Prioritizing factors influencing customer churn

Roya Hejazinia*Mahdi Kazemi*
*Master degree in information technology management
**Department of Management, University of Sistan and Baluchestan, Iran

Abstract
The current study aims at presenting new model of Telecom companies’ customer churn based on literature review. Regarding research method, our study is typical of a cross-sectional study. A questionnaire-based survey was used to collect data from 415 customers of telecom companies. Fridman Test was performed to analyze data collected over a period of three months. The results indicated that service quality is the most significant factor followed by customer's satisfaction, competitors with superior technology, cost of change, and advertising, respectively. These findings provide implications for the telecom companies as well as competition policies for the mobile industry.

Keywords: Customer churn, Fridman Test, Service quality, loyalty.

1. Introduction
In today’s competitive world, companies are seeking new ways to stay sharp and competitive than ever before. Telecom industry is not exception in which customer attraction has more cost in comparison with customer retention. Therefore, customer retention is vital for telecom companies. Moreover, customers prefer to change their providers because of quality, cost, and better technology. Therefore, presenting new solutions for decreasing customer churn help these companies to stay competitive. Customer churn in telecom industry has been defined as customer friction (Modisette, 1999). In other words, Customer churn refers to a customer leaving a service provider, for another (Wei and Chiu, 2002).

Therefore, determining the vital factors affecting customer churn in telecom companies and prioritizing these factors help organizations to establish new solution for preventing customer reduction. As a result, the need for customer attraction will decrease that help the organization to save the cost and stay competitive. Thus, the current study aims at evaluating and prioritizing the most effective factors on customer churn of telecom companies in Iran. Our research question is as follow: what is the prioritization of factors affecting customer churn in Iran telecom companies?

2. Literature review
Due to the importance of customer retention, especially in competitive industries, the majority of studies have done for customer churn management in different industries. Some studies have been mentioned as follow:

(Keramati et.al 1388) evaluated switching cost, customer dissatisfaction, customer dissatisfaction, customer status as effective factors on customer churn based on Hanvali model. They showed that that customer dissatisfaction, Services utilization, and demographic characteristics of customers have the most impacts on customer churn or customer retention. In addition, customer status affects customer churn indirectly.

Tavakoli et al. (2009) determined reasons of customer churn of one of the Insurance companies’ database. The results indicated that customer attraction method is the major factor for predicting customer churn or retention. While shopping experience is the next factor.

Sepehri et al. (2009) evaluated Iran banks current accounts to recognize factors affecting customer churn. They demonstrated that employees attitudes effects customer churn directly. Moreover, Allahyari et al. (2012) applied clustering techniques to evaluate factors affecting customer churn of insurance companies. The results indicated that educated people leave the company mostly because of employees’ attitude while Merchants leave it because of company’s reputation. Gerpott, et al. demonstrated that customer retention, loyalty, and satisfaction are dependent to each other in Germany telecom market. Moreover, the price of mobile service, perceived usefulness, and switching operator are determinants influencing on customer churn directly.

Chiang, et al. (2003) in investigating Internet Banking industry, using data mining technique, demonstrated that the most significant factor in banks’ customer churn is entering the wrong password several times. In determining significant factors affecting customer churn and retention in South Korean mobile telecommunications service market, (Kim and Yoon, 2004) claimed that customer satisfaction of services provided by operator consisting call quality, service cost, income, providing mobile phone by operator, and brand reputation are determinants of customer churn.

For discovering specific customer churn determinants, (Ahn, Hana and Lee, 2006) presented the model consisting of customer dissatisfaction, customer-related variables, service usage and customer status have mediation effects on customer churn. Using customer transaction and billing data, they investigated determinants using logistic regression method. (Seo, Ranganathan and Babad, 2008) demonstrated that switching costs and customer satisfaction along with demographic characteristics of customers have significant effects on customer churn in mobile telecommunications service market.

In 2008 Kim and Shin stated that customer satisfaction, switching barriers and demographic characteristics of customers influence on customer churn.

Bingquan Huang, Kechadi, and Buckley (2012) applied seven data mining methods in order to evaluate customer churn in the mobile phone market. The results indicated that these methods are more reliable than traditional methods in predicting customer churn.

Investigating Chinese mobile telecommunications market, (Ding, et al. 2013) found some determinants for customer churn consisting of core service failures, high prices, competition, ethical problems, service failure, and family/friends/group influence impact on customer churn.

**Customer Churn**

Customer churn is defined as the tendency of customer to ceases the contact with a company. To be more precise, in telecommunication and communication services, customer churn means customer erosion (Yang, and Chiu, 2006). In other words, customer churn is a process in which customers switch their purchases to another market (Hadden, Tiwari, Roy and Ruta, 2005)

Customer churn causes loosing revenue and even financial and social problems for company. This subject is mostly applicable in different industries including insurance, banking, and
telecommunication industries. Customer churn has divided into three types (Yang and Chiu, 2006):

- **Involuntary churn:** This occurs when customers fail to pay their bill and as a result, the provider terminates service.
- **Inevitable churn:** This occurs when customers die or migrate resulting in omitting customer from market completely.
- **Voluntary churn:** This occurs when customers prefer to switch to another operator because of more value.

**Customer churn determinants**

Based on literature review of customer churn, we indicated eight factors in which two factors have emerged as new factors that affect customer churn. These factors are explained as follows:

1. **Service price:**
   Service price refers to the amount of money that customer should pay for receiving services. Actually, customers are seeking markets with fewer service prices. As a result, due to this fact that customers are attracted to the competitors with lower prices, service providers try to reduce their costs for more customer attraction and less customer churn. Thus, it can be argued that higher prices have negative effects on customer purchase (Anuwichanont, 2011) and positive effects on customer churn. Various researches have stated that perceived fair price is an influential factor on companies’ success. (Jiang and Rosenbloom, 2005) believed when customers compare expected price with the price that they have paid. If a price is perceived to be less than the reference price, they perceive price fairness and transaction value else they feel loosing value.

2. **Switching cost:**
   Switching cost is defined as the cost that incurs when prohibits customers desire to switch to competitor's services (White and Yanamandram, 2007). Of course, these costs are not just economic but also physical, emotional and time (SHI, ZHOU, and LIU, 2010). Actually, when customers switch to competitors, they mostly loose time, energy, and money even they may be excluded from some benefits and especial opportunities due to being the member of specific organization. Therefore, switching service providers causes various costs and even excludes customers from some benefits. Thus, if customers encounter high switching costs, they prefer not to switch their service provider while they are unsatisfied (Hejazinia, 2013). T can be concluded that switching cost has negative effects on customer churn.

3. **Competitors with superior technology:**
   Competitors with superior technology are competitors that apply better and more advanced technologies (Hejazinia, 2013). Competitors with state of the art technologies and fewer prices magnetize customers. For instance, competitors with higher speed services are great dangerous for each company. Intense competition in an industry provides the opportunity for customers to switch easily from one provider to another one (Jones and Sasser 1995). In other words, if satisfaction decreases, customers become eager to change their service provider (Jones, Mothersbaugh and Beatty, 2000).

4. **Quality:**
   Quality is the difference between perceive what customers expect and what they perceive of services (Grönroos 1997). Parasuraman (1998) stated that service quality is the difference between actual services and the promised services. Therefore, in service organizations, quality is dependent to the amount of customer expectations answered by organization. In
mobile companies, service quality refers to call quality consisting of audio, video, and text services provided by operator during a call (Ahn, et.al, 2006). Thus, quality can be mentioned as one of the influential factors on mobile companies’ customer churn. Totally, three models have presented for evaluating service quality; consisting of Servqual Model, Serv-Perval Model, and Servperf Model that are approximately similar to each other. In the current study, the Servqual Model has been used. This model dimensions are explained in Table1.

Table 1- Servqual Model dimensions (Farsijani and zandi,2012)

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangible quality</td>
<td>Appearance of physical facilities, equipment, personnel, and communication materials</td>
</tr>
<tr>
<td>Reliability quality</td>
<td>Ability to execute the pledged service dependably and accurately</td>
</tr>
<tr>
<td>Responsiveness quality</td>
<td>readiness to support customers and provide prompt service</td>
</tr>
<tr>
<td>Assurance quality</td>
<td>Knowledge and politeness of employee and their skill to transport trust and confidence</td>
</tr>
<tr>
<td>Empathy quality</td>
<td>especial attention that the employees provide to each other</td>
</tr>
</tbody>
</table>

5. Satisfaction:
customer satisfaction means customer perceived value minus customer expectations (Oliver 1980). On other words, if customer feels that received value is equal with his/her expectations, satisfaction is created. Another approach defines customer satisfaction as an overall customer attitude toward a product or service after using it (Jamal and Naser2002). This satisfaction helps customers to stay with company and prevents customer churn. In investigating customer satisfaction, various models and measures have been presented that are selected based on company situation and type of service or product. The most popular models are mentioned in table 2, this research adapts the American Customer Satisfaction Index for measuring customer satisfaction.

Table 2- Customer satisfaction index with established year(Maleki & Darabi,2008)

<table>
<thead>
<tr>
<th>Established year</th>
<th>index</th>
<th>number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989</td>
<td>Swedish Customer Satisfaction Barometer (SCSB)</td>
<td>1</td>
</tr>
<tr>
<td>1994</td>
<td>American Customer Satisfaction Index (ACSI)</td>
<td>2</td>
</tr>
<tr>
<td>1997</td>
<td>Swedish Customer Satisfaction Barometer (SCSB)</td>
<td>3</td>
</tr>
<tr>
<td>1999</td>
<td>European Customer Satisfaction Index (ECSI)</td>
<td>4</td>
</tr>
<tr>
<td>1999</td>
<td>Finland Customer Satisfaction Index (FCSI)</td>
<td>5</td>
</tr>
<tr>
<td>1999</td>
<td>Greece Customer Satisfaction Index (GCSI)</td>
<td>6</td>
</tr>
<tr>
<td>1999</td>
<td>Denmark Customer Satisfaction Index (DCSI)</td>
<td>7</td>
</tr>
<tr>
<td>1999</td>
<td>Russia Customer Satisfaction Index</td>
<td>8</td>
</tr>
</tbody>
</table>
6. Security concern:
security concern is a signification factor in customer churn, however it was just considered by (Gappert, 2002). Security concerns refer to the fear of losing data or personal information because of company (Hejazinia, 2013). It seems that security concern is generally caused by lack of confidence to the service provider. In addition, Trust means the reliance of the company on trustworthy person (Cahill, 2007). As a result, the lack of trust leads customers to anxiety over security. For instance, the concern of being controlled and listened during their telephone conversation or the anxiety over telephone companies that have huge amount of personal information of customers (Gepert, 2002). Failure to formulate a solution for security concerns cause customer churn followed by customer attraction to competitors.

7. Advertising:
Advertising is defined as a form of commendation of ideas, products, and services that requires a fee (Katler and Armstrong, 2000). Technical advertising is a kind of impersonal presentation of idea, goods, or services, that person or company do for money (Blech & Blech, 2001). The purpose of advertising is not only taking the market, but also creating deep belief in customers to choose the company for future trades. Therefore, sufficient advertising helps organizations to attract loyal customers and prevent customer churn (Hejazinia, 2013). Table 3 shows some previous customer churn dimension considered in previous studies (Hejazinia, 2013).
Table 3: Some customer churn determinates (Hejazinia, 2013)

<table>
<thead>
<tr>
<th>determinates</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service cost</td>
<td>(Gerpott et al, 2001)</td>
</tr>
<tr>
<td>Cost of change</td>
<td>(Ahn et al, 2006)</td>
</tr>
<tr>
<td></td>
<td>(Kim and Yoon, 2004)</td>
</tr>
<tr>
<td></td>
<td>(Kim and Shin, 2008)</td>
</tr>
<tr>
<td></td>
<td>(Seo et al, 2008)</td>
</tr>
<tr>
<td>quality</td>
<td>(Kim and Yoon, 2004)</td>
</tr>
<tr>
<td>satisfaction</td>
<td>(Ahn et al, 2006)</td>
</tr>
<tr>
<td></td>
<td>(Kim and Yoon, 2004)</td>
</tr>
<tr>
<td></td>
<td>(Kim and Shin, 2008)</td>
</tr>
<tr>
<td></td>
<td>(Seo et al, 2008)</td>
</tr>
<tr>
<td>Security concerns</td>
<td>(Gepert, 2002)</td>
</tr>
</tbody>
</table>

A research model

Considering mentioned factors, we provided comprehensive model for customer churn. Fig. 2 presents this model.

Figure 1 A conceptual model for customer churn
Methodology
This study is one of the marketing researches done empirically. Regarding research method, our study is typical of a cross-sectional study.

Dataset description
In this study, the experimental data were obtained from” All mobile subscribers in Zahedan-Iran.” the number of Zahedan mobile customers are totally 87000, based on Cochran formula the sample should be 380 but for more confidence, we distributed our questionnaire among 500 customers out of which 415 completed questionnaires were sent back. Moreover, Cronbach’s Alpha value was over 0.84, indicating a sound reliability level.

Findings
First of all, the results of one-sample t Test indicated that two factors(security concerns and service price) are not significant in customer churn consisting of service cost and security concerns(Table4) (Hejazi Nia, 2013). For the rest of determinants, the Fridman Test was used. As shown in Table 5, Based on ranking results, it is mentioned that service quality is the first influential factor followed by customer satisfaction as the second important factor in customer churn. Competitors with superior technology, cost of change, and advertising the third, fourth and fifth influential factors respectively. due to (Sig=0.000), it can be concluded that Because the values of significance level is lower than 0.05 (Sig=0.000), so with 95% confidence, ranking is significant.

<table>
<thead>
<tr>
<th>Determinants</th>
<th>Average Rating</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>quality</td>
<td>5.00</td>
<td>1</td>
</tr>
<tr>
<td>satisfaction</td>
<td>3.94</td>
<td>2</td>
</tr>
<tr>
<td>Competitors with superior technology</td>
<td>2.55</td>
<td>3</td>
</tr>
<tr>
<td>Cost of change</td>
<td>2.39</td>
<td>4</td>
</tr>
<tr>
<td>Advertising</td>
<td>1.12</td>
<td>5</td>
</tr>
</tbody>
</table>

N= 415  Chi-Square=1513.083   df=4   Sig=0.000

Table 5- Fridman Test results
Conclusion
Because of ongoing competition in various industries, such as mobile industry, companies are trying to attract and maintain their customers and motivate them to stay away from competitors. Actually, if companies want to stay in their competitive world, they have to invest on customer retention because new customer attraction causes a lot of money. Therefore, for better manage customer churn, organizations need to know a customer’s behavioral churn and the determinants in connection to the customer churn. In this study, we focused on previous studies in order to develop and test a customer churn model. Then it was demonstrated that security concerns and service cost are not significant factors affecting customer churn (Hejazinia, 2013). Fridman Test was performed for ranking the influential factors. The results indicated that service quality is the most significant factor followed by customer satisfaction, competitors with superior technology, cost of change, and advertising. As a result, if mobile operators do not provide qualified services, the possibility of customer churn would be higher than other situations. The last effective factor was advertising which demonstrate that the small number of customers leave the mobile company due to lack of advertisements and knowledge.
References