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# The Effect of Customer Relationship Management on Organization Agility; Case Study: National Iranian Drilling Company

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## Abstract

Customers Relationship Management is one of the factors that can be effective on organization agility. In this study, according to theoretical bases of this study, relationship management situation is measuring with electronic customer of national drilling company of Iran and its effect on organization agility. Methodology in this study is survey – descriptive. Also, findings of this study resulted in a study that has done by library study and according to ideas of 32 experts and managers in the national drilling company of Iran through which has selected random sampling method. Data analysis has done using TOPSIS and QFD techniques. Key framework is characters in the context of customer relationship management and its effect on organization agility (economic-based framework, customer-based, financial framework and agility-based) and finally, obtained results from this study shows using study steps that framework 3 was selected as the best framework.

**Key words:** Customer relationship management, Relationship management with electronic customer, Organization agility

## INTRODUCTION

Nowadays, we can't guide and control organizations as past in the turbulent area along with increasing changes. Accessing to organizational agility is prerequisite of effective and suitable reaction to these changes and creation a competitive advantage of its opportunity (Shien et al, 2015). Different factors and systems has effect on organizations agility including relationship management system with customer.

Researcher is following to recognize relationship among relationship management with electronic customer and organizational agility of national drilling company of Iran.

## LITERATURE REVIEW

1. Zanjirchi and Ebrahimi (2014) are consider the effect of agility abilities in a study on organizational competitive advantages with Bayes network approaches. The questionnaire of this study are develop by library evaluation and according to studied indicators and is convey to two discrete categorizations using cluster analysis of k averages and then measurement were used by helping Bayes networks to modeling casually and test hypothesis. Then, the best model was recognize by standards of Bayes information.
2. Tik Pour and Salajaghe (2012) consider the situation of organizational agility in the governmental organizations of Kerman province. The aim of present study is to determine the situation of organizational agility in the governmental organizations of Kerman city. The findings of this study shows that the level of organizational agility of governmental organizations' staffs of Kerman is high.
3. Shorshi and Karovski (2014) in a study consider the relationship between organizational work and agility

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of workforce in the small manufacturing companies. In this study, they concluded that work order and not pragmatism of work has effect on workforce agility. We can refer to the other conclusion of this study that development of cooperative relationships is cause to increase workforce agility in the small manufacturing companies.

- Navarow et al (2015) in a study are consider the role of organizational agility on knowledge structure process and organization performance. Finally, this study is consider the effect of organizational agility and knowledge management on organization performance in the form of a conceptual model and using structural equations analysis approaches. Results are show effect of organizational agility on the knowledge management and organization performance.

## STUDY HYPOTHESES

### Main Hypothesis

Relationship management with electronic customers is effective on organizational agility of national of Iran drilling company.

### Secondary Hypotheses

- Organizational agility is effective on responding.
- Organizational agility is effective on flexibility.
- Organizational agility is effective on accordance to changes.

## STUDY VARIABLES

### In the Present Study

- Relationship management with electronic customer is as independent variable.
- Organizational agility is as dependent variable.

### Study Methodology

The present study is descriptive – survey as work method and its aim is in line with operational researches (Figure 1).

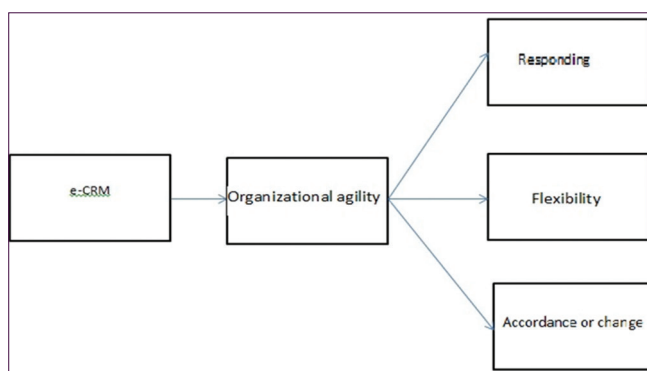


Figure 1: Conceptual model of study

Operation of this study is in the national of Iran drilling company to help managers and decision making who can use from the results of this study as a suitable and effective instrument in decisions and its programming.

### Statistical Society

Statistical society of this study is 220 experts and managers in the national of Iran drilling company. Above experts have following conditions:

- A 5 years background activity in the national of Iran drilling company;
- Having at least M.A degree;
- Having defined organizational post in the organization.

### Case Study

The purpose of high degree management of Iran drilling company is as one of the huge companies in the oil industry of Iran that study and consider about discussion of using from internet and technologies related to electronic commercial in the operations related to company. So, company management wants to do some works about pitch an agility CRM framework to cover all operational aspects of organization like sales, customer services, supply, and relationship with suppliers, logistics, supply chain management, strategy development and so on. Superior management is agreed to provide approach in this study to evaluate agility of provided options as the framework of relationship management with customer and the effect has on company operation. Following people has selected to participate in evaluation process:

- Financial and budgetary manager;
- Qualitative part manager;
- Technical and engineering managers;
- Information technology and relations managers;
- Supplies management;
- Programming management;
- Human resources management;
- Study and development management;
- Beneficial management.

Fuzz 1: Preference of relationship management frameworks with customer (based on economic approach)

As it stated in step 1-1, in the first step we should do to pitch the economic team. So, in this step, economic team was form with these members:

$$T(F) = (m_1(f), m_2(f), m_3(f))$$

These members are including financial and budgetary manager, qualitative manager and technical and engineering manager. Finally, weight of each one of these 3 voter was determined as following by consult

with these 3 people and according to the relation rate and recognition that part related to each one by economics area:

$$V(f) = (0.4, 0.3, 0.3)$$

It means that the importance of financial and budgetary management is 0.4, qualitative manager is 0.3 and technical and engineering manager is 0.3.

It should recognize the frameworks of relationship management with customer based on process 1, 2. In this step, researcher recognize main frameworks in this context by literature review about study topic and put it for 3 people economic team. Finally, economic team was agreed towards evaluation and analysis 3 provided framework by discussing forwards provided framework:

1. Kotorouf (2002)
2. Roumano and Fejromestad (2003)
3. Fingan and Kouri (2009).

Then, it asked from the members of economic team to select into form fuzzy matrixes. Following matrixes is complicated by financial and budgetary manager, qualitative manager and technical and engineering part and stand for research. Note that prices scale is millions.

$$\tilde{R}^f(1) = \begin{bmatrix} (0.0, 0.2, 0.3, 0.5) & (581, 646, 694, 723) \\ (0.4, 0.6, 0.7, 0.9) & (436, 512, 564, 622) \\ (0.2, 0.4, 0.5, 0.7) & (508, 544, 602, 688) \end{bmatrix}$$

$$\tilde{R}^f(2) = \begin{bmatrix} (0.0, 0.1, 0.2, 0.3) & (526, 584, 625, 676) \\ (0.4, 0.6, 0.7, 0.9) & (456, 548, 588, 657) \\ (0.4, 0.6, 0.7, 0.9) & (536, 562, 621, 695) \end{bmatrix}$$

$$\tilde{R}^f(3) = \begin{bmatrix} (0.0, 0.1, 0.2, 0.3) & (511, 554, 596, 633) \\ (0.7, 0.8, 0.9, 1.0) & (484, 576, 614, 668) \\ (0.2, 0.4, 0.5, 0.7) & (502, 546, 596, 633) \end{bmatrix}$$

The best frameworks of relationship management with customer by using from relations 5 to 16 that results are as follow:

$$V(f) = \begin{bmatrix} A_3 \\ A_2 \\ A_1 \end{bmatrix}$$

Fuzz 2: Superior of management framework of relationship with customer (based on customer-based approach)

In the first step into pitch strategic team based on process 1 and 2 that is as follow:

$$T(S) = (m_1(s), m_2(s), m_3(s))$$

That is including qualitative managers, human resources and beneficial that the power of voting of each one is based on harmony and point of view as follow:

$$V(f) = (0.333, 0.333, 0.333)$$

In the step 2, 1, 2, researcher recognize a number of strategic standards for agility (Figure 2). Finally, following cases is selected as final standards by 3 experts opinion:

1. Comprehends of more buyers and salesmen (Chen and Popovitch, 2003);
2. Speed of recognizing customers' orders (Daier and Shafer, 2003);
3. Improving the ability for finding, accessing and maintain the customers (Jounz et al, 2005);
4. Ability to reconstruction and reorganizing (Daier and Shafer, 2003);
5. Improving satisfactory and customers' loyalty (Batel, 2004);
6. Improving strategic relations with customers (Plonka, 1997);

It was used from sub-steps 2, 1, 5, 1 and 2, 1, 5, 2 and 2, 1, 5, 3 and also equations 20 to 24 in steps 2, 1, 5 to calculate the best frameworks of relation management with customers according to agility aspects and finally results are obtain in the following form:

$$P(s) = \begin{bmatrix} A_2 \\ A_3 \\ A_1 \end{bmatrix}$$

According to process 2, 2, in the step 2, 2, 1, an operational team was set with following members:

$$T(o) = (m_1(o), m_2(o), m_3(o))$$

That is including technical and engineering managers, information and communication technology manager and human resources manager. In continuous, it determines the importance of each one of these 3 in the voting process that is as following:

$$V(s) = (0.4, 0.2, 0.4)$$

In the step 2, 2, 2 by studying literature review, a number of agility operational standards were recognized. Then, finally, following indices were selected as operational agility indices by consulting with a 3 people expert team and harmony that are brought as following:

1. Speed of production;
2. Flexibility of production processes;

3. Removal activities without additional value;
4. Flexibility and reorganizing for producing new productions;
5. Rising information exchange.

In continuous, they determine the importance of each one of these 3 in the voting process that is as follow:

$$V(s) = (0.333, 0.333, 0.333)$$

In the step 2, 2, 4, the house of shown harmony quality in the Figure 3 was formed in the second fuzz of model QFD based on obtained individual quality house in step 2, 2, 3.

In the step 2, 3, 2, researcher review literature of study topics and recognizing key standards in the context of agility background that was selected following standards as evaluation standards by consulting with experts and 3 people groups:

It was used from sub-steps 2, 2, 5, 1 and 2, 2, 5, 2 and 2, 2, 5, 3 and also equations 28 to 32 in steps 2, 2, 5 to calculate the best frameworks of relation management with customers according to operational aspects and finally results are obtain in the following form:

1. Improving information unity;
2. Improving customer awareness and feedback from customer;
3. Agility of information management;
4. Improving education during services for employees.

$$P(o) = \begin{bmatrix} A_3 \\ A_2 \\ A_1 \end{bmatrix}$$

In the step 2, 3, 4, the house of shown harmony quality in the Figure 3 was formed in the third fuzz of model QFD based on obtained individual quality house in step 2, 3, 3 which is seen in Figure 4.

According to process 2, 3, in the step 2, 3, 1, members of team was selected as follow:

$$T(a) = (m_1(a), m_2(a), m_3(a))$$

It was used from sub-steps 2, 3, 5, 1 and 2, 3, 5, 2 and 2, 3, 5, 3 and also equations 36 to 40 in steps 2, 3, 5 to calculate the best frameworks of relation management with customers according to operational aspects and finally results are obtain in the following form:

That is including beneficial managers, study and developmental manager and human resources manager.

Benchmark strategic agility	A <sub>1</sub> (Kotorof)	A <sub>2</sub> (Romato)	A <sub>3</sub> (fingan, Koori)	Customer care
More buyer and seller integrity	(0.56, 1.12, 0.25,0.25)	(2.56, 3.12, 0.25,0.25)	(2.56, 3.12, 0.25,0.25)	0.1
Quickly understanding customers' demands	(1.56, 2.12, 0.25,0.25)	(2.56, 3.12, 0.25,0.25)	(0.56, 1.12, 0.25,0.25)	0.2
Improve the ability to find, acquire and service customers	(0.56, 1.12, 0.25,0.25)	(2.56, 3.12, 0.25,0.25)	(1.56, 2.12, 0.25,0.25)	0.2
The ability of the restructuring and reorganization	(2.56, 3.12, 0.25,0.25)	(1.56, 2.12, 0.25,0.25)	(2.56, 3.12, 0.25,0.25)	0.1
Improve customer satisfaction and loyalty	(1.56, 2.12, 0.25,0.25)	(0.56, 1.12, 0.25,0.25)	(1.56, 2.12, 0.25,0.25)	0.2
Improve strategic relations with customers	(1.56, 2.12, 0.25,0.25)	(2.56, 2.12, 0.25,0.25)	(2.56, 3.12, 0.25,0.25)	0.2

Figure 2: House of weighted fuzzy qualitative in the first fuzz of model QFD for case study

Standard operational agility	A <sub>1</sub> (Kotorof)	A <sub>2</sub> (Romato)	A <sub>3</sub> (fingan, koori)	Customer care
Production speed	(2.1, 2.3, 0.2, 0.2)	(2.1, 2.3, 0.2, 0.2)	(3.1, 3.3, 0.2, 0.2)	0.2
Flexibility of production processes	(2.1, 2.3, 0.2, 0.2)	(2.1, 2.3, 0.2, 0.2)	(3.1, 3.3, 0.2, 0.2)	0.2
Elimination of non-value added activities	(1.1, 1.3, 0.2, 0.2)	(1.1, 1.3, 0.2, 0.2)	(2.1, 2.3, 0.2, 0.2)	0.2
Flexibility and reorganization in order to produce new products	(1.1, 1.3, 0.2, 0.2)	(1.1, 1.3, 0.2, 0.2)	(3.1, 3.3, 0.2, 0.2)	0.3
Promote the exchange of information	(1.1, 1.3, 0.2, 0.2)	(2.1, 2.3, 0.2, 0.2)	(3.1, 3.3, 0.2, 0.2)	0.1

Figure 3: The house of weighted fuzzy quality in the second fuzz of model QFD for case study

Agility Benchmark duty	A <sub>1</sub> (Kotorof)	A <sub>2</sub> (Romato)	A <sub>3</sub> (fingan, koori)	Customer care
Improve information sharing	(2.56, 3.12, 0.25,0.25)	(0.56, 1.12, 0.25,0.25)	(1.56, 2.12, 0.25,0.25)	0.2
Improve customer awareness and get feedback from customers	(1.56, 2.12, 0.25,0.25)	(0.56, 1.12, 0.25,0.25)	(2.56, 3.12, 0.25,0.25)	0.2
Agility Management	(0.56, 1.12, 0.25,0.25)	(2.56, 3.12, 0.25,0.25)	(1.56, 2.12, 0.25,0.25)	0.3
Improved in-service training for staff	(2.56, 3.12, 0.25,0.25)	(1.56, 2.12, 0.25,0.25)	(2.56, 3.12, 0.25,0.25)	0.3

Figure 4: The house of weighted fuzzy quality in the third fuzz of model QFD for case study

$$P(a) = \begin{bmatrix} A_3 \\ A_2 \\ A_1 \end{bmatrix}$$

Fuzz 3: Selecting agility CRM framework (based on economic and agility evaluation)

Leadership team was formed by following members based on process 3, 1:

$$T(l) = (m_1(s), m_1(o), m_1(a), m_1(f))$$

Which is including information and communication technology manager, human resources manager and financial and budgetary manager. They determine the importance of each one in the weighted process by consulting team members which weight and power of vote of each one is as follow:

$$V(l) = (0.2, 0.25, 0.25, 0.3)$$

In the step 2, 3, the final quality house was obtained in Figure 5 in the fourth fuzz of model QFD based on the best frameworks of relationship management with customer in fuzzes 1 and 2 and 3 of model QFD and economic based evaluation.

At last, according to process 3, 3, the best frameworks of relationship management with customers was obtained as follow:

$$\begin{bmatrix} A_3 \\ A_2 \\ A_1 \end{bmatrix}$$

At last, it was provided a report of done activities in the study and was set for high degree management of company. This framework was selected for administration and was set in the organization program to administration.

## RESULTS

As it discussed before, the aim of this study is to consider the effect of administration of customer relationship management system (CRM) on organizational agility

Frameworks	X (s)	X (o)	X (a)	X (f)
A <sub>1</sub>	3	3	3	3
A <sub>2</sub>	1	2	2	2
A <sub>3</sub>	2	1	1	1

Figure 5: The house of weighted fuzzy quality in the fourth fuzz of model QFD for case study

by analytical case study in the national of Iran drilling company. The first step that was pick up in this line, comprehend recognition by using exist resources, after that comprehensive literature review of topic literature, it was provided studied framework of study. The framework in 3 main fuzzes was provided as follow:

1. Superior of frameworks of relationship management with customer (economic-based evaluation)
2. Superior frameworks of relationship management with customer (based on customer-based approaches)
3. Selecting agility framework (based on economic evaluation and CRM).

After saying study steps, case study was provided related to national of Iran drilling company and was picked up study steps to doing this case study. 3 key frameworks was recognized in the context of relationship management with customer and its effect on organizational agility and framework 3 was selected as the best framework using study steps.

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