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INVESTIGATING THE CAUSES OF DELAY IN PAYMENT OF SERVICES' PRICE (CASE OF MAZANDARAN PROVINCE GAS COMPANY)

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ABSTRACT

Background: Timely payment of the cost of services by clients provides substantial cash resources to finance the company. If the collection time is prolonged, the company not only will face difficulty in timely providing of its plans' cost, but also there will be delay in providing services to the customers, tracking and controlling the overdue. Accordingly, the aim of this study is to determine the causes of delay in timely payment of the price of gas in Mazandaran Province Gas Company. **Methods:** Those customers who had not paid the cost of consumable supplies more than 3 times were included in the study through stratified and random sampling. Therefore, a total of 135 participated in the research. Data analysis was performed using SPSS and SPSS win softwares. **Results:** The analysis shows that, among various factors, low income, and lengthy periods of meter readings, inappropriate payment mechanism through banks and credit position of some governmental subscribers are the most important factors in the delay of payment of bills in Mazandaran Gas Company.

Keywords: Customer Relationship Management, Customer Loyalty, Collections, Path Analysis

INTRODUCTION

The company currently sales gas on credit that is energy is sold first then two-month consumption bills are distributed and customers should pay their debts in 15 days (Gas Company, 2009). This kind of energy sale policy makes some difficulties in terms of collection of energy cost with some buyers (debtors) (Gas Company, 2009). Complaining behavior of consumers is the term includes all activities that consumers blurt when they are dissatisfied (John *et al.*, 2009). Discharging behavior refers to the choice of a consumer in ending or decreasing consumption level or receiving a particular service (John *et al.*, 2009). The main purpose of this study was to identify the major causes of delay in timely payment of gas bills in Mazandaran Gas Company. In so doing, the following conceptual model was applied.

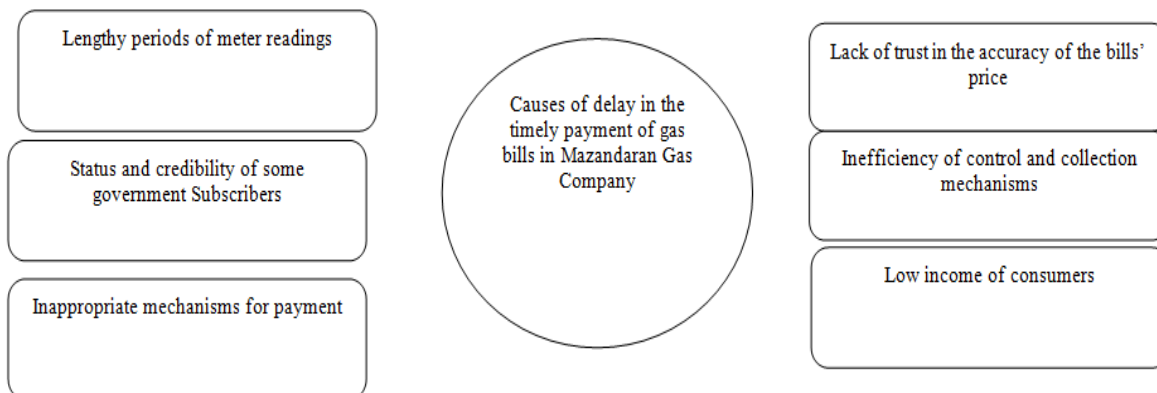


Figure 1: Causes of delay in gas bills payment

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Review of the Related Literature

A brief review on some concepts such as customer relationship management (CRM), customer loyalty, and managed collections are presented in this section.

Customer Relationship Management (CRM)

CRM approach enables organizations to realize the current needs of the customers, find out what they wanted in the past and what they have in the mind for future. Smart use of the information related to the customers' needs provides a long reciprocal relationship with the customers.

CRM enables organizations to expose these strategies to interpersonal communication management with consumers. For example, a service organization can retain the customers by solving their problems quickly and satisfying them.

Research has shown that staffs' quick operation in providing banking services is one of the effective factors on enhancing customers' satisfaction. Resources management, including both human and financial resources, has become a unified system in most of the service organizations.

Customer Loyalty

The concept of loyalty of customers and creating loyal customers in business are described as 'creating loyalty in the customer to have transactions with a particular organization and to purchase certain goods and services frequently.

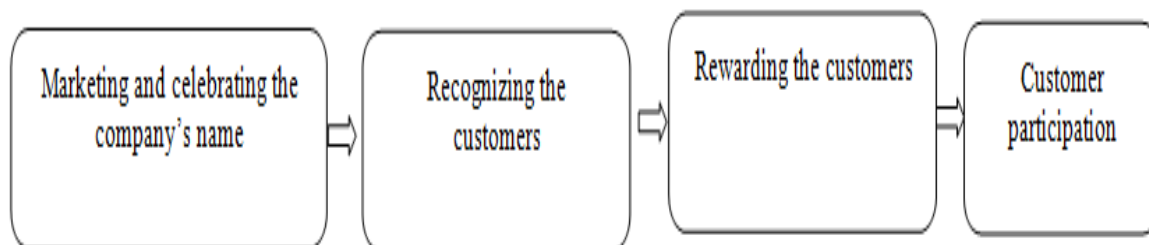


Figure 2: Customer trust and loyalty plans

Reviewing Different Methods of Collection

Amount of collections has direct relationship with the customers' satisfaction. The more failures in collections, the more inability in attracting customers' satisfaction will occur.

Hence, careful and systematic efforts must be conducted to collect the customers' debt through follow-ups. Efforts in collection of debts and energy prices should not cause customers' dissatisfaction. If public relations use effective methods to present the prices of energy consumption to the subscribers, they will pay the bills eagerly.

Certainly, timely payments of bills and energy cost would provide the possibility of running new programs and better retaining of the facilities (Shahrdar, 2005).

MATERIALS AND METHODS

Methodology

The study inclusion criterion was to include those in debt customers of Behashahr- a city in north of Iran- who owed the cost of consumable supplies more than 3 times.

Accordingly, a total of 135 were chosen using stratified and categorized random sampling.

This instrument used in this study was a questionnaire containing 7 questions about the customers' specifications, 29 five Likert-type items and two open questions in order to get the information about the research topic. Table 1 shows the relationship between the items and the research questions/hypotheses:

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Table 1: Correspondence of the items and questions/hypotheses

Questions	Corresponding concepts	Sections of the questionnaire
1-1 to 1-7	Common characteristics	Demographic questions
1-2 to 2-7	Questions related to the monitoring and evaluation indicators of inefficiency of collection mechanisms	The first sub-hypothesis
2-8 to 2-11	Questions associated with monitoring and evaluation indicators of low levels of income	The second sub-hypothesis
2-12 to 2-15	Questions related to monitoring and evaluation indicators of the customers' lack of trust about accuracy of the amount of bills issued by the company	The third sub-hypothesis
2-16 to 2-19	Questions related to monitoring and evaluation indicators of lengthy period of meter readings (which increases the amount of fees)	The fourth sub-hypothesis
2-20 to 2-24	Questions related to monitoring and evaluation indicators of inappropriateness of payment mechanisms (through banks)	The fifth sub-hypothesis
2-25 to 2-29	Questions related to monitoring and evaluation indicators of the status and credibility of some governmental customers that prevents applying legal leverage	The sixth sub-hypothesis
1-3 to 2-3	Free comments	Open questions

Research Hypotheses

1. Inefficiency of collection mechanisms results in delayed debt collection.
2. Low levels of income results in delay in timely payments of gas consumed.
3. Lack of trust about accuracy of the amount of bills issued by the company results in delayed payments.
4. A lengthy period of meter readings (which increases the amount of fees) results in delay in payments.
5. Inappropriateness of payment mechanisms (through banks) results in delayed payments.
6. The status and credibility of some governmental customers that prevents applying legal leverage results in delayed payments by the customer.

Validity and Reliability

To attain the validity of the questionnaire, a group of 10 experts in the field were invited to participate in the content validity phase. Out of 10, five were experts in the gas industry, two were customers, two were university instructors, and one was a specialist in statistics.

They proved that the items included in the questionnaire cover all aspects of the study and measure the research variables.

To assess the reliability of the instrument, Cronbach's alpha was calculated using SPSS software. $\alpha=.9$ suffices to be sure about the reliability of the questionnaire.

Results of the Descriptive Data Analysis

The descriptive analysis of the sample including different types of subscription and duration of subscription of Gas Company's customers determined that 87 percent of the samples had household account, 11 percent of them had business types, and also 2 percent did not mention their subscription type. 29.6% of the samples have subscribed between 5 and 10 years, and 26.8% between 10 and 15 years. It is noteworthy that among the subscribers, 9.8 percent had a household account for more than 20 years old. Table 2 presents descriptive statistics of duration and type of subscription variables.

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Table 2: Descriptive statistics of the sample including duration and type of subscription variables

		Type of subscription			Total numbers
		Not specified	household	business	
Duration of subscription	Not specified	2	8	0	10
	<5	0	22	6	28
	5-10	0	39	4	43
	10-15	1	35	3	39
	15-20	0	9	3	12
	>20	0	13	0	13
Total		3	126	16	145

According to Tale 3, descriptive statistics of job and income level variables indicate that the 54.5 percent of the sample were self-employed and 33 percent had government jobs. In addition, 9.6 percent of the sample earned more than 110 dollars per month and had an official job. Also, 19% of the sample earned less than 30 dollars per month and 33% earned between 30 to 65 dollars per month.

Table 3: Descriptive statistics of the sample including job and income level variables

		Jobs				Total numbers
		Not specified	Self-employed	Government employees	Non-government employees	
Income level(\$)	Not specified	3	4	2	0	9
	<39	1	26	0	1	28
	39-78	1	33	8	6	48
	78-117	0	7	10	5	22
	117-156	0	4	14	1	19
	>156	0	5	14	0	19
Total		5	79	48	13	145

Results of Path Analysis

In path analysis, the causal relationships between variables as well as the extent of effects of several variables on the dependent variable can be assessed. In Figure 2, the extent and the direction of the effect of independent variables on the dependent variable are obtained based on path coefficients in path analysis.

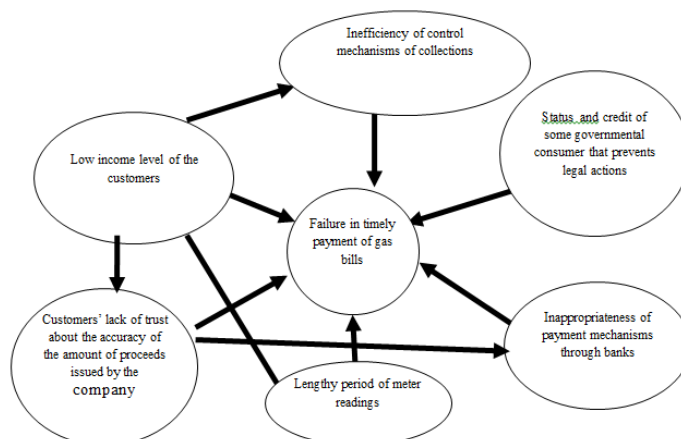


Figure 2: Path analysis of factors affecting payment of bills

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Results of path analysis showed that the inefficiency of control mechanisms of collections, consumers' low income, customers' lack of trust on the accuracy of the amount of proceeds issued by the company, lengthy period of meter readings, inappropriateness of payment mechanisms, and status and influence of some governmental customers that prevent legal actions had direct and immediate effects on failure in timely payment of gas bills. Some of the independent variables also affected each other's. Some of the paths include:

- Inefficiency of control mechanisms of collections failure in timely payment of gas bills.
- Low levels of income failure in timely payment of gas bills.
- Customers' lack of trust on the accuracy of the amount of proceeds issued by the company failure in timely payment of gas bills.
- Inappropriateness of payment mechanisms failure in timely payment of gas bills.
- Lengthy period of meter readings failure in timely payment of gas bills.
- Status and influence of some governmental customer's failure in timely payment of gas bills.

Customers' low income level Lengthy period of meter readings failure in timely payment of gas bills.

- Customers' low income level Inefficiency of control mechanisms of collections failure in timely payment of gas bills.

- Customers' low income level Customers' lack of trust on the accuracy of the amount of proceeds issued by the company Inappropriateness of payment mechanisms failure in timely payment of gas bills.

Results of Testing the Hypotheses

Results of testing the first sub-hypothesis (Inefficiency of control mechanisms of collections) indicate that the calculated statistic ($t = -2.82$) is located in H_1 area, therefore the null hypothesis can be rejected at the significance level of .05 with 95 % confidence. This means that the hypothesis inefficiency of control mechanisms of collections results in a delay in the timely payment of gas bills will not be verified.

Results of testing the second sub-hypothesis (the customers' low income level) indicate that the calculated statistic ($t = 7353$) is located in the H_0 area, thus the null hypothesis can be confirmed at the significance level of 0.05 with 95% confidence. This implies that the hypothesis consumers' low income level results in a delay in the timely payment of gas bills in Mazandaran Gas Company will be approved.

Results of testing the third sub-hypothesis (Customers' lack of trust on the accuracy of the fee issued by the company) show that the calculated statistic ($t = 2.08$) is located in H_1 area, so the null hypothesis is rejected at the significance level of .05 with 95% confidence. It can be concluded that the hypothesis customers' lack of trust on the accuracy of the fee issued by the company results in a delay in the timely payment of gas bills will not be approved.

Results of testing the fourth hypothesis (Lengthy periods of meter readings) indicate that the calculated statistic ($t = 0.23$) is located in H_0 area, so the null hypothesis is accepted at significance level of .05 with 95% confidence. This means the hypothesis lengthy periods of meter readings results in a delay in the timely payment of gas bills in the Mazandaran Gas Company will be confirmed. Results of testing the fifth hypothesis (inappropriateness of payment mechanisms through banks) suggest that the calculated statistic ($t = 1.52$) is located in H_0 area, so the null hypothesis is accepted at the significance level of .05 with 95% confidence. This implies that the hypothesis inappropriateness of payment mechanisms through banks results in a delay in the timely payment of gas bills in the Mazandaran Gas Company will be confirmed. Results of testing the sixth hypothesis (status and influence of some governmental customers prevent applying legal leverage) show that the calculated statistic ($t = 2.08$) is in H_0 area, thus the null hypothesis can be confirmed at the significance level of .05 with 95% confidence. Accordingly, the hypothesis status and influence of some governmental customers that prevent applying legal leverage results in a delay in the timely payment of gas bills in the Mazandaran Gas Company is confirmed. The test results related to the main hypothesis of the research 'the aforesaid causes have significant effects on delays in timely payment of the gas bills on in Mazandaran Gas Company' show that the calculated statistic ($t = -11.60$) is located in H_1 area, so the null hypothesis is rejected at significance level of .05 with 95% confidence. This means that the hypothesis the aforesaid causes have significant effects on delays in timely payment of the gas bills on in Mazandaran Gas Company' will not be confirmed.

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Results of ANOVA Test

ANOVA test was employed assuming that the impacts of different reasons of delay in timely payment of gas bills in Mazandaran Gas Company were equal. Since the calculated significance level (0.000) is less than the desired alpha level (5%) in the study, it can be concluded that the null hypothesis is rejected. Therefore, the hypothesis the impacts of different reasons of delay in timely payment of gas bills in Mazandaran Gas Company are not equal at least in two cases is confirmed.

Discussion and Conclusion

According to the results of the tests conducted on each of the six research sub-hypothesis, sub-hypotheses related to low income, lengthy periods of meter readings, inappropriateness of payment mechanism through banks, and status and credit of governmental customers that prevent the company from applying legal leverage have been confirmed. Therefore, it can be said that these factors are influential factors on the delay in payment of bills by the customers of the Gas Company. According to the rejected sub-hypothesis related to ‘the customers’ lack of trust on the accuracy of the fee’ and ‘inefficiency of control mechanisms of collections’, it can be said that these factors have no impact on the delay of payment of the bills. Since the main hypothesis of the research ‘the aforesaid causes have significant effects on delays in timely payment of the gas bills on in Mazandaran Gas Company’ has not been verified, it can be concluded that from the participants’ point of view, there are some other factors more influential than the ones scrutinized in this study which result in delays in payments.

Moreover, according to the results of the path analysis on the extent and direction of influence of independent and dependent variables based on the path coefficients showed that all six sub-hypothesis had immediate and direct effects on the failure in timely payment of gas bills, some of these variables also affect each other.

The research conducted by Pia (2003) revealed that the causes of delay in payment of electricity prices are: 1. lack of sufficient trust on the calculation of the bills, 2. lack of adequate information acknowledgement 3.

Banks’ avoiding of receiving the fees after the deadline of the payment. These results are similar to the findings revealed by the current study.

Khosravi (2002) mentioned that customers’ energy Outage, communicating with customers, training and informing the consumers are of the effective methods of debt collection. On the other hand, the increase in electricity tariffs could not lead to increase in consumers’ debt collection.

Shojaeyan (2003) acknowledged the electricity company's failure to inform as the major weakness of the company which resulted in a delay in the customers’ debt collection. The agents of the electricity company's encounter the customers 12 times annually (6 times to read and 6 times to distribute the bills) that is a perfect opportunity to communicate with the subscribers permanently and effectively.

Shahrdar (2005) categorized some factors which had the most effects on collecting the debts. These factors are: tele-communication with the customers who owed prior to the power outage, power outage of in debt consumers who were warned on the bill, providing mechanized connections, establishing a committee to collect the debts and overseeing the collection committee, dividing the fee of governmental organs on their annual credits. These findings are somehow in line with the results of the present study.

REFERENCES

- John C, Moon Michael S and Minor (2009).** *Consumer Behavior: Internal and External Factors*, translated by Saleh Ardestani A and Saadi M (Union: New World) Tehran.
- Khosravi K (2002).** Investigating and Comparing Effective Ways of Collecting Debts in Raising Revenue of Zabol Electricity Distribution Company. M.A Thesis, Institute of Management Education and Research, Tehran, Iran, In Persian.
- National Iranian Gas Company (2009).** Natural Gas sales Tariffs and Regulations. Subscribers Section, in Persian.
- Pia B (2002).** Investigating the reasons of delay in the Payment of the Cost of electricity bills. M.A Thesis, Institute of Management Education and Research, Tehran, Iran.

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Shahrdar S (2005). Identifying Effective Factors in the timely collection of receivables and Measuring the Amount of Not collected Fees in Tabriz Electricity Distribution Company. M.A Thesis, Institute of Management Education and Research, Tehran, Iran.

Shojaeeyan S (2003). Modifying the Methods of Debt Collection Based on Results Obtained From Public Survey. *Published in the Proceedings of the Ninth Conference on Electric Power Networks* (Solaleh publication) Tehran.