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The effects of demographic factors on customer satisfaction from ATM (Case Study: mellat Bank in Mazandaran state)

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Abstract. This study aimed to identify the demographic factors on customer satisfaction of mellat Bank ATM in mazandaran province using Logit, logistic and regression method. This research is a type of applied research and research methodology is described as descriptive, explanatory and survey research. the 8- demographic variables (age, sex, education, status, employment status, marital status, occupation, type of account) was used in the model. Assumptions related to gender, marital status, residence, employment status, education, type of bank account for verified. then significant study of regression using the LR statistic significant level 5% in final model investigated. The results show that the greatest impact on customer satisfaction and is the type of account and employment status. Residence status, occupation, gender, education and marital status have the greatest impact on customer satisfaction respectively.

Keywords: customer, ATM, demographic factors, logit model

1. INTRODUCTION

One of the principles of competition in customer customer-driven organizations is customer satisfaction. As the primary driver for business organizations that seek to enhance their career are indeed the customers of that organization.

Any commercial institution should have the framework for understanding analysis and evaluation of customer satisfaction since customer satisfaction is the key argument in market performance and used for decision in management And the means by which the marketers assess their health communication with the customers. One of the important issues of service organizations is customer satisfaction and have a high correlation to the quality of services. Customer satisfaction is due to the characteristics of the product or service offered him to purchase and use. Dissatisfaction is due to the defects and deficiencies in the product or service which cause annoyance and customer complaints. The main purpose to measure customer satisfaction with feedback from customers an lead activities and resources in such a way that we conduct the major aim of which is long-term relationship with customer and retention. Increasing number of customers, to achieve the desired results, rather than dealing with an employee interacts with technology in the banking industry is not an exception.

Among these technologies, ATM banking is one of the tools of technology to serve the banks and customers for a few years. ATM is compressed bank which can apply everyday business.

Customer satisfaction is a key factor for the success of the relationship with customers. On the level of customer satisfaction in the long run have a great influence on the profitability of distribution channel. In this study we try to estimates the demographic factors affecting customer satisfaction of the ATM.

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2. THEORETICAL STUDY

1.2. Customer satisfaction

There are a lot of things satisfying word in this sense means that reflects: Customer satisfaction is the emotional response achieved of different understanding between customer expectations and product performance. Satisfaction emotional described as the state of customer satisfaction with the service provider over time. Customer satisfaction is a result of the purchase of consumer or, using of the goods or services obtained the cost of purchase of the ordinary compared with the expected results

2.2. Who is the customer?

Customers are people, or processes that used or need the product of a function. in an organization certainly there is a goal for a function, so are of the customers, too. Perceptions, expectations and preferences of customers, are the key factors of customer satisfaction, satisfaction or non- satisfaction of the results are of difference between customer expectations and perceptions of reality. nowadays, if companies and customers want to create satisfaction they should eliminating the causes of dissatisfaction and complaints, providing high quality and attractive products to customers provide grounds for rejoicing.

3.2. Service, Definition and Features

Service is a activity or benefit that one party offers another which is essentially intangible and does not provide property. The result may or may not be physical products. Service is a process that include activities which may not be tangible but not necessarily in the interact with the customer and staff or in the benefits, goods and services to resolve the customer’s need.

3. BACKGROUND RESEARCH

Jabulani (2001) evaluate the effects of demographic characteristics on the quality of the perception of hotel's clients. The results show that age and education affect the quality of perception by the customer.

The demographic characteristics of sex, have no significant relationship with the five dimensions of service quality and customer perceptions of service quality.

(Aldaghaiter 2004) has conducted study of patient satisfaction in medical care of Malik Khalid University Hospital, Riyadh, Saudi Arabia and concluded that women are more satisfied than men and increasing levels of education reduce satisfaction of the patients. Kvyntana and colleagues (2006) conducted a research to assess socio-demographic factors on patient satisfaction of hospital’s service. The results suggests that variables such as age, education and gender, marital status affects satisfaction thus employment status variables does not affect it. Other results include: older people and those without a college education and single individuals and more satisfied and also men are more satisfied than women. Yüksel and colleagues examined the effects of recognition and customer satisfaction on customer loyalty. The results of this study suggest that positive emotions increase customer satisfaction loyalty. Kumar et al (2012) assessed the relationship between service quality and customer satisfaction in organized retail in Bangalore, India, were investigated. The results showed that dimensions of the quality of services such as tangibility, reliability, responsiveness, competence, credibility, reliability, availability and customer knowledge and satisfaction linked to organized retail. However, using the SPSS software only four factors such as reliability, customer knowledge, credibility and tangibility have a significant effect on customer satisfaction. Hajian (1386) has conducted a

research on patient satisfaction with health care services in Yahyanejad and Beheshti hospital in Babol. Based on the findings of this no significant difference in patient satisfaction according to sex. No significant correlation was observed between age and satisfaction. A significant inverse relationship was observed between education and satisfaction. Amerian, Ebrahim Nia and Tofighi (1388) conducted a research on the satisfaction of patients and referring to a military hospital. The results suggest that there is no significant between gender, education, marital status, age and satisfaction. Danaie, Hagh Talab and Salehi (1392) conducted a research on the relationship between demographic variables and satisfaction with the quality of services of Agricultural Bank according to SERVQUAL model.

The case study was the branches of the Agricultural Bank in Birjand. The results show that there was no significant positive correlation between gender, employment status, education, quality of service and satisfaction.

Conversely there is a significant positive relationship between age, marital status, satisfaction with the quality of service. Amin Bidokhti and Rohi Poor (1392) have conducted a research on the impact of demographic characteristics on customer expectations of service quality in the hospitality industry in Semnan province. The results showed that age is only the demographic characteristics of the five dimensions of service quality which influence on customer expectations and demographic characteristics of gender, marital status, income, and educational level has no effect on customer expectations of service quality. Khayat Moghadam Aghizadeh has conducted a research under the influence of demographic variables on customer satisfaction of customers in the Ansar Bank. The results of this study are: there are no relationships between the variables such as gender, history of services, jobs, education and customer satisfaction. But there is a relationship between the age of the customer and a significant level of customer satisfaction in Ansar bank.

4. INITIAL CONCEPTUAL MODEL OF RESEARCH

Creating a model and a tool to measure customer satisfaction, both in the micro and macro level, have the special advantages. In the present study it is assumed that the customer's satisfaction or dissatisfaction with the performance of ATM had been influenced by demographic characteristics.

5. RESEARCH PURPOSES

The main objective of this study was to examine the impact of demographic factors on customer satisfaction with the performance of ATM and branch target is the Prioritization of demographic factors.

6. RESEARCH HYPOTHESES

1. Satisfied clients are more women than men clients to use ATM.
2. Married people are more satisfied with unmarried individuals to use the ATM
3. The residents have a greater appreciation for the non-resident individuals are using an ATM.
4. Employed people are less satisfied than unemployed individuals to use an ATM.
5. Government employees are less satisfied than non-government employee to use ATM
6. The satisfaction of people with lower education increases.
7. People who paid for with ATMs are more satisfied than those who are used for other cases of ATM.

7. RESEARCH METHOD

The present study is a descriptive and survey research. Since this study sought to examine the relationship between the defined independent variables then the type of survey is the correlation functional.

8. STATISTICAL ANALYSIS OF DATA

The customer satisfaction estimated through the use of statistical and econometric models. So we try to use regression models with qualitative dependent variables (logistic regression) and logit model to analyze the data. The general form of the model is as follows:

Y = F (F1. F2, F3, …. , …. Fn)

Where Y is the response variable and determining satisfaction which is discrete character. The study collected data from documents used in the case of bank customers, so the reliability and validity of research tools are adequate.

9. POPULATION AND THE SAMPLES

The population of this research are customers who have received credit card bank. In this study, due to the large number of branches in the province at the time of sampling, It is natural that sampling from of all the branches in the province is not possible. So for sampling, we use stratified random sampling. by Using Cochran formula for infinite population, 384 samples were obtained from the data of 400 client list.

10. FINDINGS

10.1. Logit model process

To achieve the best model fit logit model was performed repeatedly on different variables. The best fit model obtained shown in the following table:

Table 1. Estimation results of logit regression mode (Mellat bank).

Result	Prob.	z-Statistic	Std. Error	Coefficient	Variable
confirm	0.0007	3.390023	0.179573	0.608757	Education
confirm	0.0880	1.706093	0.363725	0.620548	Gender
confirm	0.0000	5.514766	0.320653	1.768324	Residence
confirm	0.3102	1.014854	0.369534	0.375023	Marital
confirm	0.0156	2.417429	0.939509	2.271196	Employment
Not confirm	0.0581	-1.895026	0.495233	-0.938480	Job
confirm	0.0002	3.678561	0.831865	3.060065	Account
	0.0000	-4.867151	0.542104	-2.638499	C
	0.353652	McFadden R-squared		161.3857	LR statistic (9 df)
				0.000000	Probability(LR stat)
	400	Total obs		103	Obs with Dep=0
				297	Obs with Dep=1

In Table 1-10 Variables in hypotheses concerning gender, marital status, residence, employment status, education, type of account, were confirmed. After examining the significance of individual coefficients of the model, it is necessary to determine the significance of the model and in the other words goodness of it. One of the criteria to determine the significance of the model (all coefficients are not zero), is the probability statistic LR (this statistic Logit regression model was used to determine significance.

The value of statistic equal to 161.3857 and the probability of LR statistic is 0.0 probability, and because it is less than 0. 01, indicating that in 99% level, the null hypothesis that all coefficients are zero is rejected, resulting in a significant estimated regression model. MAC Fowden statistic change between zero and one, well- fit measures according to the model. Mac fowden Number obtained is 0.353 Mac which show that only 35 % of the variables for satisfaction of the bank's ATM identified. Another test that is used to show the goodness of fit was performed Hasmr- Lmshv test with Eview software.

Table 2. Hosmr - Lmshv test for the accuracy of the prediction of mellat bank model.

s	
400	Observation no
10	Group no
52.54	Hosmer-lemeshowv statistic
0.0675	Kai do probability

According to Table 2, we see Hasmr- Lmshv value is 52.54 for the Bank and its possible value is 0.06 (square with 8 degrees of freedom) and i is more than 0.05, since the null hypothesis is accepted and therefore we conclude that variables obtained in customer satisfaction have the explanatory power.

This test indicates the satisfaction of being part of the model is fitted.

2.10. Analysis of final effects

To determine and calculate the impact of different factors on the probability of an ATM customer satisfaction, and the sign of the coefficients final effect is examined. The result of the calculation of the final effect shown table is 3.

Table 3. Final effect of Mellat Bank

Prob.	z-Statistic	Std. Error	Coefficient	Variable
0.0006	3.424665	0.132125	0.452483	Education
0.0940	1.674873	0.291842	0.488799	Gender
0.0000	5.661916	0.242830	1.374884	Residence
0.1805	1.339304	0.293869	0.393581	Marital
0.0042	2.863478	0.675085	1.933091	Employment
0.0317	-2.147752	0.349612	-0.750880	Job
0.0003	3.628628	0.766648	2.781880	Account
0.0000	-4.475365	0.359623	-1.609443	C

The results show that the final effect:

With an increase of one unit (the single node or rank or class or grade) to education the customer satisfaction is likely to increase the rate of 0.45%.

The remaining variables showed that if the employment situation and the status of the account increase by one unit the possibility of each satisfaction will increase 1.93, 1.37 and 2.78 respectively. In this study type of accounts have the greatest effect on other variables. Employment status and occupation and, resident status, type of job gender, education and marital status have the greatest impact on customer satisfaction from ATM respectively.

11. ANALYSIS OF RESULTS

Considering the positive coefficient can be concluded that women are more satisfied than men with the hypothesis is confirmed. Aldqaytr (2004) found similar results with this study. In the study of Azami, Akbarzadehin (1385) and Kvyntana et al (2006) men are more satisfied than women which do not match.

The results of this study. If the table resulting sex changes from male to female it is likely to increase the satisfaction level at the rate of 48 % The findings of this study indicate that subjective criteria and expectations of men and women are different, and therefore in the marketing policy, we should consider the gender then design the marketing plan. Due to the positive coefficient we can be conclude that married individuals are more satisfied with ATM's function and hypothesis is confirmed. If you change the status from single to married possibility that satisfaction can be increased by 39 %. Dissatisfaction of single people than married people show the need for manager to pay attention to improve the delivery of services to this group. Positive coefficient indicates residents are more satisfied than non-residents and the hypothesis is confirmed. If the status of a non -resident changes to resident satisfaction probability will increase by % 1. 37. Due to the positive coefficient of the conclusion the unemployed have been more satisfied with the performance of ATM and the hypothesis is confirmed. Danaie, Haghtalab and Salehi (1392) concluded in their study that there is no relationship between job status and satisfaction and that the results does not match to this study. If you change the employment status of workers to unemployed it is likely that satisfaction probability increases by % 1. 93. Due to the negative coefficient we concluded that the non-government employees are more satisfied with ATM and hypothesis can not be verified. in the study of Khayat Moghadam (1392) there is no relationship between job satisfaction and that the results do not match. if the type of changes from n non-government to government employment job satisfaction reduced 75%. according to the positive coefficient people with less education are more satisfied and the hypothesis confirm The dissatisfaction of the people with university education is perhaps due to the expectations of the people compared to people with lower education levels. Aldvaqyr (2004) and Kvyntana and colleagues (2006) found similar results. In the research of Khayat Moghadam, Danaie and Taghizadeh (1392) there is no correlation between the degree of satisfaction and education which does not match to the results of this study. If the degree of Doctor of senior changed the probability of satisfaction increase by 45 %.

Due to the positive coefficient it is concluded that the people who pay with ATM are more satisfied and the hypothesis is confirmed. If the type of account changes from others to pay the probability of satisfaction increases by 2.78%. Bank customers are from various strata of society with diverse interests and tastes. Therefore examining whether demographic variables, and hence satisfying customer expectations affect them or not, is essential. The results show that the model assumptions relating to gender, marital status, residence, employment status, education, and type of account is approved. The results show that the greatest impact on the satisfaction are the variable such as bank accounts, wages, conditions of employment and residency status. Wages and conditions of employment, occupation, gender, education, marital status, have the lower impact on satisfaction respectively.

The most important result of this study we can conclude is that marketers in the field of banking activities, must be sensitive to demographic variables. They must identify any customers who want to provide their service precisely identify before acting. Because, as was observed in this study, demographic variables plays decisive role in the quality of service perceived by customers. The bank managers can further spend their limited resources on aspects of quality of service that costs them more efficient with respect to the target customers that are present. This led them to success in a competitive market in the bank they manage. In addition, according to the survey results, banks can observe the demographic trends and codify the appropriate strategy to exploit environmental opportunities before competitors.

13. RECOMMENDATIONS BASED ON THE RESULTS

1. Establishment of customer insights regarding customer service in the bank as an institution.
2. Given the demographic characteristics of clients in bank marketing policies
3. Polling about the needs and preferences of our customers and their expectations

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