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Rahmoun Mbarek,

Ph.D., King Abdulaziz University, Saudi Arabia

Yasser Baeshen,

Ph.D., King Abdulaziz University, Saudi Arabia

TELECOMMUNICATIONS CUSTOMER CHURN AND LOYALTY INTENTION

Abstract. Nowadays the telecommunications sector is becoming very complex because of the panoply of high-speed technological services. Customers are abandoning the services offered by telecommunications operators because of their dissatisfaction with the services they offer. «Churn» or the migration of customers from one telecommunications operator to another is the main problem facing the telecommunications industries worldwide. Business managers consider the quality of service to be paramount. As a consequence, they have devised reliable criteria to assess the flow of customers within the market and check and evaluate whether customers are satisfied with the services they are offered. This, in turn, helps to establish customer loyalty and provide a healthy and sustainable trading agreement. Service quality control assessment is pivotal to identify the leverage and evaluate the internal and external competition in the industry. Although this concept is not foreign, rather it is an essential business management tool. The goal of this study is to determine the significant criteria for the cause migration of a Tunisie Telecom customer to another operator. Telecommunication is an essential lifelong component that contributes to the comfortability of our daily lives. The various means of telephone communication play a significant role in improving the effectiveness of communication industry. Every telecommunication operator is aware today that it is cheaper to retain an existing customer than to seek to recruit a new one. Indeed, we noticed that the telecommunications market is characterized by intense competition, where a change in the quality of service or a negative interaction perceived by the customer could risk losing them. As a result, the majority of operators introduce studies and action plans to retain customers and keep them as long as possible. The notion of keeping customers and building loyalty is probably one of the biggest challenges that operators around the world face in global competition. In order to achieve the goals set by telecom operators and to achieve maximum profitability, operators must effectively analyze market data and adopt a most effective targeted communications strategy for their customers.

Keywords: churn analysis, customer loyalty, mobile marketing, telecommunications, telecommunications customer.

Introduction. Today, companies across sectors are aware that retaining existing customers is cheaper than acquiring a new customer. Indeed, they express great importance to managing the churn rate in order to maintain current subscribers and to deeply investigate the reasons for their dissatisfaction. The company's «quest» for customer satisfaction has fueled marketing research under the non-confirmation paradigm perspective (Oliver, 1980). Research in the wake of this paradigm measures satisfaction by the gap between the client's initial expectations and current service performance. Bearing on the psychosocial theory that combined sociology and psychology concepts (Morman et al, 1992), customer engagement takes the form of observable and measurable behavior (Kiesler, 1971). Under this perspective, the customer shows a deliberate and conscious acceptance of the implications of the purchase, which leads to a repetitive purchasing process, like brand dependence (Gundlach et al, 1995). Today, we notice that the importance of the notion of service delivery changes over time with the evolution of technology, particularly in the field of information. According to Adam Smith, (Aspromourgos, 2013) «services generally disappear at the very moment of their provision; they rarely leave behind any traces of value that could then make it possible to obtain an equal quantity of service».

The aims of this research are to investigate Telecommunication customers' loyalty intention, expectations, and to determine the reasons behind migration of customers from one telecommunication operator to another, a phenomenon called customer «churn».

Literature Review. Churn Management: The telecommunications sector is rapidly developing with the diversification of offers to attract new customers and satisfy existing ones. Because of fierce

competition, the telecommunications market faces a serious loss of revenue due to the loss of potential customers (Umayaparvathi and Lyakutt, 2016). In the telecommunications industry, churn is defined as the migration of current customers to another telecommunications company. As a result, most companies and operators invest huge amounts of money to explain the reasons for losing customers and ensure a competitive edge by measuring customer loyalty to identify lost customers (Shaaban et al, 2012).

Categories of Telecom Churns: In the telecommunications sector, churn customers can be classified into two main categories: Involuntary and voluntary. Involuntary churn customers are those who are easy to identify and whom the telecom operator decides to suspend and remove as a subscriber. They are generally non-creditworthy customers or customers who do not use the service or who get involved in fraudulent behaviour. Voluntary churn customers are very difficult to identify because they are customers who make decisions to unsubscribe from the service, (Dahiya and Bhatai, 2015). These latter voluntary churn customers may be attracted by offers of competing for telecom operators who may offer more attractive benefits or may experience a change in their financial situation or proximity to the operator's location, etc., (Rahul and Usharani, 2011).

Phases of customer loyalty: Today, companies are interested in being close to customers to identify their needs and therefore they should be aware of how to set up means of interaction and communication with consumers. In his paper «Whence consumer loyalty», Oliver (1999) presents the different phases of customer loyalty in a competitive environment. In the first phase, it is important for the customer to be aware of the formation of beliefs about the attributes of a brand and its position in the market. In the second phase, customers express an emotional preference for a specific brand that vehicles the company's image. In the third phase, the customer expresses a commitment to buy the brand. Consumer loyalty should be considered as a strategic objective and the efforts of the proposed loyalty strategies should be tailored to each customer category.

In all countries, whether developed or developing, customer capital is at the heart of companies' concerns. The latter are in constant search of any source of growth that can guarantee them «sustainability» that many companies have not been able to achieve, particularly in a market characterized by increasingly fierce competition in almost all fields. Today, the effort of companies to build customer loyalty has become a real challenge since nothing is yet guaranteed because companies face a more informed clientele and therefore more demanding and volatile (Mbarek et al., 2017). The telecommunications sector has evolved considerably in recent years. It is characterized by an increase in points of sale, the number of franchise stores, and the number of products and services offered. It is important that each operator carry out a detailed audit of all the characteristics of the current offer as a first strategic step to obtain customer loyalty. Not only should they consider customers' perceptible expectations, but also they need to take into account what customers would be likely to appreciate and what products and services they do not necessarily have any idea about at the moment.

Cognitive loyalty: according to Oliver (1980, 1999), as a first phase, when information about brand attributes are available, the consumer expresses a demand for a specific brand in the presence of alternatives, this is the author refers to as cognitive loyalty. This type of loyalty bears essentially on the consumer's prior knowledge and successful experiences.

Emotional loyalty is the second phase of loyalty development. According to Morgan and Hunt (1994), it is a notable form of customer engagement with the brand. Emotional loyalty is explained by a pleasure that the consumer feels, resulting from an accumulated satisfaction through the occasional use of the brand.

Conative loyalty is a third phase of loyalty development. Conative fidelity is expressed by a consumer's behavioural intent. The customer expresses commitment to the brand, but it would still be possible that this commitment would not lead to purchase as long as the customer is influenced by advertising of competitors.

Action loyalty is the fourth phase, considered to be true brand loyalty. Indeed, the customer is ready for action (purchase and repurchase). In addition, the customer is ready to ignore all competitors' marketing actions (price reductions, promotions, advertising, etc.).

The Telecom operator as a service company: The telecommunications sector is an industry that reduces human efforts and allows people to communicate easily with others via a constantly improving technology. Telecommunication customers have the impression to change the telecommunication operator to obtain cheaper telecommunication rates and benefit from more attractive offers. Therefore, the topic of customer migration is an extremely critical topic and of great importance to the competitive telecommunications sector.

Classification of services: The service sector is considered complex. This complexity can be explained by two main reasons: First, there are services that are fundamentally different in one dimension but are quite similar in another. The second is that some criteria are not self-evident, while for others differentiation is a matter of «mix». Due to the complexity mentioned above, it is clear that differentiation or classification is not an easy task. Thus, several service classifications can be considered:

Some practical one-dimensional classification: Killeya and Armistead distinguish between rigid services that involve the use of equipment, and flexible services that do not require equipment between two people. Indeed, most companies fall between rigid and flexible services. Cross and Walker propose a classification referenced against retail trade since according to the author's services can be classified as special products, retail products or consumer products with similar requirements for the use of the retail system.

Some two-dimensional classification: Killeya and Armistead's classification (rigidity degree) can be combined with intangibility to form a two-dimensional classification. This classification allows us to distinguish between services that need certain products for their consumption and those that are completely intangible. This notion is often associated with flexibility. Lovelock developed a classification that places intangibility degree on one side and the type of service delivery on another. Companies should closely monitor how customers evaluate intangible services, as service delivery does not guarantee customer satisfaction. A third two-dimensional classification refers to the relationship between the company and its customers. The provision of a service can be continuous or discontinuous and customers can identify or differentiate themselves with/from a specific company (Balasubramanian et al., 2014, Moulins and Roux, 2008).

Lovelock also classifies services according to standardization criteria and their use by the staff; it all depends on their nature. Some services are customized, others require a lot of judgment from the people who provide them. Schemmer distinguishes services according to their degree of interaction and standardization, two notions the author considers very close, and the workforce they need. Within this classification, companies tend to move diagonally to improve their productivity. According to the taxonomy of Eiglier and Langeard, customers can be dominated or dominant and participate actively or passively in the service.

A three-dimensional classification: The combination of the three factors of the workforce, interaction and standardization can determine the common characteristics of companies sharing the same sector.

Typology of services: Marketing-wise, we propose to distinguish 4 main types of services.

Reception services: These are services whose provision by nature always takes place at the provider's premises. Example: hotels, restaurants, passenger transport, tourism, telecommunication agencies.

Professional Services: These are services that require a vision of excellence from the service provider, from the service company, and from the people who are in contact with the customers. These are problem-solving services such as training, advertising, lawyers.

Technological services: These are services that are intended to be used by means of equipment. The typical sectors of such services are databases, software.

Sustainable services: These are services whose benefit to the client continues after the service has been provided, for example, transport of goods, insurance, banking.

Quality Insurance: Quality improvement is one of the issues that attract the attention of researchers in the field of service quality. Indeed, this notion is a component of quality management. At a time when the global economy is facing a dynamic and too unpredictable change and an increasingly competitive and rapidly expanding global trade characterized by a rapid increase in new technologies, quality control is a crucial requirement that companies all over the world should integrate at all levels and constantly improve. In terms of satisfaction, quality can be summarized in 3 complementary dimensions: Customer satisfaction (linked to the company by contract): compliance with contractual clauses (specifications), a type of external quality. General interest satisfaction (users, consumers, society): respect of the point of view, laws and regulations, e type of external quality.

Company satisfaction: its profitability, competitiveness, sustainability, progress – a type of internal quality.

Methodology and research methods. The goal of this study is to determine the reasons behind the migration of customers from one telecommunication operator to another, a phenomenon called customer «churn». «Customer churn» is the percentage of customers that stopped using a company's product or service during a certain time period. To this end, we opted for a survey-based study.

To collect data, we conducted an exploratory study of quality and production managers of the agency for the promotion of industry in Tunisia, «a network of services for entrepreneurs and companies». The aim is to understand the sources of dissatisfaction of telecommunications customers and the reasons for their migration to another Telecom operator. The data population was considered from all customers using Telecom's mobile service in Tunisia. The sample consists of subscribers to Tunisie Telecom operator for at least one year. In view of the time available and the lack of resources, we conducted this study on a sample of 211 clients. It is important to determine the sample size as its choice could affect the results and its representativeness. To obtain data quickly and cheaply, a convenience sampling method is selected. Then, we interviewed customers while leaving Tunisie Telecom's sales agencies. The questionnaire design referred to previous studies on the retention of Telecom customers (Mbarek et al, 2017). Ahn et al., (2006) had presented in his study effective marketing solutions and strategies to help telecommunication service providers in order to reduce the churn rate effectively and reduce customer turnover. Ashwini and Sunitha (2016), in their work, they used Ordinal Regression to model customer's satisfaction and they compared the results obtained with those of the methods of analysis.

The questionnaire was first tested on customer management managers in some telecommunications agencies in order to check the respondents' understanding of the items in the questionnaire. This phase was necessary because it significantly improved the quality of the questionnaire. It allowed us to refine the pre-formed items and to group some items together. We removed unnecessary and similar statements and changed the wording of misunderstood statements.

Research hypotheses and Data: The research hypotheses are as follows:

H1: If telecommunication customers are not satisfied in general, they will not intend to migrate to another operator for reasons of loyalty.

H2: The quality of a Telecom operator's network is the most important reason for customers to migrate from one operator to another.

H3: Telecom agency design is not a determining factor for customers to migrate to another operator.

Results. Correlation and Regression analysis: Empirically, we were able to determine the key variables that explain why customers are unable to migrate to a competing operator. Thus, we can see that there is a positive relationship between the determinants of service quality and customer loyalty. The correlation coefficient ranges between 0.66 and 0.95 and significant at the 0.01 level (Table 1, 2).

Estimating the different variables via a multiple regression model also allowed us to check the three hypotheses. To validate the regression results, we run the following tests: the Homoscedasticity test, the Error term independence test, the normal distribution of error terms and finally the collinearity test. The tests are found to be satisfactory.

Table 1. Pearson correlation between variables

	Churn	Network quality	Communication costs	Service speed	Request satisfaction time	Information reliability	Staff friendliness	Premises design
Churn	1.000							
Network quality	0.836	1.000						
Communication costs	0.810	0.847	1.000					
Service speed	0.786	0.816	0.992	1.000				
Request satisfaction time	0.742	0.703	0.744	0.735	1.000			
Information reliability	0.693	0.629	0.646	0.630	0.866	1.000		
Staff friendliness	0.671	0.598	0.634	0.634	0.778	0.779	1.000	
Premises design	0.649	0.590	0.601	0.593	0.786	0.852	0.752	1.000

Note: Personal calculations.

Source: Data are collected from 211 customers interviewed while leaving Tunisie Telecom's sales agencies.

Table 2. Criteria for Churn

Variable	Frequency	
Network quality	Pearson Correlation	83%
	Sig. (bilateral)	0
	N	211
Communication costs	Pearson Correlation	81%
	Sig. (bilateral)	0
	N	211
Service speed	Pearson Correlation	78%
	Sig. (bilateral)	0
	N	211
Request satisfaction time	Pearson Correlation	74%
	Sig. (bilateral)	0
	N	211
Information reliability	Pearson Correlation	69%
	Sig. (bilateral)	0
	N	211
Staff friendliness	Pearson Correlation	67%
	Sig. (bilateral)	0
	N	211
Premises design	Pearson Correlation	65%
	Sig. (bilateral)	0
	N	211

Note: Personal calculations.

Source: Data are collected from 211 customers interviewed while leaving Tunisie Telecom's sales agencies.

The causal relationship between the variables representing telecommunications customer loyalty and the intention not to migrate is significant, except for the variable «premises design», as its P-Value is higher than 10% (0.64%) (Table 3). The multiple regression model also allowed us to check our hypotheses. The following tests to validate the regression results are all found satisfactory: Homoscedasticity test, the Error term independence test, the normal distribution of error terms and finally the collinearity test.

Table 4. Regression analysis

	Coefficients	Standard Error	t Stat	P-value
Customer churn if not satisfied with the overall service quality	0.707	0.061	11.669	0.000
Network quality	0.654	0.063	10.249	0.000
Communication costs	0.569	0.255	2.233	0.027
Service speed	0.44	0.22	1.997	0.047
Request satisfaction time	0.35	0.210	1.66	0.09
Information reliability	0.29	0.169	1.71	0,08
Staff friendliness	0.099	0.039	2.582	0.011
Premises design	0.017	0.037	0.465	0.642

Note: Personal calculations.

Source: Data are collected from 211 customers interviewed while leaving Tunisie Telecom's sales agencies.

From results Table 4, we can see that most customers are willing to switch to another operator if they are not satisfied with the quality of service provided by their operator. This means that all telecommunications operators should take into consideration the risk of customer migration to another operator. Then, the first Hypothesis H1 «If telecommunications customers are not generally satisfied, they will not intend to migrate to another operator for reasons of loyalty» is not confirmed.

Table 4. Regression analysis

Regression Statistics	
Multiple R	0.798
R Square	0.796
Adjusted R Square	0.792
Standard Error	0.185
Observations	211.000

Note: Personal calculations.

Source: Data are collected from 211 customers interviewed while leaving Tunisie Telecom's sales agencies.

We found that all variables are significant for respondents. Indeed, network quality is the most important criterion for customers as 83% of respondents consider it to be very important for customer loyalty. Indeed, our second hypothesis H2 «The quality of the Telecom operator's network is the most important cause for the customer to migrate from one operator to another» has been confirmed. The second concern of our respondents is to providing Telecom subscribers with the best possible communication costs to maintain and retain them. Indeed, 81% of respondents believe that communication

costs are very important, so any telecommunications operator should review its pricing policy in order to satisfy as many customers as possible and beat competition.

In addition, service speed, request satisfaction time, information reliability and overall reception are required criteria and play a very important role in building customer loyalty. 69% of respondents believe that information reliability is an important variable to attract customers. Premises design is judged to be as the least important factor for customers not to migrate to another operator, but it is still considered a determining factor since 65% of respondents think that this variable is very important for them. Indeed, the third hypothesis H3 «premises design is not a determining factor for the customer to migrate to another operator» is not confirmed.

Conclusions. Technological advances and innovations around the world have given the telecommunications industry a great management capacity. Indeed, studying the telecommunication industry, we were able to point out to the importance of service quality when offering telecommunications services. Then, in a changing environment, any company is expected to opt for change and adaptation, where communication is one of the means available to the company to influence consumers and build their loyalty. In this paper, we have tried to identify the most determining factors that prevent telecommunications customers from migrating to a competing operator. We found that network quality has a positive and a significant relationship with loyalty. However, premises design seems not to influence customer intention to migrate to another competitor.

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Рахмун Мбарек, Ph.D., Університет Короля Абдулазіза (Саудівська Аравія);

Яссер Басшен, Ph.D., Університет Короля Абдулазіза (Саудівська Аравія).

Відтік та лояльність споживачів у галузі телекомунікацій

Сьогодні діяльність у галузі телекомунікацій стає дедалі більш складною через виникнення великої кількості різноманітних технологічних послуг. Клієнти відмовляються від послуг, пропонованих операторами зв'язку, через своє незадоволення послугами, які вони пропонують. Відтік або міграція клієнтів від одного оператора зв'язку до іншого є основною проблемою, з якою стикаються телекомунікаційні галузі у всьому світі. Керівники бізнесу вважають, що якість обслуговування є найважливішим параметром, що впливає на формування лояльності клієнтів. Як наслідок, розроблені надійні критерії для аналізу потоку клієнтів на ринку та перевірки та оцінювання задоволеності клієнтів послугами, які вони отримують від операторів ринку телекомунікацій. Це, у свою чергу, допомагає встановити чинники, які впливають на формування лояльності клієнтів, а також дає можливість сформулювати доцільні умови клієнтських договорів. Оцінювання та контроль якості послуг має вирішальне значення для виявлення важелів впливу на споживачів та при оцінюванні внутрішньої та зовнішньої конкуренції в галузі. Ця концепція є важливим інструментом управління бізнесом. Мета статті полягає у визначенні найбільш істотних факторів, що впливають на міграцію клієнтів оператора ринку телекомунікацій «Tunisie Telecom» до інших операторів. У рамках дослідження зроблено висновок, що ринок телекомунікацій характеризується напруженою конкуренцією, коли зміна якості послуг або негативна взаємодія, сприйнята замовником, може призвести до втрати споживача. Як результат, більшість операторів впроваджують дослідження та плани дій щодо утримання клієнтів та збереження їх якомога довше. Поняття збереження клієнтів та формування лояльності виявляється однією з найбільших проблем, з якою стикаються оператори в усьому світі. Для досягнення цілей, встановлених операторами зв'язку, та досягнення максимальної прибутковості, оператори повинні ефективно аналізувати ринкові дані та розробляти на основі них ефективні цільові комунікаційні стратегії взаємодії з клієнтами.

Ключові слова: аналіз відтоку, лояльність споживачів, мобільний маркетинг, телекомунікації, споживач у галузі телекомунікацій.

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