customer becomes satisfied, if the perceived performance matches or exceeds his/her expectations. On the other hand, when perceived performance goes below expectations, the customer gets dissatisfied (e.g. Oliver 1993; Mittal et al. 1999; Westbrook and Oliver 1991; Banker et al. 2000). So, satisfied customers repeat the purchase, become brand loyal, spread positive word-of-mouth advertising, leading towards increased sales (Dispensa 1997; Aaker 1992; Fornell 1992; Oliver et al. 1997). Conversely, dissatisfied customers may not buy the product, spread negative word-of-mouth advertising, leading towards the decline of (Day et al. 1981; Hirschman 1970). All the above indicate the importance of identifying customer satisfaction (Metawa and Almossawi 1998).

“Friendly, courteous, knowledgeable, helpful employees, the accuracy of bills, competitive pricing, and service quality impact customer satisfaction” (Bamfo 2009, pp. 299–311). Some customer satisfaction studies identified positive correlations between importance quality and customer satisfaction (Cronin and Taylor 1992; Taylor and Baker 1994). A few other studies also identified that service excellence plays a key role in customer satisfaction (Bartell 1993; Kotler and

Armstrong 1991; Bitner 1990; Chitwood 1996). Consequently, many companies apprehend that customer satisfaction must begin from their employees' satisfaction (Bitner 1990; Surprenant and Solomon 1987; Lian 1994; Gremler et al. 1995). Exceed customer's expectations, friendly behaviour & efficient employees, fair price, competitive service quality, repeating to purchase, brand loyalty, positive word-of-mouth and comfortable environment are facilitated to determinant customer's satisfaction (Nekmahmud et al. 2016).

4 Service Quality

“Service quality is the gap between customers' expectancy and actual performance of a service” (Parasuraman et al. 1985, p. 42, 1988, p. 17). Parasuraman et al. (1988) developed the SERVQUAL model, where assurance, reliability, responsiveness, empathy, tangible are key elements.

According to Yang et al. (2005, p. 578), “service quality depends on the usefulness of content, usability, adequacy of information, interaction and accessibility”. Besides, Kuo et al. (2009) proposed four dimensions of service quality of mobile value-added services, which include customer service and system reliability, navigation and visual design, content quality, and connection speed.

5 Customer Satisfaction in Telecommunication Markets

Service quality has a positive impact on satisfaction and loyalty. Such a positive relationship between service quality and satisfaction is supported by many studies, for example (Sureshchandar et al. 2003; Cronin et al. 2000; Caruana et al. 2000; Negi 2009; Agyapong 2011).

Customer satisfaction is explained by customer services, personal and market factor, perceived quality, perceived value, technological advantages and company image have positively related to customer satisfaction except for customer services (Uddin et al. 2014). According to Islam and Rima (2013) stated that core service, product variation, and promotion have a significant influence on the customer experience that significantly affected by core activities of telecommunication services like network, promotion and product variety. Hossain and Suchy (2013) identified six factors of customer's loyalty, which are communication, value-added service, price structure, convenience, customer service and sales-promotions. The result indicated that excluding for sales-promotion, all other five factors are having positive correlations with customer loyalty.

According to Arokiasamy and Abdullah (2013, p. 1), “all service quality dimensions of SERVQUAL model positively induced customer satisfaction in terms of loyalty and attitudes, although there was a significant gap between the perceived satisfaction and expectancy on these service quality dimensions”. Almossawi (2012) stated that payments and savings (such as offers, rents, and charges) are

the most significant in determining satisfaction, retention, and likelihood of switching from one mobile provider to another. Customer service, friendly employees, and user-friendly websites were found to be the least significant. On the other hand, Hossain et al. (2012a, b) emphasized that there are some factors including quality of air time, service of the information centre, service of the helpline, and high billing rate are acting behind customers' dissatisfaction and need to be improved to gain higher market share.

Leelakulthanit and Hongcharu (2011) investigated that promotional value, quality of customer service at shops and corporate image play the most important role in determining customer satisfaction. According to Alireza et al. (2011) addressed that customer satisfaction plays a significant mediating role in relationships from service quality, corporate image, and perceived value of loyalty. Loyal customers tend to remain longer with their service providers. Service quality is the determinant of customer satisfaction (Cronin and Taylor 1992) and by ensuring good service quality; telecom operators can enrich customer satisfaction (Kuo et al. 2009). Osei-Owusu and Henten (2017) highlighted that the communal lands constitute the dominant land proprietorship system. The authors further added that it when it faces a private ownership system, a number of land ownership cases were grown increasing the costs for the telecom companies. It has been calculated that the total transaction costs in terms of the ownership issues related with mobile towers were estimated between GHC 6.9 and 13.9 million in 2015.

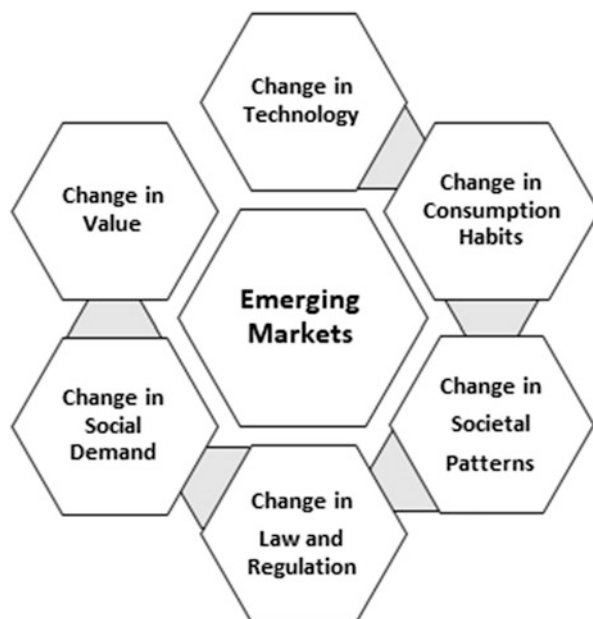
Malik et al. (2012) stressed that brand image, service quality, and price are correlated to customer satisfaction. Interestingly, there was a negative correlation of customer satisfaction with the price, and positive correlation with brand image and service quality. Khan (2012) identified that many factors have impacts on customer satisfaction, but price fairness, coverage and customer services were three major factors highly impacted the customer satisfaction.

Loke et al. (2011) attempted that reliability, assurance, responsiveness, and empathy significantly positively inclined towards customer attitudes in terms of loyalty. Furthermore, a significant gap between the perceived satisfaction and importance of all of the service quality dimensions was also found. Alom et al. (2010) interviewed that two factors, brand image, and perceived call rate, to have the most influence in the consumers' selection decision of a mobile service provider in Bangladesh. Kabir et al. (2009) looked for the presence of a significant direct relationship between service quality and customer satisfaction. It has also recognized that switching costs, service quality, and trust is significant forecasters of customer loyalty. Among other factors, trust has been identified to be the most significant forecaster of customer loyalty.

6 Emerging Telecommunication Markets

"Emerging markets are high-growth developing countries that represent attractive business opportunities for Western firms that share remarkable features in terms of economic potentials" (Cavusgil 1997, p. 87). According Emerging to Markets

Fig 1 Emerging markets as output of changes (Source: Khajeheian 2017b)



Directory “An emerging market is a country trying to change and improve its economy with the goal of raising its performance to that of the world’s more advanced nations”. “Emerging markets are those markets that emerge from changes: change in technology, change in demography, change in law and regulation, and change in media” (see Chap. 2 by Feldmann and Zerdick 2005, pp. 19–29). Khajeheian (2017b, p. 3) develops their definition in ‘emerging media markets are those that emerge from changes in (1) technology, (2) consumption habits, (3) societal patterns, (4) law and regulations, (5) social demands, and, (6) values (See Fig. 1).

Emerging telecommunication markets are those as emerge from a change in technology, change in Government law and regulation or political change, change in value-added service, change in social media demand, change in sales promotion, change in user behavior, change in market competitions. A range of the characteristic of emerging telecommunication market is illustrated in Fig. 2.

Technological environment forces that create new technologies, creating new product and market opportunity (see Chap. 3 by Kotler and Armstrong 1991). A technological change or up gradation has a great influence on emerging telecommunication markets. New technology expands the existing market and increases the new market with large share. Changing technology brings an inordinate revolution on telecommunication markets. In addition, the fast change of technologies gives rise of too many new markets while many existing markets diminish (Khajeheian 2017a).

Companies native to emerging market countries have grown in prominence in the twenty-first century. In emerging markets, regulations and policies are some of the main factors that are shaping the industry (Venkatram and Zhu 2012). The importance of regulatory and policy changes is stressed upon in order to adapt to the

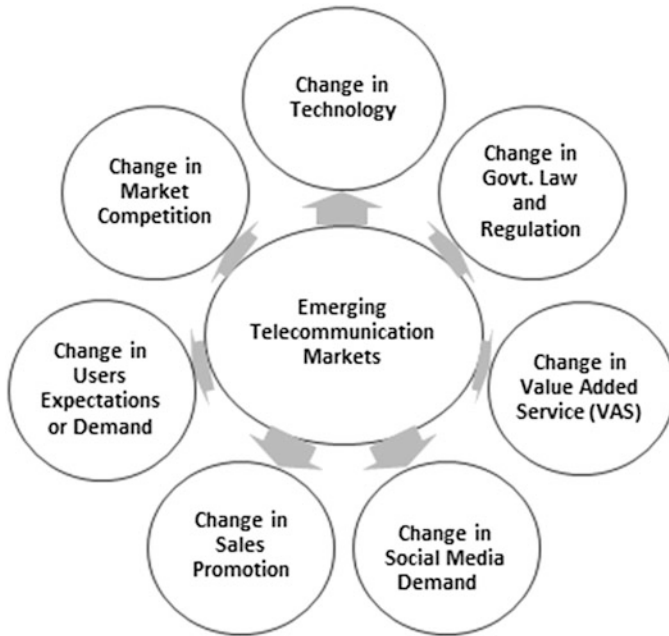


Fig. 2 Emerging telecommunication markets (Source: Elaborated by Authors)

future and maintain the growth rate of the telecom industry (Bhattacharya 2001; USCC 2011). The role of the government is a vital advocate of the industry, employing a host of policies to support directly to the competitive performance of target industries (Porter 1990). The telecom companies with the most exposure to emerging markets are usually the ones that are politically favoured. Telecommunication companies flourish in emerging economies based on the political and regulatory context as well as their business expertise. Telecoms businesses are regulated by the governments, and require licenses to operate. For example, Vodafone, a U.K.-based telecommunications companies spent many years to peruse the policy makers in India to allow it access to consumers (Ross 2015).

A large number of competitors in telecommunication markets offer similar products and services and increase its value line with the core services. Value-added service is the most changeable characteristic in emerging telecommunication markets. In emerging telecommunication market, value-added service depends on demography variable such as location, gender, race, occupation, education, generation, income, and technology. Telecommunication operators offer a large number of value-added services (e.g. caller tunes and alerts, friends and family (fnf) facilities, mobile banking, internet speed, missed call alert and call block facilities, entertainment, insurance coverage, caller identity display, conference call, online service etc.), which raise the market growth and profit that support to change markets.

A central feature of the Internet is its nature as a network, which fosters the emergence and development of positive externalities (see Chap. 2, Feldmann and Zerdick 2005). In emerging market, social media is the vital part of

telecommunication industry. Different kinds of social media (e.g. Facebook, Twitter, LinkedIn, Google plus, Instagram, Tagged, Skype, Tumblr, Flickr, Meet up, Vine etc.), are connecting the world as a global village. Without a SIM card, it is not feasible to use the social media. The users connect with social media network by using SIM card or telecom operator. Social media interconnects with telecommunication markets. It is building the new markets and the market growth. Social media exposes the emerging markets by providing new innovation.

Although sales promotion does not a huge effect on emerging market, but companies always try to make a sustainable relationship with its customers. Various types of sales promotions are offered to the customer to attract the new markets. Sales promotion has a sound contribution in emerging and economic development in Asian developing countries like India, Bangladesh, Nepal, and Maldives.

Market competition strategy is changing. Telecommunication companies take different types of competitive marketing strategy to stay in markets. Customer demand or customer expectations rapidly changes and customers are always searching out for innovative packages or services (Khajeheian 2017b). Thus telecommunication industry always tries to fulfill the customer expectation and satisfies their demand by expanding the emerging market.

Competition is one of the important characteristics of the emerging telecommunication markets. The intensity of rivalry in a competitive market is the major determinant of the competitiveness of the industry. The importance of industry competition force is the number of competitors and their ability to threaten a company (Porter 2008). Telecommunication industry has an existing strong competition to expose the emerging market. Telecommunication operators always hardly compete with existing competitors to keep up its present market share and revenue (Nekmahmud and Rahman 2016). So, it has a strong influence in emerging telecommunication market. The telecommunication industry helps by extending and upgrading its infrastructure, connecting remote and underserved communities, stimulating economic participation, and supporting new telecommunication innovation.

7 Competitiveness Factors in Telecommunication Markets

7.1 Communication and Coverage

Communication guarantees that negotiable call failure rates are to be influenced by the loyalty. All telecommunication operators updated their technological communication coverage, e.g. connection, network coverage, wire line voice, internet and GPRS, signal quality, international roaming etc. in the world. Communication and coverage are the first steps to enter the emerging market. Moreover, network coverage, signal quality, uninterrupted communication, international roaming facilities are significant competitive factors for building the loyalty of telecom market of

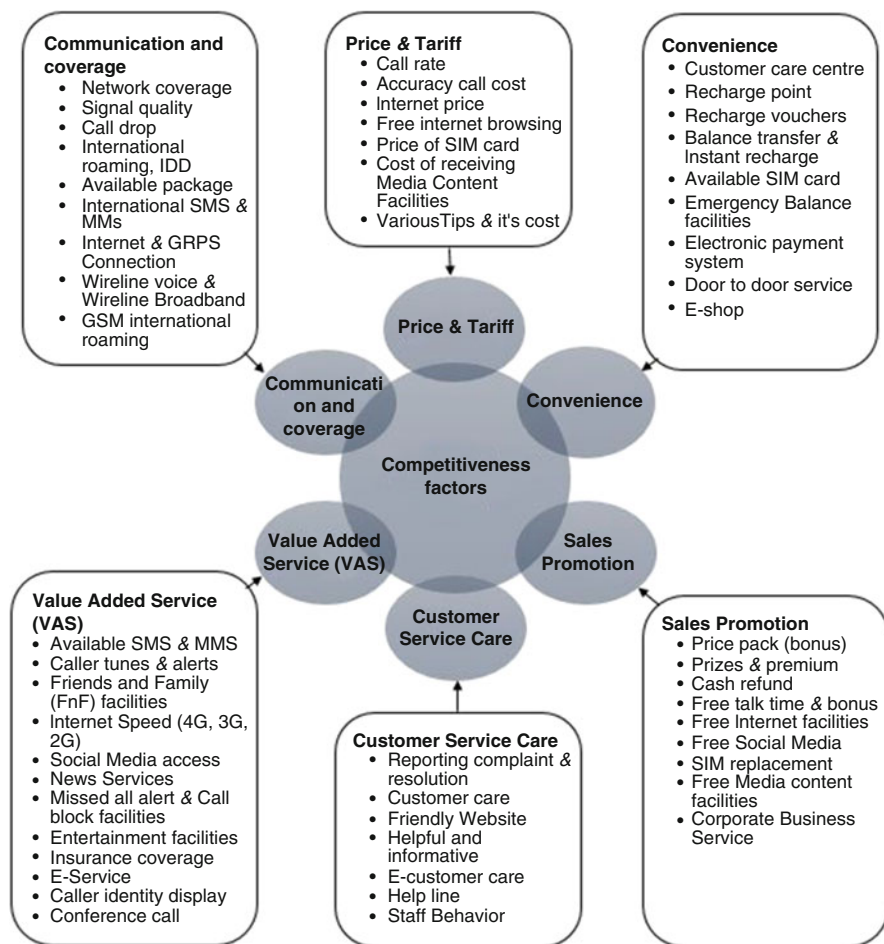


Fig. 3 Competitiveness factors in telecommunication markets (Source: Elaborated by Authors)

Bangladesh (Hossain and Suchy 2013). If the certain cellular company fails to provide coverage where customer needs, then it will lead to customers' dissatisfaction. Firstly, users use the operators by considering the communication and coverage factors. If the operators are unable to provide better communication and coverage, users or subscribers will switch to other operators. A range of characteristics of communication and coverage in telecommunication is illustrated in Fig. 3.

7.2 *Value-Added Services (VAS)*

A value-added service (VAS) is popular in the telecommunications industry. There are two common reasons why the value is added to a product or service: (1) to satisfy customer needs (2) to create profits for the company and shareholders. “Value-added services are service options that are complementary to but also ancillary to a core service offering” (Managing Value 1995, p. 6). Value-added is an economist’s term meaning that the service offered would have added value to the user compared with more basic telecommunications (or other) services. The DTI, Value-added and data services, which define anything beyond the basic telephone, telex and leased line services as being of a value-added nature (Collins 1986, pp. 193–218). The term for non-core services, or in short, all services beyond standard voice calls and fax transmissions. Value-added service and customer loyalty embrace a positive relationship. Value-added services include SMS, MMS, GPRS facilities, caller tunes and alerts offered by the service providers that quickly come into focus and considered important by the users in case of building loyalty towards the operator of the telecom market of Bangladesh (Hossain and Suchy 2013). It also highlights the continuing growth of the importance of value-added services, including mobile Internet, multimedia services, location-based services and camera-enabled phones, as mobile telecommunications technology evolves rapidly. Mobile carriers must concentrate their efforts on developing value-added services to increase enjoyment and convenience (Kim et al. 2004). Value-added services are attitude, followed by perceived ease of use, perceived cost, and perceived usefulness. Service providers need to develop mobile value-added services (Kuo and Yen 2009). Which types of Value-added service offered by the telecommunication that is as shown in Fig. 3.

7.3 *Price and Tariff Structure*

Customers perceptions about the price of a product or service are the determinants of supply and demand they also resonance that price is a sign of product or service quality. Also, customer satisfaction is echoed by the price consciousness (Lyer and Evanschitzky 2006; Varki and Colgate 2001). Similarly, the price level, value for money, and special offers may impact both satisfaction and dissatisfaction. Furthermore, among others price fairness, price possibility and price perceptibility may dissatisfy the customers (Zielke 2008). Additionally, the various levels of price, product, and a combination of price consciousness scopes are having the potentiality to terrify the customers’ satisfaction (e.g. Diller 2000; Pramhas 2004; Matzler et al. 2006). Customers can be enticed to a retail store by utilizing price and special promotions (Grewal et al. 1998). Figure 3 illustrates Call rate, internet price, price of SIM (Subscriber Identity Module) card, costs of receiving media content facilities, various tips and its cost, accuracy call cost etc. are significant competitive

factors in the telecommunication markets in the world. Market penetration pricing and tariff structure to help keep it up its existing customers and attract the new customers. Users always consider lower pricing and tariff structure. Price and tariff structure is moving factors in telecommunication markets.

7.4 Convenience

Convenience has a positive correlation to customer satisfaction and loyalty. It is also evident that customers “convenience to reach customer care centre and availability of recharge points and vouchers can influence customer loyalty” (Hossain and Suchy 2013, p. 78). Figure 3 shows as convenience characteristic in telecommunication markets.

7.5 Customer Service Care/Point

Customer care is initially concerned with the perceptions of an organization reflected in associations with reaching customers. Customer service can be defined as a system of activities that comprise customer support systems, ease of reporting and speed of processing complaints; friendliness when reporting complaint (Hossain and Suchy 2013). “Handling customer-complaint effectively leads to customer satisfaction” (Jawaria et al. 2009, p. 4). The promptness of all these activities grounds for creating customer loyalty towards the service operator in the telecom market in Bangladesh. Customer service care is a comparatively new practice of mobile telecom operators in Bangladesh but their presences have partially influenced customer loyalty. Different types of customer service care in telecommunication in the world are illustrated in Fig. 3.

7.6 Sales Promotion

Sales promotion can be defined as short-term incentives to encourage the purchase or sales of a product or service (see Chap. 3 by Kotler and Armstrong 1991). Sales promotion has a significant impact on consumer’s brand choice, purchase time, and purchase quantity decision (Khan 2012; Hossain and Suchy 2013). In Bangladesh, the mobile telecom operators are intensifying their offerings in case of sales promotions (bonus, price-offs) to attract existing and new customers (Hossain and Suchy 2013). Sales promotion can affect the consumer’s buying decision, such as brand choice and brand switching (Oyeniyi 2011). The purpose of sales promotion is to increase the cellular subscribers; therefore, cellular companies offer extra free minutes, limited offer to get double balance, free VAS, MMS at low rate etc. (Shahzad Khan 2012). Sales-promotion services divert attention to financial

incentives and encourage brand-switching behaviour, as well as increased price sensitivity, which minimizes the importance of quality criterion (Omotayo 2011; Aaker 1996). Figure 3 shows as the different types of sales promotion activities that are offered to the customer.

8 Customer Satisfaction on Loyalty

According to Foss and Stone (2001), customer loyalty relates to what customers think and do (or try to do). As mentioned earlier in the literature review that in marketing literature, a strong positive correlation exists between customer loyalty and customer satisfaction (Donio et al. 2006; Cheng et al. 2008; The story and Hess 2006). Most of the studies concluded that customer satisfaction is an indicator of customer loyalty (e.g. Faullant et al. 2008; Terblanche 2006; Leverin and Liljander 2006). Communication, price, value-added service, convenience in usage and customer service are positively related to customer loyalty and less-promotion is not related to the customer loyalty (Hossain and Suchy 2013).

Figure 4 highlights that customer satisfaction on telecommunication depends on six competitiveness factors. Strong communication and coverage, customer’s expected price and tariff, available convenience package, offering superior value-added service, exciting sales promotion and effective and friendly customer care satisfy the customer wants and demands. If customers are satisfied that it helps mark the customer loyalty to the particular telecommunication operator. Customer loyalty makes the sustainable and profitable relationship, which helps to emerge the telecommunication markets.

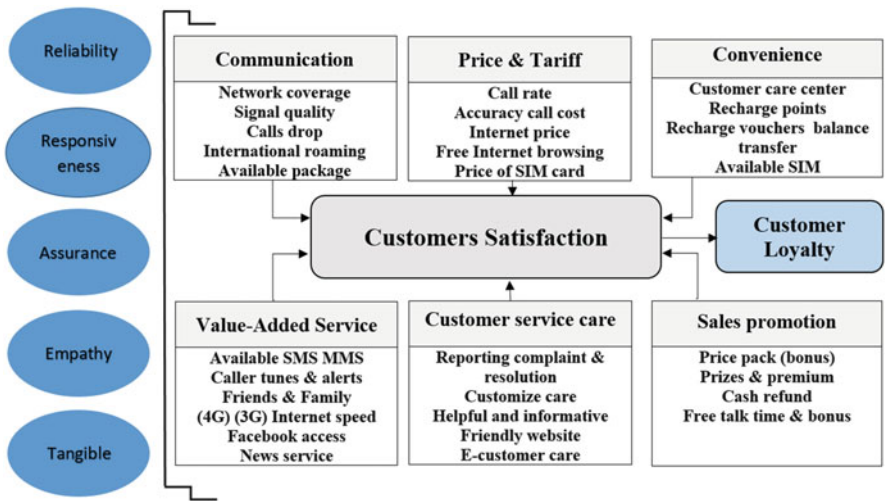


Fig. 4 Conceptual framework of service quality, competitiveness factors of customer satisfaction and loyalty in telecommunication markets (Source: Elaborated by the authors)

9 Hypotheses Development

H₁ Communication and coverage has a significant influence on customer satisfaction in telecommunication Market in Bangladesh.

H₂ Value-added services (VAS) has a significant influence on customer satisfaction in telecommunication market in Bangladesh.

H₃ Price and tariff has a significant influence on customer satisfaction in telecommunication market in Bangladesh.

H₄ Convenience has a significant influence on customer satisfaction in telecommunication market in Bangladesh.

H₅ Customer service care has a significant influence on customer satisfaction in telecommunication market in Bangladesh.

H₆ Sales promotion has a significant influence on customer satisfaction in telecommunication market in Bangladesh.

H₇ There is a positive correlation between customer satisfaction and customer loyalty in the telecommunication market in Bangladesh.

10 Methodology

The chapter has been designed to measure the competitiveness of factors in telecommunication markets. It also highlights the service quality and customer satisfaction on telecommunication market in Bangladesh. This study is descriptive in nature and conducted based on a mixed of primary and secondary data. The designated population for the study includes all customers who regularly use SIM card of different mobile phone operators in Bangladesh.

The random sampling method is used to select respondents from developing a country of Bangladesh. Primary data were collected over a 4 months' period during the October 2016 to January 2017. The field survey method is used to collect primary data by taking direct interviews through the questionnaire and observation. The secondary data are collected from different sources such as previous articles, books, different related publications, news, reports, and websites etc.

A questionnaire was designed which has been considered as the major tool of study. In the questionnaire, respondents were asked 45 questions those are usually considered for telecommunication. To develop the research questionnaire and collect data from the determined sample, the extended semantic differential scale was used in this study. To get the respondents original and active opinion, Liberty's 7 (Seven) point rating scale is used. Where, 1 = Strongly Disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither Agree nor Disagree (Neutral), 5 = Somewhat agree, 6 = Agree, 7 = Strongly Agree.

The questionnaire was designed in three (3) parts. The first part identifies respondents' specific demographic criteria and some basic questions about mobile operators were framed; the next part includes 29 measurement questions of identifying dependable variables sales promotion, value-added service (VAS), price and tariff structure, customer service care, communications and convenience competitiveness that measure the service quality and customer satisfaction on telecommunication market in Bangladesh, Third part includes five factors under two dependable variable of customer's satisfaction and loyalty that measure the customer's present satisfaction on the brand loyalty. For this research, data are collected from direct and online interviews through the questionnaire. In this study, researchers distributed 390 questionnaires to respondent for measuring the service quality and customer satisfaction on telecommunication markets in Bangladesh. Among them, 340 respondents returned the completed questionnaires. Because of respondent's inability, unconsciousness, and excessive missing values, we had to drop 40 questionnaires. Lastly, the size of the sample stands at 300 (three Hundred). The collected data were analyzed by various statistical tools and techniques, which includes frequency distribution, reliability test (Cronbach α) and factor analysis (KMO and Bartlett's test). We also conducted multiple regression analysis using IBM SPSS (Statistical Package for Social Science) 20.0 version to test the hypotheses.

11 Results and Discussion

The summary of respondents' demographic statistics, Table 2 shows that 74.2% ($n = 230$) male and 25.8% ($n = 80$) female. The age of respondents belongs to less than 20 years ($n = 16$) 5.2%, 20–25 years ($n = 148$) 47.7%, 25–30 years ($n = 62$) 20.0% and 30–25 years ($n = 44$) 14.2%, above 35 years ($n = 40$) 12.9%. Here, the analysis also illustrates that 60.0% of respondents are students, 15.2% of belonging to service holder, 13.5% of business people and 6.1% of household and rests of them are retired and other professionals.

Table 3 Exhibits that 3.9% of customers use their current SIM less than 1 year, 5.8% of customers 1–2 years, 9.4% of customers 2–3 years, 13.2% of customers 3–4 years and 67.7% of customers use their SIM more than above 5 years. 64.8% of customers use Grameenphone, 16.8% use Robi, 12.9% of Banglalink and 1.9% of Teletalk and 3.5% use others SIM operators. 61.0% of customers have 1–3 biometric SIM card, 24.2% of 3–6 SIM card, 7.1% of 6–12 SIM card, and residual 5.2% of customers have 9–12 biometric SIM card. 36.5% of customers recharge to their mobile phone less than 4 \$ per month, 31.0% of recharge to 4–8 \$, 21.3% of recharge to 8–12 \$, and remaining 11.3% of users recharge to 12–16 or above 16 \$ per month to their mobile phone.

The table also demonstrates that 66.1% of customer use the mobile phone for keeping in touch with family member, and rest of 33.9 % of customers use mobile phone for business, office, friends and others motives. 26.8% of customers are

Table 2 Summary of socio-demographic profile of telecom operator users

Profile	Groups	Frequency	Percent
Gender	Male	230	74.2
	Female	80	25.8
Age of the respondent	< 20 years	16	5.2
	20–25 years	148	47.7
	25–30 years	62	20.0
	30–35 years	44	14.2
	> 35 years	40	12.9
Occupational status	Student	186	60.0
	Service holder	47	15.2
	Business	42	13.5
	Household	19	6.1
	Retired	8	2.6
	Others	8	2.6

satisfied to usage mobile phone operator for call rate, 27.4% for the network, 12.9% for internet packages, 10.6% of FnF number, rest of them satisfied to others reasons. 24.2% of customers would like to switch to the others phone operator to attract the call rate, 17.1% for network, 29.7% for internet packages, 8.1% for FnF number, 7.1% for 3G internet speed and others attractive new offers or factors (see Table 3).

11.1 Reliability Analysis

The research computed Cronbach Alpha test to discover the inner consistency that shows reliability of different factors of the survey questionnaire. Reliability analysis has been measured via Cronbach's coefficient alpha to check for internal consistency of the constructs. All constructs had no problems in reliabilities as Cronbach's Alpha values exceeded the criterion of 0.700 (Anderson et al. 2010). Cronbach's alpha has been applied widely in social science and it gives a conventional result and subsequently, analysts recommended composite reliability as an option measure (Wong 2013). An acceptable reliable esteem will be between 0.60 and 0.95 (Hair et al. 2013; Bagozzi and Yi 1988). On the other hand, George (2003) provides a commonly accepted the following rules of thumb for describing internal consistency is: " $\alpha \geq 0.9$ —Excellent, $0.9 > \alpha \geq 0.8$ —Good, $0.8 > \alpha \geq 0.7$ —Acceptable, $0.7 > \alpha \geq 0.6$ —Questionable, $0.6 > \alpha \geq 0.5$ —Poor, $0.5 > \alpha$ —Unacceptable".

Table 4 illustrates that computed value of the Cronbach Alpha of the factors is 0.908, which that implies data is excellent and reliable because the pragmatic value is comparatively higher than the standard reliable value of Cronbach Alpha. Thus, the survey appliance is reliable to measure all constructs resolutely and free from random error.

Table 3 Frequency distribution of customer's general information about telecommunications operators

Variables		Frequency	Percent of respondents
Usage duration of current SIM	< 1 year	12	3.9
	1–2 years	18	5.8
	2–3 years	29	9.4
	3–4 years	41	13.2
	> 5 years	210	67.7
Name of the operator	Robi	52	16.8
	Grameenphone	201	64.8
	Banglalink	40	12.9
	Teletalk	6	1.9
	Others	11	3.5
Total number of biometric SIM card	1–3	189	61.0
	3–6	75	24.2
	6–9	22	7.1
	9–12	16	5.2
	12–15	4	1.3
	15–20	4	1.3
Recharging the mobile phone Amount (\$) per month	< 4 \$	113	36.5
	4–8 \$	96	31.0
	8–12 \$	66	21.3
	12–16 \$	29	9.4
	> 16 \$	6	1.9
Why you are using a mobile phone	Keep in touch with family	205	66.1
	Business	39	12.6
	Keep in touch with friend's	0	0
	Office use	0	0
	Above all	66	21.3
The major reason for my satisfaction to the mobile operator is	Call rate	83	26.8
	Network	85	27.4
	Internet package	40	12.9
	Service package	21	6.8
	Attractive advertisements	8	2.6
	Number of FnF	33	10.6
	Package	6	1.9
	3G speed	10	3.2
	Others	24	7.7

(continued)

Table 3 (continued)

Variables		Frequency	Percent of respondents
I would like to switch to another operator	Yes	88	28.4
	No	222	71.6
Which factors attract to switch the mobile phone operators?	Call rate	75	24.2
	Network	53	17.1
	Internet package	92	29.7
	Service package	12	3.9
	Brand image	4	1.3
	Attractive advertisements	6	1.9
	Number of FnF	25	8.1
	Package	14	4.5
	3G speed	22	7.1
	Others	7	2.3

Table 4 Reliability coefficients

Reliability statistics	
Cronbach's Alpha	No. of items
0.908	34

11.2 Descriptive Analysis

The descriptive analysis of the statistics (Table 5) illustrates that the mean as well as the standard deviation value of all the questions, which have been designed under seven (7) point's semantic scale. According to this scale 7-strongly agree and 1-strongly disagree. The mean of all variables ranged from 2.6548 to 6.1065. Meanwhile, the standard deviation for the below variables ranges from 1.80961 to 1.17620. The observed mean value is 6.1065 or more with little value of standard deviations of all statements that experienced the customers' satisfaction on telecommunication markets in Bangladesh.

The overall mean value of communications (4.5413), value-added service (4.8522), customer service care (4.3226) and customer loyalty (4.4613), which indicates customers somewhat agree towards the service. The mean value of price and tariff structure (3.5890), sales promotion (3.6581) on customer satisfaction variable measure somewhat disagree towards the telecommunication market. Customers agree to the convenience factor mean value, which is 5.0258. The overall result justifies that respondents are showing the multi-coloured attitude towards the telecommunication industry.

Table 5 Descriptive statistics on competitiveness factors of customer satisfaction and loyalty in telecommunication markets

Item statistics					
Constructs	Items	Mean	Std. deviation	Over all mean	Over all std. deviation
Communications	I am satisfied with the network coverage	4.9065	1.56653	4.5413	1.15382
	Signal quality is high	4.7065	1.34416		
	Drop calls is low	4.3774	1.68646		
	International roaming services are available	4.1548	1.79226		
	Service packages are available that my mobile operator provides is very attractive and easy to go	4.5613	1.61940		
Value-added services (VAS)	Provide Information through available SMS, MMS	5.2935	1.58909	4.8522	1.00238
	Caller tunes and alerts are available	5.3258	1.59904		
	Friends and Family Number (FnF) facility	5.1806	1.69129		
	Quality, facility and high speed of Internet and GPRS Connection (3G), (2G)	3.7516	1.80961		
	Facebook access service by mobile phone	5.1839	1.77407		
	Sports news, job news, news service are available	4.3774	1.69984		
Price and Tariff structure	Lower call rate	3.5097	1.70803	3.5890	1.15694
	Lower price of internet	2.7903	1.77484		
	Free Internet browsing	2.6548	1.77365		
	Price of SIM is moderate	4.7387	1.59270		
	Accuracy of call cost	4.2516	1.58510		
Convenience	Availability of customer care centre	4.7129	1.56566	5.0258	0.98919
	Availability of recharge points	6.1065	1.17620		
	Different types of recharge vouchers	5.1677	1.43159		
	Balance transfer system is good	3.7548	1.72491		
	Availability of SIM Card	5.3871	1.44315		
Customer service care	Ease of reporting complaint and Speed of complaint resolution	4.1548	1.35170	4.3226	0.91485
	Customize (Personalize) care	4.3032	1.40214		
	Customer care department is helpful and informative	4.4161	1.51724		
	Having user-friendly website/E-customer care	4.4161	1.35975		

(continued)

Table 5 (continued)

Item statistics					
Constructs	Items	Mean	Std. deviation	Over all mean	Over all std. deviation
Sales promotion	Price pack (bonus)/my mobile operator gives frequent special Offers	4.1419	1.57216	3.6581	1.20963
	Prizes, premium and price-off are available	3.9839	1.36166		
	Cash refund offers	3.0839	1.53473		
	Free talk time and bonus facilities are good	3.4226	1.66211		
Customer satisfaction	I am satisfied with using the mobile telecommunication services	4.0935	1.50972	3.9387	1.11518
	Telecom company has effectively provided mobile telecommunication services	4.0548	1.47258		
	Mobile telecommunication service is better than expected	3.6677	1.60378		
Customer loyalty	Say positive things about telecommunication in Bangladesh	4.5484	1.47775	4.4613	1.28160
	Intend to continue doing as a customer	4.3742	1.33244		
	Valid N (list wise)	300			

11.3 Factor Analysis (KMO)

Factor analysis is suitable for determining whether the data set of this study or the strength of the inter correlation test were carried out applying Bartlett's Test of Sphericity (Bartlett 1954) and the Kaiser-Mayer-Olkin measure of sampling adequacy (KMO) (Kaiser 1970, 1974). Bartlett's trial of Sphericity esteem value ought to be considered ($p < 0.05$) for the significance of the factor analysis and KMO esteem ought to be considered in the range of 0 to 1 with 0.6 suggested as the minimum value for good factor analysis (Tabachnick and Fidell 2007). The result of the study (see Table 6) shows the calculated value of Bartlett's test of Sphericity measure 0.000 which was highly significant and KMO test 0.561 was close to 0.6 which directly indicates that data collected from the respondents is acceptable for factor analysis.

Table 6 KMO and Bartlett’s test

Kaiser-Meyer-Olkin measure of sampling adequacy		0.708
Bartlett’s test of sphericity	Approx. Chi-Square	8851.586
	Df	561
	Sig.	0.000

11.4 The Test of Hypotheses

11.4.1 Regression Analysis (ANOVA)

Model 1a linear regression analysis was used for hypothesis testing, Adjusted R^2 , the coefficient of determination, which shows that overall service quality and customer satisfaction in the telecommunication market can be explained 44.3% of sales promotion, value-added service (VAS), price and tariff structure, customer service care, communications and convenience (see Table 7).

Model 2b exhibits that customer satisfaction can be explained 63.6% by customer loyalty.

From the ANOVA Table 7, we get F-value is 40.174 and ($P = 0.000$) is less than 0.05, the null hypothesis is rejected, then alternative hypothesis is significant accepted at the 95% level of confidence, which means that the sales promotion, value-added service (VAS), price and tariff structure, customer service care, communications, and convenience statistically significantly explained of overall customer satisfaction in telecommunication market in Bangladesh. Same as F-value is 198.016 and $P = (0.000)$ which is less than 0.05 that customer satisfaction explained by customer loyalty. ANOVA Model 1a and 2b we see that the significance value is 0.000 (Table 7), thus proving that the model is valid and significant.

11.5 The Result of Hypotheses and Interpretation

First Hypothesis (H1): The results of multiple regression analysis of the alternative hypothesis H1 as presented in Table 8 indicated that communication concerns significantly negative influenced on customer satisfaction on telecommunication market in Bangladesh and disclosed a significant negative result ($\beta_1 = 0.014$; t-value = 0.239; <0.05). According to the analysis, the significance value for the hypothesis is 0.811, which is higher than the level of significance $p = 0.05$. So, an alternative hypothesis is rejected and null accepted, H1 implying the significant negative relation.

Second Hypothesis (H2): The alternative hypothesis, H2, Value-added service (VAS) of service quality has a strongly positive significant influence on customers satisfaction on telecommunication market in Bangladesh, the significance value for the hypothesis is 0.001, which is less than the level of significance $p = 0.05$. So, an alternative hypothesis is accepted and null rejected. H2 implying the significant positive relation between values added service and customer’s satisfaction (see Table 8).

Third Hypothesis (H3): Alternative hypothesis H3, customer's price and tariff service quality has a highly positive significant influence on customer satisfaction on telecommunication market where ($\beta_3 = 0.251$; $t\text{-value} = 4.585$; $p < 0.05$). Thus, proves as per the evidence that significance value for the hypothesis is 0.001, which is less than the level of significance $p = 0.05$. Thus, the significant relation between customer satisfaction and price and tariff. So alternative hypothesis is accepted (see Table 8).

Fourth Hypothesis (H4): The alternative hypothesis, H4, convenience has a positive significant influence on customers satisfaction on telecommunication operators in Bangladesh and released a significant result ($\beta_1 = .215$; $t\text{-value} = 3.353$; $p < 0.05$). The significance value for the hypothesis is 0.001, which is less than the level of significance $p = 0.05$. So, an alternative hypothesis is accepted and null rejected. H4 implying the significant strongly positive relation between the customer's satisfaction and convenience of telecommunication market in Bangladesh (see Table 8).

Fifth Hypothesis (H5): The alternative hypothesis, H5, customer service care has a negative significant influence on customers satisfaction on telecommunication operators in Bangladesh ($\beta_1 = 0.143$; $t\text{-value} = 2.381$; $p < 0.05$). Thus, proves as per the evidence that the significance value for the hypothesis is 0.018, which is less than the level of significance $p = 0.05$, the significant positive relation between customer satisfaction and customer service care in telecommunication market in Bangladesh (see Table 8).

Sixth Hypothesis (H6): The alternative hypothesis, H6, sales promotion has a negative significant influence on customers satisfaction on telecommunication market in Bangladesh ($\beta_1 = 0.055$; $t\text{-value} = 0.917$; $p < 0.05$). The significance value for the hypothesis is 0.360, which is higher than the level of significance $p = 0.05$. So, an alternative hypothesis is rejected and null is accepted. H6 is not supported indicating that the significant strongly negative relation between customer sales promotion and customer's satisfaction on mobile telecommunication market (see Table 8).

Seventh Hypothesis (H7): The alternative hypothesis, H7, Loyalty has a highly significant positive relationship with customer satisfaction on telecommunication market where ($\beta_1 = 0.626$; $t\text{-value} = 14.072$; $p < 0.05$). The significance value for the hypothesis is 0.00, which is less than the level of significance $p = 0.05$. So, an alternative hypothesis is accepted and Null is rejected (Table 9). H7 is signified that the significant strongly positive relation between customer loyalty and customer's satisfaction on mobile telecommunication market (see Table 8).

12 Recommendations

The recommendations are given below based on suggestions to improve the customer service to fulfill the customer satisfaction and make a sustainable relationship with the customer. Recommendations are made based on survey findings and

Table 9 Illustrates the summary of hypotheses accepted or rejected

HN	Hypotheses	Accepted or Rejected
H1	Communication and coverage has a significant influence on customer satisfaction in telecommunication market in Bangladesh ($0.811 > 0.05$)	Alternative (H_0)— Rejected Null (H_a)— Accepted
H2	Value-added Services (VAS) has a significant influence on customer satisfaction on mobile telecommunication market in Bangladesh ($0.001 < 0.05$)	Alternative (H_0)— Accepted Null (H_a)— Rejected
H3	Price and tariff has a significant influence on customer satisfaction on telecommunication market in Bangladesh ($0.000 < 0.05$)	Alternative (H_0)— Accepted Null (H_a)— Rejected
H4	Convenience has a significant influence on customer satisfaction on telecommunication market in Bangladesh ($0.001 < 0.05$)	Alternative (H_0)— Accepted Null (H_a)— Rejected
H5	Customer service care has a significant influence on customer satisfaction in telecommunication market in Bangladesh ($0.018 < 0.05$)	Alternative (H_0)— Accepted Null (H_a)— Rejected
H6	Sales Promotion has a significant influence on customer satisfaction on telecommunication market in Bangladesh ($0.360 > 0.05$)	Alternative (H_0)— Rejected Null (H_a)— Accepted
H7	Customer satisfaction has a significant influence on customer loyalty ($0.00 < 0.05$) in telecommunication market in Bangladesh	Alternative (H_0)— Accepted Null (H_a)— Rejected

analysis. Some customers have been switching to other operators because of their poor network infrastructure, internet packages, 3G speed, and promotional packages. Telecommunication operators should have quick expansion in the network, lower internet price with 3G and 4G high speed over Bangladesh if they want to keep its customers to stay with them. The value-added services (VAS) department should be coming up with more ideas to entertain its customers. This department has its potential but should be used it to the full range to provide more useful services to customers' needs. Although telecommunication operators provide latest technology and services, should clarify that to the customers. As it has been observed that many customers are unaware off the use of value-added services, they may not be well informed about the recent packages of the companies. If the customers are happy and satisfied on telecommunication sectors than it makes sustainable customer loyalty on service provider operators. So, service providers need to provide customers' expected service to make loyalty. Different programs should be taken in the customer care centres to educate the customers by providing

pertinent advice regarding different essential features of the mobile phone and its operations and services. The result shows that some dissatisfaction among the respondents about the charge of internet packages in Bangladesh. The respondents said that the internet package charge is higher. So, telecommunication operators need to reduce internet package rate. Based on the findings of this study service quality of telecommunication companies should focus on the tangible, reliability, and assurance of service quality, these three dimensions of service quality have the significant relationship with customer satisfaction in using telecommunication service in Bangladesh.

13 Managerial Implications

The result of this chapter has important managerial implications. It will support to generate new thoughts for researchers, consultants and telecom experts. The key competitive factors like [sales promotion, Value-added service (VAS), price and tariff structure, customer service care, communications and convenience] touching the customers' perception in mobile phone operators (service providers) will put the practitioner in a better position to design appropriate strategies to deal with marketing practices that will enhance the benefit of the operators. The study also finds improvement areas for telecommunication investors and sellers for serving better than the before and helps to achieve remarkable progress. Mobile telecommunication operators should pay attention to improving the quality of different services and customer image to build sustainable customer loyalty.

14 Limitations and Further Research

The research area, the data collection only focused on customers of developing the country in Bangladesh. The result of developed and under developing countries may be variation. Further, researchers should collect data from some part of developing and developed countries. Based on the proposed theory in this chapter, it is highly suggested to the researchers in the field of telecommunication markets to conduct researches on the implementation of applying the emerging markets theory, the emerging telecommunication markets theory and conceptual framework of competitiveness factors of customer satisfaction and loyalty in telecommunication markets which are discussed in this chapter.

15 Summary and Conclusions

Telecommunication market is going up by modernizing and emerging its technology. The mobile telecom industry has a higher impact across developed economies, as investments in and connectivity and networks over a long period of time leading to higher infiltration of voice and data. On the other hand, in developing countries, this business has made progress against the SDGs mainly through rising connectivity and access to information, with explicit services like mobile money and agricultural platforms leading to higher productivity and poverty eradication. Moreover, for the survival of telecommunication companies in any country, they should also consider the competitive factors. The phone is not only used for making calls, among many other functions, it is used for communicating through text-messages, multi-media messages (MMS), as well as to connect us to the internet. Telecom industry is now a paramount importance in developing countries with emerging markets (Huq et al. 2015; Arokiasamy and Abdullah 2013). In Emerging telecommunication markets, we focus some characteristic of change in technology, change in government law and regulation or political change, change in value-added service, change in social media demand, change in sales promotion, change in user behaviour, and change in market competitions. Telecommunication market is growing fast in the world by extending its market share. Telecommunication companies should increase its strong networks in everywhere. Communication and coverage, price and tariff, convenience package, value-added service, sales promotion, and customer care are the competitiveness factors in telecommunication markets. Telecommunication operators compete with their competitors by providing this effective competitiveness factor. In Bangladesh, telecommunication has become a very popular communication to all professional persons, even the X and Y generation are using this product intensively for their personal and occupational purposes. Telecommunication provides mobile banking service to the rural area in Bangladesh. The telecommunications service quality depends on both the supporting services and networking. The mobile telecommunications service quality is typically measured in terms of some common parameters like call completion rate, call drop rate, voice quality, complaints resolved percentage within a timeframe and customer service etc. (TRAI 2008; Sutherland 2007; Australian Communications and Media Authority 2008). The mobile telecom companies in Bangladesh need to eradicate several concerns that enable them to draw the attention of customers and retain them in the long run. It is an established fact that both customers' perceived service quality and satisfaction have been the most significant success factors of business competition either for manufacturers or for service providers (Munusamy et al. 2010; Buzzell and Gale 1987). Communications, value-added service, customer service care and customer loyalty, which indicates customer, are somewhat satisfied towards the service quality. That's mean customer are not satisfied towards their providing service. The result of this research is illustrated that value-added service (VAS), price and tariff, convinces and customer care competitive factors have a positive significant influence on

customer satisfaction in telecommunication operators in Bangladesh. Other sides Communication and coverage and sales promotion competitive factors have a significant negative influence on customer satisfaction in the telecommunication market in Bangladesh. So company operators in Bangladesh need to develop the communication coverage, sales promotion, and customer service care. In addition, these operators need to consider the factors of competitiveness in the telecom sector in order to survival and growth the market share. Companies need to segment the markets and provide the particulars offers to the customers. In developing country, quality education, sustainable cities and communities, industry, innovation and infrastructure are provided by telecommunication industry. It creates more employment in different sectors, ensures standards of living, and develops the economic growth. It also helps to achieve the sustainable development in the world. By upgrading the new telecommunication technology, they create new market opportunity.

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Md. Nekmahmud is a research scholar in marketing. He earned his M.B.A. (Master of Business Administration) specialization in marketing and received B.B.A. in marketing from Begum Rokeya University Rnagpur, Bangladesh. Nekmahmud achieved first position in B.B.A. He has published more than ten academic research articles in reputed international journals of the USA, the UK, Australia and New Zealand. His three research papers have also been presented in international conferences. His current research interests are in the areas of advertising, consumer behaviour, sustainable marketing and telecommunication markets.



Shafiqur Rahman has been a Vice-President of Australian Academy of Business Leadership (AABL) for last 3 years. Prior to this, he served the US Embassy in Dhaka as an economic specialist and trade promotion manager for about 10 years. He also served as an M.B.A. coordinator for two private universities in Bangladesh for about 12 years. He is a Ph.D. in management from Macquarie University, Australia. He also received a Graduate Certificate in Research from Western Sydney University and an M.B.A. from I.B.A., Dhaka University. His research profile includes 15 research articles and 20 conference presentations.