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## The Effects of Electronic Marketing on Organizational Agility: Evidence from the Oil Industry

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### ABSTRACT

The subject of this study is to consider the effect of electronic marketing on organizational agility of provision management and good works of national oil company of South regions. All samples were obtained according to Corjasa's table of Morgan and Kohan that was marked 385 people. It was concluded that, after data analysis, there was a positive and meaningful relationship between the effect of electronic marketing on organizational agility of provision management and good works of national oil company of south oil fields. So, raising the responding speed to chances and threats, increasing the high ability of present structure in adaption with changes and educational meetings and workshops were desirable which was suggested to increase the efficiency and effectiveness of work processes.

JEL Classifications: M30; M31; M39.

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### 1. INTRODUCTION

Oil sector attracted considerable number of studies in the last two decades. Not only the role of oil sector but management and behavior of oil companies have been an important concern for researchers in management and/or behavioral economics fields. Today, the provision of the best performance is conveyed to the main conflicts of managers of manufacturing companies and they try to take the best performance by using different approaches. Company performance is measured how it gains the financial aim and goal and company market that is specified by market share, selling and competitive status and decreasing inventory level and expenses and on-time delivery. On one hand, we can see high swinger and controversial of growth and rate of investment efficiency during past 10 years by considering electronic marketing and organizational agility. In fact, whatever makes difficult the companies' performance is the selection of the most effective and best strategy according to organization features that of course these strategies has reported as the greatest challenges in studies and recent information. Companies need to design and take some strategies inevitably that could help them to improve in their marketing. This study investigates the effects of electronic marketing on organizational agility in the case of the oil industry in Iran, which is an important oil exporter country in the world; thus, results of this study will be important for policy makers. The next section reviews similar studies in the field.

### 2. LITERATURE REVIEW

#### *Definitions and Concepts*

Many studies have been done for the case of the oil industry as mentioned before (Gokmenoglu et al., 2016; Memis & Kapusuzoglu, 2015; Al-Abdulhadi, 2014; Jumadilova, 2012; Anoruo & Elike, 2009; Shaeri et al., 2016; Katircioglu et al., 2015; Heidari et al., 2013; Sodeyfi & Katircioglu, 2016; Katircioglu, 2017). In addition to economics of oil sector, management of oil also have started to receive attention. In this section, concept of organizational agility will be defined prior to methodology section.

The features of present century is development of information technology and it is applied to increase the speed and quality in services provision. Meanwhile, the service part consists of about 20 percent of all world trade and has had rapid growth of 8/5 of trade during past 15 years. Companies are facing technologies' rapid changes, raising mobility in markets, decrease of production time and raising partition of market in world environment. In such mobile and complicated environment, analysis and observed performance comparison by past process, competitors and or average of industry has provided desirable feedback for making decision for future activity. For this topic, one of the most important goals of all companies during time has been the continuous improvement of performance. Today, the provision of the best performance is conveying to basic challenge of managers of manufacture companies. For this topic, they try to obtain higher marketing by using different technics. Companies' marketing is defined by how it can access to financial aim and goals and companies' market. Today's world is full of changes in all of terms. Companies and organizations have to adapt themselves by these changes and conditions. In this regard, companies and organizations face themselves by these changes. One of these tools is electronic marketing and organizational agility.

Present changes and complications design organizations' requirement to apply reasonable counsel, specially act to correct programming, decision making and scientific management and create coordination in some cases related to society requirement (Noury, 2013). Changes and complications of present era have been discussed on markets requirements to apply reasonable counsel, specially correct programming, making decision and scientific management and create coordination related to society requirements (Esmayil Pour, 2013). Using new methods of marketing is effective in going on social and economic goals, in addition to prevent from low speed of work and dissipation of public property and it causes a company do all its activities such as income and paying expenses to execute different and variety of programs in framework of marketing concepts (Wang and Liao, 2007). So, it is a full scale mirror of all programs and activities and plays a significant role in development of national economy. Common process of our markets doesn't obtain adequate information about the results of values expenses and rate of market's effectiveness and efficiency (Javanmard & Soltanzadeh, 2012).

Electronic marketing is a new concept that is applied to modern trades. Companies are using this new media for production marketing and their services and try to share production ideas and new information. Companies and trades use internet and information technology for their production marketing and this attracts attention of surveyors, experts and legislative man to them. Advantages of electronic marketing are described as follows; It provides unique division chances. Desirable and easy division of customers based on geographical regions, preferences and purchase attribute and etc. It permits companies to relate to their customers directly. Companies can obtain globalization level. Agility is a new temple that makes able organization show a desirable reaction against unpredictable changes. In other words, it is not predicted by the agility of responding ability to changes. Agility has the ability of crossing with changes as an axis necessity. Agile organizations are rapid and flexible in responding to variable conditions of market. They lever rational power of employees instead of their muscle power (Agha Mohammadi, 2012), and the information flow inside these organizations is stable and constant (Hormozi, 2010). In fact, agility is a combination of physical production, services and information that change by customer requirement alteration (Khosh Sima, 2003). Agility creates a basic ability that senses the changes in commercial environment, take, observe, analysis and predict it (Khosh Sima, 2003). Agility is a vast ability of business that consists of organizational structure, information systems, and supportive process and specially thinking sets (Hormozi, 2010).

Paradigm of agility provides adaption with rapid changes of business environment and enrichment of employees responding to customer and market's requirements. Agile competitors accelerate the change, create markets and new customers that is out of their recognition and form a path to new markets and customers. Although agility allows company to react faster than before, the strength of agile competitors in pre-prediction of customer requirement and leadership is though continuous innovation in creating new markets. Agility is a comprehensive response to a new competition environment that has formed by some powers that has decreased direct focus of mass production (Goldman and et. Al, 1995, Gunasekaran, 2008). The most comprehensive framework has been provided for agility by Sharifi and Zhang (1998) among reviewed theoretical literature which Sharifi and Zhang (1998) state replication, ability, flexibility and speed as four dimensions of organization agility:

Replication: it is the ability of recognition of changes and rapid reaction against it and advantage from it.

Ability: it is a vast set of abilities that provide efficiency and effectiveness of activities for organization's end and goal.

Flexibility or the ability of adaption: it is the ability of processing of different productions and reach to different ends with the same facility.

Speed: it is the ability of doing tasks and operations in less possibility time (Jafar Nejad and Shahabi, 2010).

Although existing definitions of agility are different from each other, all of them emphasize effect on speed and flexibility as two main factors to reach to agility. Provision management and good works of national oil company of oily regions that is one of the biggest parts of national oil company could by its different offices play a main role in economic development of realm.

It is faced with problems in spite of high efforts of this company for marketing and quality. This company has following challenges in the different parts in the region of market direction:

- Shortage or loss marketing skills;
- Not aware of company employee in the execution of electronic marketing strategies;
- Loss of employees' motivation about execution of electronic marketing strategies in company;
- Loss of adequate recognition from marketing programming process of company and its results among managers
- Problems related to coordination between different parts of company about execution of strategies and marketing designs;
- Not attracting the incorporative of executive part in codification of strategies and electronic marketing designs
- Weak incorporative of task units about execution of organizational agility strategies;
- Incoherence and non-support of organizational culture from electronic marketing strategies;
- Incoherence between electronic marketing strategies and organizational agility;
- Internal weak relation between task units about execution of organizational agility strategies;
- Shortage of marketing analysis to codify market agility strategies;
- Limitation of financial references to execute strategies and companies' marketing designs effectively;

### 3. STUDY HYPOTHESIS

The following main and sub-hypotheses have been developed in this study:

Main hypothesis:

H1. Electronic marketing has effect on organizational agility of provision management and good works of national oil company of oily regions.

Sub-hypotheses:

H1: internal factors of organization have effect on organizational agility in provision management and good works of Oil Company of oily regions.

H2: external factors of organization have effect on organizational agility in provision management and good works of national Company of oily regions.

### 4. METHODOLOGY

It is needed to gather some information about present status of studied topic that is not before to answer the questions of study. So, this study is based on primary information that is provided, codified, produced and collected as scaling sense. Present study is accounted in terms of the problem entity and the aim of functional study and is descriptive - survey in terms of executional method and has done in two ways:

First step: primary information about the subject to understand the problem better, is obtained from library references like books and articles and surveys related to study literature.



time in this country, it has tried to recognize all the elements and factors of electronic marketing dimensions and relation and interaction with each one of them. This work has done by considering supplement theories like Belch, George and Anderson and Oliver and meanwhile, the principles contained in country market is studied that is confirmed by following references. Then, its factors are collect and applied method and model in this study is electronic marketing. On the other hand, they are effective factors in organizational agility. Independence variables in this study are the electronic marketing factors including organizational and external factors and dependence variables are organizational agility factors including responding, competence, flexibility and speed. Organizational agility dimensions are selected from the survey of the related literature (Wageeh, 2016). Dimensions of this model are:

Organizational agility including speed, competence, flexibility and responding factors, and marketing including internal and external organizational factors (Agha Zadeh et. al, 2011). So, conceptual model of study is stated as follows in Figure 1:



**Figure 1.**  
**Conceptual Model of the Study**

## 5. METHODOLOGY AND RESULTS

The aim of this study is functionally searching to gain a scientific goal and its affirmation is on supply and welfare of people who are desirable in the activity to gain development and scientific methods of executional activities. The study type is descriptive-causal. Descriptive studies describe everything relevant including description and the analysis of existing conditions. Some studies are causal that follow the relationship between two or more variables. This study describes, analyzes and determines the effect of electronic marketing on organizational agility in provision management and good works of national company of oily regions. Variables include whatever that could accept different values. These values can be different in different times and eras for a person or a thing or is different in a same time for some people or different things.

In model design that is provided for the first time in our country, it has been tried to specify all the elements and factors of market dimensions and relationship and competence of each one of them, this work is done by considering supplement theories like Blech and George and Anderson and Oliver and others. So, they have studied present principles in country market that is confirmed during past years. Then, its factors are collected. And applied method and model in this study is electronic marketing. Suggested model includes some main and output elements. Independent variables in this study include electronic marketing. In this study, dependent variable includes the organizational agility.

Information was collected by using the questionnaire. In this part, survey method that was produced to collect the primary data was used and collecting tools were written in the questionnaire. Used questionnaire includes: a) electronic marketing questionnaire. This questionnaire is a standard questionnaire and has 35 questions that measure electronic marketing as internal and external effective factors on electronic marketing. b) Standard questionnaire of organizational agility: this questionnaire is a standard questionnaire that is in the references of organizational agility and is invented by Sharifi & Zhang in 1998 and is degree in Likert spectrum.

**Table 2. Instrument Summary**

Variable	Numbers of questions in questionnaire
Speed	15-11-7-3
Competence	16-12-8-4
Flexibility	13-9-5-1
Responding	14-10-6-2

*Validity and Reliability*

Validity concept or value is the answer to this question that the measurement tools measure the intended feature. Without the awareness of the value of measurement tools we cannot ensure its data that are as two forms of content validity and structure. There are different methods to value the measurement. Content validity is a measurement tool that depends on formed questions that is confirmed according to the results of valid studies and also helps tutors and experts and some other faculty members in the field of statistics and methodology to comment. Used questionnaire in this study values the same way. Chronbac Alpha coefficient was used in this study to consider questionnaire reliability. It has calculated the Alpha coefficient by using from following formula.

$$r_{\alpha} = \frac{j}{j-1} \left(1 - \frac{\sum s_j^2}{s^2}\right)$$

J= a subset of questionnaire  
Sj<sup>2</sup> = following variance test j  
S<sup>2</sup>= total variance of test

As it can be seen on the table above, it confirms the rate of Alpha in all cases and the rate of Alpha of all parts of questionnaire has been 0.90 based on software, that is an acceptable amount. Statistics society includes a set of people or units which have at least one shared adjective; provision management and good works of national company of south oily regions.

**Table 3. Validity Test**

Variable	Alpha
Questionnaire of organizational agility	0.89
Questionnaire of electronic marketing	0.91
All of questionnaire	0.90

Study sample includes a selected group from the study society that should have features and specifications that could explain the results of the study. It has considered classified sample method in this study to increase the sample equality and society and increase sample care for society parameters and interference of society features in sample. In this study sampling has been made by random sampling method from some managers and experts. All of the samples were obtained according to Morgan and Kohan's Corjja table that their number was specified as 385. In the present study, it has used two types of descriptive and deductive statistics to analyze the data. It used descriptive statistics (variable, frequency, and average, standard deviation) to consider study sociology variables. It used deductive statistics to consider the study hypothesis. Structural equations were used in deductive statistics to consider the total process of the study model. In this study, SPSS software was used to calculate the questionnaire reliability and viability and used LISREL software to accept or reject the hypothesis. So, first of all, descriptive statistics method was used to consider public questions of the questionnaire and then in deductive statistics, firstly statistics sample distribution was considered as normal though testing the distribution adaption of Kolmogrove-Smirenof and has considered the status of study variables in the study place by t test. Then, the model of study variables measurement was considered by using the viability and reliability analysis and it was used the path analysis and considered the model in two senses; of standard estimation and meaningful sense, in the following to consider the study hypothesis and at last to consider the study model processing.

Deductive Statistics

After describing variables in statistic sample, we considered the hypothesis and designed goals by statistics test and have judged by using the statistics analysis of foundation about the accuracy of the study claim.

Kolmogrove-Smirenof Test

The result of this test is shown below. Because it has obtained a meaningful level for all of the variables bigger than 0.05. We can conclude the distribution of data of all the variables are normal. The level of Kolmogrove-Smirenof test of scales is meaningful.

Table 4. Validity Tests

Meaningful level	Factors
0.063	Electronic marketing
0.059	Organizational agility

Table 5.t-Test Results

Factor	T test	Average	Standard deviation	P-Value Sig. (2-tailed)
Electronic marketing	12.529	3.5320	0.67410	0.000
Organizational agility	5.518	3.3020	0.86533	0.000

The results of practice test resulted in LISREL software confirm the desirable outcome of this model.

Table 6. Further Detections of Diagnostics

NNFI	AGFI	GFI	RMSEA	P-VALUE	DF	CHI-SQUARE
0.94	0.9	0.93	0.064	0.00000	194	293.20

According to calculated LISREL, output is equal to 293.20. Being low, the rate of this scale shows less difference among the conceptual model with the observed data of study. Also, the amount of RMSEA is equal to 0.064 that is a sign of good practice. Allowable limit of RMSEA is 0.08; it is observed that this amount is smaller than the allowable limit that this amount is a sign of desirable practice. Where this amount is less, the model has better practice. The scale of AGFI and GFI is the relative amount of variance and covariance that is justified as a common case by the model. These amounts are closer to 1; data practices will be more desirable. This amount in this study is equal to 0.93 and 0.9 that is desirable. Practicing not standardized scale or NNFI should be higher than 0.9 that is equal to 0.94 in this study. AVE scale was used to show the homology or internal value of measurement model that the amount higher than 0.5 is acceptable and it shows internal value of measurement model.

Table 7. Further Detections of Diagnostics

Variable	AVE
External factors of electronic marketing	0.568
Internal factors of electronic marketing	0.704
Organizational agility	0.604

According to all obtained amount for AVE scale, being bigger than 0.5 shows the internal value of this model.





and this management is paying attention to expert human resources education in terms of trade and electronic marketing and promote quality level of electronic trade information. Therefore, we can see the reliability in attribute and adaption against the changes as a chance for advancement, the rate of development of new skills and competence, the existence of flexible human resources and multi-skills in this management and high ability of present structure in adaption with changes.

#### *Policy Implications*

Suggestions resulted in the main hypothesis of this study: electronic marketing has effect on organizational agility of provision management and good works of national company of oily regions. So, it is suggested that provision management and good works of national company of oily regions do the following cases: Increasing the speed of responding to chances and threats. Increasing the ability of present structure in adaption with changes for this work is desirable holding some educational and detective sessions. Increasing the efficiency and effectiveness of work processes, speed in action and accuracy in reporting and holding the educational classes in this term, the combination of multiple tasks, the management of human resources, the education of employees to adapt with different occasions and the competency in transferring responsibility in this management. Some suggestions resulted from first sub-hypothesis of study: internal organizational factors have effect on organizational agility in provision management and good works of Oil Company of south oily regions. So, we suggest that provision management and good works of Oil Company of oily regions do as follows: Some cases are paying attention such as the creation and the development of resources, abilities and competences for execution of organizational agility, face with electronic marketing strategies, provision sub-structure of electronic activity in organization, development of intelligence system of electronic marketing, create convergence between guidance programs for whole company, information technology, electronic trade and electronic marketing, marketing in thinking, making decisions, programming and managers proceedings. Some programs are in preference like awareness, information and knowledge than electronic activity from employees, creating organizational culture adaptation with information and relations technology, management of changes and adaption with electronic activities.

Custom built production and activities are based on custom requirement, design, tooling and development of web site adaptation with customers style, connection to internet, information exchange and documents and electronic exchanges, continuous supervision on performance and doing improvement proceedings, regard of personal frontage of customers in the environment of electronic activity. More efficient execution is combined with electronic marketing; recognizing strategies execution responsibilities of electronic marketing for employees, applied internal leadership require for continuous electronic marketing process, determination of politics and facilitator approaches of electronic marketing strategies execution. Suggestions for second sub-hypothesis: external organizational factors have effect on organizational agility in provision management and good works. So, it is suggested that provision management and good works of national company of oily regions is done as follow:

The approval of comprehensive law of electronic trade in congress and its execution in company, legal support from the consumers of electronic marketing from ministry, getting electronic marketing sub-structure in country though responsible men, developing the capacity of informative and relational band width and initiating the development of light fiber network, encouraging the investment in terms of trade and electronic marketing, creating a healthy competitive space in electronic business environment, approving of right law of thinking ownership from government and ministry, supporting the form and development of council companies of network or internet services and electronic marketing, supporting education and trade researches and electronic marketing, creating a cultural bed, applying information and relation technology in company, the confirmation of electronic banking, electronic transfer of expenses and valuable cards widely in company, supplying relation and information security in electronic marketing, the education of expert human resources in terms of trade and electronic marketing, the development of internet networks and increasing the numbers of people connected to it, promoting the quality level of electronic information, increasing facilities, authority and budget for applying information and relational electronic technology.

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