An Evaluation of Mobile Instant Messaging Applications' Preferences: Case of Kurdistan Region of Iraq

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Received: April 12, 2017 Accepted: May 23, 2017 Online Published: June 1, 2017

doi:10.23918/ijsses.v3i4p20

Abstract: This study aims to understand the satisfaction parameters of the mobile instant messaging application users in Kurdistan Region of Iraq. To do that, MIMQual survey of Demir and Aydinli (2016) have been conducted as survey questionnaire to the users in the region. Initially exploratory factor analysis and reliability analysis have been proposed to validate the questionnaire in the region. Secondly, regression analysis has been proposed to test the impact of each dimension on the user satisfaction. After that, again regression model have been proposed to understand the determinants of the willingness to pay for an application. Due to this model have been proposed in Turkey first, it has been learned in this study that there are some similarities and some differentiations of Kurdistan Region regarding to Turkey. More details about the research have been evaluated and concluded in the paper.

Keywords: Satisfaction of Users, MIMQual, Mobile Instant Messaging Applications, Customer Satisfaction.

1. Introduction

Since smart mobile phones production have increased the utilization of mobile instant messaging application have been improved. Using these applications is necessary and important for people in order to communicate with their relatives and friends. Thus, people are downloading these applications via internet, because most of them are free of charge. Communication in society makes mobile instant messages application to be used massively. Customer satisfaction has a great role in choosing one or more of these applications by users. They may install more than one application in their mobile phone but they are using only one of them because of the service quality. Anderson and Sullivan, 1993; Chang and Chang, 2010; Orel and Kara, 2014; Zeithaml, Berry and Parasuraman, 1996 have demonstrated that satisfaction is driving customer to repurchase a specific product or service. Hence, there are some factors which affect customers to prefer one application to be chosen from them than the others.

2. Literature Review

Service quality can be seen as the customers' perception about meeting their expectations. In order to understand customers' needs and expectations, companies must make market research to provide customer satisfactions, if service quality considered being a customers' perception (Grönroos, 1998). One of the basic objectives of companies is customer satisfaction and this can be considered as a service provision exceeding over customers' expectations (Drucker, 1954). Service quality is the main factor of customer satisfaction. On the other side, the term of service quality includes a number of factors which

can be changed from one culture to another. Some of these factors may influence the customer satisfaction in one culture, may not in another culture. Hence, the importance of these factors has to be analyzed in every culture. A market research should be made by the company initially about the customer expectations in order to increase the service provision. For instance, what they are doing for fulfilling customers' demand. In this way, a company can achieve customers' loyalty (Oliver, 1999). A consequence feeling of customers about satisfaction can be concerned as a loyalty. Feeling loyal to a company from a customer means they may pay more for this good quality of service or product that the company purchased to them rather than the other companies (Demir, Talaat & Aydinli, 2015).

The main field for e-business investors is MIM which is becoming an important sector of this field. What's up is using by 700 million people in the world. Facebook messenger is utilizing by 600 million, using WeChat by 500 million, utilization of Skype by 300 million, there are 236 million users of Viber in the world, Line is using by 181 million, Kakaotalk has 48 million users in the world (Woods, 2015; Aydinli & Demir, 2015). On the other side, in Turkey 25% of internet users' time is allocated for MIM, spending 9.9% of their time is for social networking, and the rest time is for playing, reading, e-mails…etc. (Mohamud, 2009). Obviously, these figures show that the most spending internet time of internet users in Turkey is for MIM. For this purpose, this field might be an enormous sector for the e-business investors. Another investigation has been implemented by Shim and Shin in Korea (2016) about the moderator impact on group pressure in context of group chat by utilizing MIM through conducting questionnaire among students.

Another research performed by Ogara, Koh, and Prybutok (2014), to investigate whether mobile instant messages are satisfying the users or not by utilizing the models of channel expansion, social influence, social presence and media richness theories. In order to know the elder users' necessities Kiat and Chen (2015) have examined the MIM. Deng, Lu, Wei, and Zhang (2010) have investigated the loyalty and satisfaction of users of MIM in China. They have tested Trust, Service Quality, Perceived, Functional, Emotional, Social, and Monetary Value to be a dynamic of the users' satisfaction. As a result, 54% of the variance is to satisfaction and 64% is for loyalty by using only 3 items to measure perceived service quality of an application. However, utilizing only 3 items for measuring this application will not be enough.

Some other researches have been published in this field for instance, Oghuma, Libaque-Saenz, Wong, and Chang (2016) studied comprehension of the continuing desire to utilize MIM in Korea through utilizing the model of expectation-confirmation. For the measurement purpose, they include these items such as confirmation, perceived enjoyment, continuance intention, perceived service quality, satisfaction, Perceived Security, User Interface, and Perceived Usefulness.

Customer satisfactions can be considered as a main factor of evaluating mobile instant messaging applications from quality of view, if a MIM application seen as service which means it has both provider and customer (Aydinli & Demir, 2015, Wang & Lo, 2002). Within this framework some of the aspects of some factors should be included in the strategic plan in order quality dimension of this service to be explored. However, some of the factors might be more important than the others in influencing customers' satisfaction. For this reason, service providers can be controlled by customers' satisfaction (Demir, Eray & Erguvan, 2015; Drucker, 1954). A positive decision by the customer about a utilized product is customer satisfaction (Kotler, 1991). In a case this decision occurs, the customer will probably

use the same service again because, it is noted that a key factor of repurchase and reutilize of any service is the satisfaction (Demir, Talaat & Aydinli, 2015; Demir & Eray, 2015).

Since Smart phone has been utilized in Kurdistan, the majority of people are using MIM such: Viber, what's up, Skype, Messenger, Telegram, for communication with their families and relatives. Thus, MIM became an enormous sector of e-business investment. However, a minority of people in Kurdistan are using Telegram because utilization of this application is more popular in Iran and only those people are using it that they have relatives in Iran. There is no research performed in Kurdistan before on this issue to provide any figures to announce us about how much people exactly use Viber for instance. The only research has conducted by (Demir & Aydinli, 2016) and he found that the majority of people are using Viber in Kurdistan.

Customers' anticipating might be changing from a service to another if, service quality is the customers' expectations conforming. Dimensions of service quality of internet retailing can be explored to 14 dimensions such as: Reaction, integrity, ease of use, reliability, suitability, communication, entrance, capability, politeness, personalization, continues improvement, cooperation, security/privacy, and aesthetics (Yang, Peterson & Cai, 2003). Nevertheless, these dimensions are somehow similar to those which have explored by Parasuraman et al. (1985), such: (sympathy, reaction, assurance, reliability, and tangibles), still some technical dimensions are unique. In this study, some dimensions will be explored which are totally unique form the previous studies. However, they are more or less similar to each other as the dimensions of customer satisfaction of the mobile instant messaging applications (Demir & Aydinli, 2016). Lots of users of these applications are interviewed in Turkey (Demir & Aydinli, 2016). They asked to express their expectations about those applications through voice recorded. Some factors are designed depending on the answers. Marketing, production management, and statistics experts from a number of companies and Universities in Turkey are argued to discuss about these factors. As consequence, 7 factors are determined as the application quality dimensions. These factors are as follows Demir and Aydinli (2016):

1. Communication: one of the most important parameter of communications is speed and quality. Such application that does not provide a quick and good quality signal of communication will not be accepted by consumers. This communication might be voice or video. Related Questions:

• Voice Signals are delivered fast • Voice signals are quality

• Video call quality is high • Video call signals are delivered fast.

2. Data transfer: significant parameter of the data transfer for consumers is speed and quality. The quality and the quickness of a message, picture, video, and so on are important from the consumers' point of view. Related Questions:

• Text messages are delivered fast • Pictures are delivered fast

• Video records are delivered fast • Any document is delivered fast.

3. Features: applications are similar more or less with each other; however, they are different in some points. Some of the applications might have better features than the others. For instance, video call might

be provided by an application which cannot be found in another application. This could have influence on the quality of service using.

Related Questions:

• Number of stickers of this application is enough.

• There is location delivery option in this application.

• Location delivery option is nice.

• When you send a message, you can see that the other party has seen the message or not.

• I like it when I see that other party has seen the message or not.

• By the time other party connects to the internet, I can see that s/he is online.

• I like to see if the other party is online by the time s/he connects to the internet.

4. Aesthetics: it is significant for a customer to have further aesthetic application in terms of good looking, color and so on. Related Questions:

• There is a very nice background style of this application.

• Colors of the background of this application are very nice.

• Visually messages are seen very nice.

5. Security: communication through an application may look as risky issue. Likewise, a consumer may prefer an application that can be more secured from the confidentiality of information point of view such as: video, messages, voice and contact information. Related Questions:

• It is hard to hack my account in this application.

• I feel confident about my privacy while using this application.

• I know that my private information will not be shared with other parties.

• I know my messages will not be shared with other parties.

• I know my speeches will not be listened by other parties.

6. Feedback: the owners' application for feedback evaluations could be preferred from the consumers. The improvement and development of the application is significant on the bases of the feedback from the customers. Related Questions:

• There is a strong feedback system in this application.

• Feedbacks of the customers are carefully considered.

• I think that owners of this application are developing the software based on the feedbacks.

7. Marketing: almost customers want to utilize an application which is utilized by their friends broadly. When they want to communicate with each other they can easily be connecting in a group. This can be achieved when the owners of the application develop a strong marketing strategy. Related Questions:

• This application is widely used among my friends.

• Owners of this application are making very good marketing of this product.

• When I would like to create a group of my friends, I can include almost all of my friends

• I think this is one of the most widely used applications.

3. Methodology

3.1. Purpose of the Study

This study was conducted to study satisfaction of customers who are utilizing the mobile instant messaging applications in Kurdistan Region of Iraq. Secondly, by testing the concerning hypothesis, it was aimed to see the determinants of satisfaction in this field.

3.2. Model of the Study

In this study, influence of the mobile instant messaging application quality dimensions on the user satisfaction has been elaborated by regression models. The hypothesis and the theoretical model of the study can be shown as;

H1a: Communication quality of an application has significant impact on the satisfaction of the customers

H1b: Data Transfer quality of an application has significant impact on the satisfaction of the customers

H1c: Security aspect of an application has significant impact on the satisfaction of the customers

H1d: Features of an application has significant impact on the satisfaction of the customers

H1e: Aesthetics view of an application has significant impact on the satisfaction of the customers

H1f: Feedback quality of an application has significant impact on the satisfaction of the customers

H1g: Marketing aspect of an application has significant impact on the satisfaction of the customers

H2a: Communication quality of an application has significant impact on the willingness to pay of the customers

H2b: Data Transfer quality of an application has significant impact on the willingness to pay of the customers

H2c: Security aspect of an application has significant impact on the willingness to pay of the customers

H2d: Features of an application has significant impact on the willingness to pay of the customers

H2e: Aesthetics view of an application has significant impact on the willingness to pay of the customers

H2f: Feedback quality of an application has significant impact on the willingness to pay of the customers

H2g: Marketing aspect of an application has significant impact on the willingness to pay of the customers

H2h: satisfaction of a of a user from an application has significant impact on the willingness to pay for that application

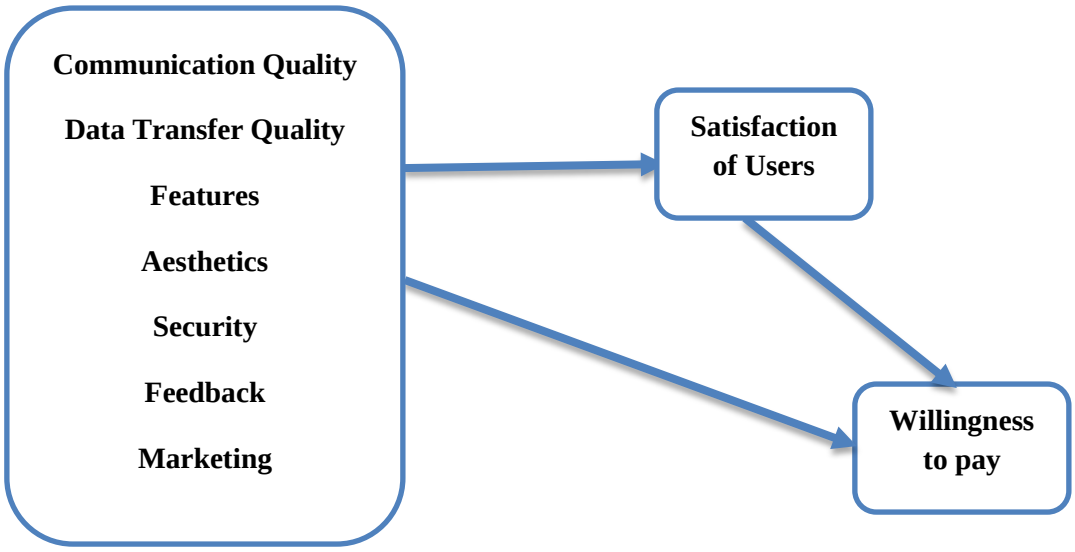

Figure 1: Model of the study

This study achieves findings through survey questionnaire. Thus, this is a quantitative study in which the obtained data have been analyzed by IBM SPSS 18. The questions have been asked to around 300 participants in Kurdistan Region of Iraq. The validity has been evaluated firstly by exploratory factor analysis and reliability. Secondly, reliability has been tested by Cronbach's Alpha value. Finally, multiple regression analysis has been proposed to determine the coefficient values of each determinant.

3.3. Population of the Study

In this study, population have been selected randomly among people who have been living in Kurdistan Region of Iraq. Initially, 300 participants have been reached to conduct the survey questionnaire. Around 60 data was not adequate after checking with naked eye. Furthermore, 48 of the data have been eliminated due to the technical problems. Finally 190 were adequate to be evaluated for the further analysis. The demographic information of the population is shown on the table below;

Table 1: Demographic information of the population

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25	136	71.6	71.6	71.6
	16-35	45	23.7	23.7	95.3
	36-45	7	3.7	3.7	98.9
	46-55	2	1.1	1.1	100.0
	Total	190	100.0	100.0	

Years of Utilization

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-3 years	28	14.7	14.7	14.7
	4-6 years	63	33.2	33.2	47.9
	7-10 years	86	45.3	45.3	93.2
	11-13 years	10	5.3	5.3	98.4
	14-16 years	3	1.6	1.6	100.0
	Total	190	100.0	100.0	

Type of Application Utilized

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Whatsapp	33	17.4	17.4	17.4
	Viber	44	23.2	23.2	40.5
	Facebook	70	36.8	36.8	77.4
	Skype	5	2.6	2.6	80.0
	Line	27	14.2	14.2	94.2
	Kakao Talk	5	2.6	2.6	96.8
	Tango	5	2.6	2.6	99.5
	Wechat	1	.5	.5	100.0
	Total	190	100.0	100.0	

It was seen that 72 percent of the population was between 18 and 25 years old. As number, this value was 136. Within the population, 24 percent was between 26 and 35 years old while 3.7 percent was between 36 and 45 years old. Finally, 1.1 percent of the population was above 45 years old. 14.7 percent of the population have been utilizing the mobile instant messaging applications for 1-3 years. Further, 33 percent of the population have been utilizing for 4-6 years, 45 percent was utilizing for 7-10 years, and only 7 percent of the population have been utilizing the mobile instant messaging applications for more than 10 years.

4. Findings

4.1. Exploratory Factor Analysis

It is known that before proposing any further analysis, the validity and the reliability must be tested. In this research, exploratory factor analysis has been used to test the validity. Initially, Kaiser Meyer Olkin test result shows about the adequacy of the population of a study. It is known that this value must be over .50 in order to determine that the sample is adequate. Beside this, Bartlett's Test of Sphericity must be significant. The sample of this study shows that KMO level of the test result is 0.907. This result is quite above the sufficient level. Furthermore, the Bartlett's Test of Sphericity is significant and this results show that we can perform further analysis with this sample population.

Table 2: Results of Exploratory Factor Analysis

Question No	Standard Deviation	Mean	Dimension	Extraction	Anti-Image	Factor Loading
1.	3.36	1.280	Communication Quality	.703	.893	.775
2.	3.36	1.268		.730	.875	.803
3.	3.30	1.247		.691	.911	.804
4.	3.53	1.224		.547	.899	.626
5.	3.56	1.274	Data Transfer Quality	.705	.930	.736
6.	3.44	1.287		.703	.907	.699
7.	3.41	1.230		.699	.918	.697
8.	3.42	1.252		.697	.923	.652
9.	3.15	1.370	Features	.742	.906	.798
10.	3.19	1.241		.785	.853	.851
11.	3.27	1.258		.837	.913	.865
12.	3.24	1.298		.822	.892	.853
13.	3.18	1.342		.751	.900	.788
14.	3.28	1.252	Aesthetics	.835	.849	.806
15.	3.26	1.350		.793	.845	.804
16.	3.98	1.567		.553	.871	.702
17.	2.76	1.319		.637	.959	.593
18.	2.95	1.424		.824	.896	.811
19.	3.05	1.415		.844	.892	.827
20.	3.02	1.416		.758	.914	.745
21.	3.11	1.397		.657	.960	.664
22.	3.95	1.563		.536	.883	.655
23.	2.94	1.296		.458	.948	.457
24.	2.97	1.327	Security	.774	.881	.783
25.	2.94	1.355		.847	.892	.791
26.	3.12	1.368		.757	.912	.760
27.	3.07	1.295	Feedback	.785	.916	.754
28.	2.98	1.276		.799	.911	.716

29.	3.07	1.310		.663	.899	.692
30.	3.25	1.468		.760	.951	.641
31.	3.34	1.346	Marketing	.738	.927	.631
32.	3.47	1.413		.726	.920	.623
33.	3.45	1.475		.793	.914	.709

It is known that the results of anti-image correlation should be greater than .50 (Demir & Eray, 2015) and the extraction should be above .4 (Baglin, 2014; Demir, 2015). Table above shows that the minimum value of the anti-image correlation is .845 which shows quite higher representation than the threshold. Furthermore, there are no values smaller than .4 in extraction column. Factor loadings also are above the adequate level as they are greater than .300 (Demir & Aydinli, 2016). Table below shows about the explained variance of the questionnaire.

Table 3: Total variance explained out of this questionnaire

	Initial Eigenvalues			**Extraction Sums of Squared Loadings**			**Rotation Sums of Squared Loadings**		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12.828	38.873	38.873	12.828	38.873	38.873	5.118	15.510	15.510
2	3.571	10.821	49.695	3.571	10.821	49.695	4.119	12.481	27.991
3	2.483	7.526	57.220	2.483	7.526	57.220	3.971	12.033	40.023
4	1.514	4.587	61.807	1.514	4.587	61.807	3.545	10.743	50.766
5	1.455	4.410	66.217	1.455	4.410	66.217	2.894	8.771	59.537
6	1.109	3.359	69.576	1.109	3.359	69.576	2.405	7.288	66.825
7	1.007	2.992	72.568	1.007	2.992	72.568	1.895	5.742	72.568

The group of items those Eigen values are equal or above one are considered to be a dimension. According to this knowledge, there are 7 main dimensions in this scale after proposing factor analysis with principle components analysis and varimax method of the rotation. It is known that minimum explained variance of a questionnaire must be 50 percent. It means that the questionnaire must explain minimum 50 percent of the issue. The results show that the explained variance is 72 percent.

These results show that all the parameters are at adequate levels and the questionnaire is valid to measure the hypothesis. Further, reliability analysis can be proposed.

4.2. Reliability Analysis

Cronbach's Alpha value analysis was proposed in order to test the reliability of the questionnaire. Cronbach's Alpha value is one of the ways to determine how reliably the same results might be obtained. According to the rule of Cronbach's Alpha in literature, the reliability level of each dimension and whole questionnaire should be .70 and above. The table below shows about the results of reliability analysis.

Table 4: Reliability analysis

Communication Quality				
Reliability Statistics				
Cronbach's Alpha	N of Items			
.865	4			
Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q1	10.19	9.953	.784	.797
Q2	10.18	10.183	.757	.809
Q3	10.25	10.388	.744	.815
Q4	10.02	11.619	.575	.880
Data Transfer Quality				
Reliability Statistics				
Cronbach's Alpha	N of Items			
.888	4			
Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q5	10.27	11.332	.710	.873
Q6	10.39	10.567	.816	.832
Q7	10.42	11.261	.760	.854
Q8	10.41	11.301	.734	.864
Features				
Reliability Statistics				
Cronbach's Alpha	N of Items			
.926	5			
Item-Total Statistics				

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q9	12.88	21.133	.771	.916
Q10	12.84	21.795	.810	.908
Q11	12.76	21.314	.845	.902
Q12	12.79	21.053	.838	.903
Q13	12.85	21.347	.772	.916

Aesthetics

Reliability Statistics

Cronbach's Alpha	N of Items
.860	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q14	29.00	75.323	.466	.854
Q15	29.02	75.238	.425	.858
Q16	28.30	74.497	.372	.865
Q17	29.52	69.806	.701	.836
Q18	29.33	68.223	.712	.834
Q19	29.23	67.417	.757	.830
Q20	29.26	68.280	.715	.834
Q21	29.17	69.072	.689	.836
Q22	28.33	73.969	.394	.863
Q23	29.34	73.919	.512	.851

Security

Reliability Statistics

Cronbach's Alpha	N of Items
.901	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q24	6.05	6.463	.810	.853
Q25	6.09	6.135	.851	.816
Q26	5.91	6.558	.751	.903

Feedback

Reliability Statistics				
Cronbach's Alpha	N of Items			
.863	3			
Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q27	6.05	5.622	.738	.810
Q28	6.14	5.466	.794	.759
Q29	6.05	5.764	.692	.853
Marketing				
Reliability Statistics				
Cronbach's Alpha	N of Items			
.934	4			
Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q30	10.26	15.378	.838	.916
Q31	10.17	16.257	.840	.916
Q32	10.04	15.697	.848	.913
Q33	10.05	15.172	.856	.910

The table above shows that the Cronbach's Alpha level of each dimension is .700. The minimum value of the test was obtained as .860 and the maximum value was 934. However, the Cronbach's Alpha levels if any item of the dimensions deleted also have been determined. Furthermore, the value of the whole questionnaire was obtained as .950 and this value is quite adequate.

After these results, it can be said that the questionnaire which have been used in this research is both valid and reliable. In the next chapter, further analysis can be proposed.

4.3. Regression Analysis Results

Regression analysis is to determine the impact of each independent variable on the satisfaction and willingness to pay for the concerning mobile instant messaging application. In this study, initially the impact of 7 dimensions on the satisfaction of the customers has been tested. The results are on the table below.

Table 5: Influence of Mobile Instant Messaging Applications on Satisfaction of User

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.335	.217		1.546	.124
	Communication Quality	-.013	.075	-.011	-.171	.864
	Data Transfer Quality	.131	.074	.119	1.965	.049
	Features	-.044	.055	-.042	-.797	.427
	Aesthetics	-.064	.096	-.050	-.664	.507
	Security	.041	.058	.042	.703	.483
	Feedback	.318	.062	.305	5.149	.000
	Marketing	.509	.065	.554	7.819	.000
a. Dependent Variable: Satisfaction						

Initially, it was seen that the adjusted R square was 64%. This shows that the satisfaction of the customers in Kurdistan Region of Iraq are explained by those dimensions. Further, the coefficients of the dimensions show that the most significant impact on the satisfaction is belonging to the marketing of the concerning mobile instant messaging application. Marketing has standardized regression coefficient of .554 and this value is the highest of all. However, Marketing, Feedback, and Data Transfer Quality are the dimensions which influence the user satisfaction significantly while the remaining dimensions not. Moreover, to test the impact of 7 dimensions and the satisfaction independent variables on the willingness to pay of the user, another regression model have been proposed. The results are on the table below.

Table 6: Impact of Satisfaction and other 7 dimensions on the user willingness to pay

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.730	.287		2.547	.012
	Communication Quality	.060	.099	.055	.604	.547
	Data Transfer Quality	-.019	.098	-.018	-.189	.850
	Features	.005	.072	.005	.065	.948
	Aesthetics	.007	.127	.005	.053	.958
	Security	-.022	.077	-.023	-.286	.776
	Feedback	.170	.087	.169	1.966	.051
	Marketing	-.129	.103	-.146	-1.257	.210
	Satisfaction	.548	.102	.578	5.358	.000
a. Dependent Variable: Willingness to pay						

The table above shows the dimensions which impact on the willingness to pay of the user. Is seems that the satisfaction has the most influence on the willingness to pay. It was observed that the adjusted r square of the model is 33%. It means that if a customer is satisfied of the concerning mobile instant messaging application, 33% of chance that s/he will intend to pay for that application. Furthermore, satisfaction and feedback are only the dimensions which impact on the willingness of pay for an application. Remaining dimensions don't have significant impact on the willingness to pay.

5. Conclusions and Discussions

The results show that these dimensions explained 64% of the customer satisfaction on mobile instant messaging application field. Further, the most important factor for satisfaction of users was marketing. The reason might be that the users install the most used application among each other and this depends on the marketing of the concerning application. Demir and Aydinli (2016) found the variance close to this study as 60%.

Feedback was the second important dimension that influence the satisfaction of the mobile instant messaging applications' users. The reason might be that the customers feel important when their feedbacks are evaluated by the producers to improve the quality of the application. According to Demir and Aydinli (2016) also found that the feedback was the second important dimension which impact the user satisfaction.

Very interestingly security was the least influencing dimension. This result also seems parallel with Demir and Aydinli (2016). The reason might be the users are not thinking or paying attention to the security because;

a) They are not recording the correct information about them and keep the confidentiality by that way.
b) The users are not aware of the consequences of security problems on virtual world.

On the other hand, communication quality, features, aesthetics and security didn't significantly influence satisfaction of the users. Du to this was not the case for authors Demir and Aydinli (2016). This might be considered as a contradiction between two researches. The reason might be cultural and market differentiation. Tastes, perceptions and reasons of satisfaction might change from one society to another.

In this research, willingness to pay also have been tested to understand the dimensions which influence the willingness to pay for the concerning application. It was seen that satisfaction has significant and the greatest impact on the willingness to pay for an application. However, 7 dimensions and the satisfaction explained the 33% of the overall variance in this field. On the other hand, only satisfaction and feedback influenced the willingness to pay but remaining not.

In the further researches, the authors might take internet quality also into consideration as mediating effect. Furthermore, to increase variance for willingness to pay, extra dimensions and parameters might be included such as repurchase intention. To extend this study, another research can be conducted to compare the customers who pays for the concerning application with who don't. By this way, reasons those increase willingness to pay might be seen well.

To mention about the limitations of this study, sampling could be increased and homogeneously gathered from all over Kurdistan Region of Iraq. In this study only from Erbil and Sulaimani the data could be gathered due to lack of support.

This study might be useful for the e-business investors and good source of information about this region. The information which have been provided in this study shows some differences from other studies as well as similarities. By this way it can be understood that Kurdistan Region of Iraq has some similar tastes of satisfaction in this field and some unique evaluation criteria.

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