Investigating the Impact of Operational Accountability to Environmental Conditions on Organizational Performance

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Abstract

The purpose of this study is to investigating the impact of operational accountability to environmental conditions on organizational performance. Research in terms of purpose, applied and the method of collecting descriptive surveying information. Data were collected through a questionnaire. The statistical population of the safety glass company staff was 500 people. According to the Jersey and Morgan table, the sample size is about 217. Sampling method is a simple random probability. The results showed that operational accountability to environmental conditions has a positive impact on organizational performance. Also, operational responsiveness to environmental conditions has a positive impact on customer retention and financial performance.

1. Introduction

Modern organizations are faced nowadays with a variety of issues, such as quick and unpredictable changes, special orders, customer tastes, full quality and expectancy of a very high level of service. Meanwhile, changing is one of the main features of organizations in new and modern competitive era. Instability and market instability, intense competition between organizations, declining product of lives, changing customer needs and accelerating technological changes are all as source of uncertainty and stagnation in current century [1]. Nowadays, companies confront with intense competition due to technological changes and shift in customer demands. This situation raises the question of correctness of the traditional models of management. Organizational design is the basis of a competitive advantage and performance of an organization. From the late 1980s till the mid-1990s, following extensive worldwide economic and political developments, many efforts have been made to identify the root causes and factors affecting the new global business systems. A group of industrial specialists observed that rate of change increase in the business environment is faster than the ability of traditional manufacturing organizations to adjust and adapt to it. These organizations are weak in taking the advantage of opportunities that are created. And this inability to adapt to the conditions of change could lead to their bankruptcy and failure in the long run [2]. Since all the famous theoreticians of economics and business in today's world consider the defined knowledge to be the ultimate secret of success and competitive advantage for modern organizations, any method or model that can shape the mentioned knowledge and then distribute it, is the key issue in success of today's global organizations. In a situation where meeting the complex and changing needs of customers, as well as acquiring and maintaining sustainable advantages, are the requirements that each organization, whether governmental or non-governmental, should pursue, have up-to-date knowledge and information is considered as the main sources of competitive and beneficial advantages. Therefore, managing the organizations relying on superior knowledge, should make more reasonable decisions on important issues and improve knowledge-based practices so that they can achieve the optimal performance in environmental conditions throughout the change, based on the mechanism of technological framework and appropriate innovation. The purpose of this study is to investigate the effect of operational responsiveness on environmental conditions by organizational performance. The performance of organizations in changing

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environmental conditions and gaining competitive advantage in such an environment is an issue of fundamental importance, especially in manufacturing organizations.

2. Theoretical Foundations and Research Hypotheses

2.1. Operational accountability to environmental conditions

Organizations carry out specific measures to meet environmental conditions including new product design, flexible production, marketing and flexible advertising. Each of these actions is briefly described here:

2.2. New product design

The variability of competitive laws in the business world has made the process of delivering a new product to the market very important. Most organizations have found today more than ever that relying solely on traditional competitive leverage such as increasing quality, reducing costs and differentiating goods and services is not enough, and concepts such as speed and flexibility in competition are significant instead. And the tendency to offer new products and services to their marketplace is the reason for this change of attitude. A survey conducted in 1981 about 700 American companies and the results indicated that about one-third of the profits of these organizations were due to new products that they provided, while the similar survey had showed a fifth in 1970. Considering the above, managing the new product development process also requires the adoption of new management approaches. The rugby racing approach, in which hardworking, forward and reciprocal backing of the ball simultaneously is the victory code, is one of the approaches that will lead to better results. Honda and Canon are among the companies that have used such a pattern as a reference source for the development of their new products [3].

2.3. Flexible production

A flexible production system consists of a group of process stations that are linked together by an automated system for material transfer and storage and are controlled in an integrated computer system. What gives it the FMS name is capability of simultaneous processing of a number of different types of control units under NC program control at different workstations. The FMS is sometimes used to introduce the term "flexible machining system". The machining process is now the largest application area for FMS technology. However, it seems that the description of FMS in its broader sense is associated with an extended range of possible applications other than machining [4].

2.4. Marketing

The principles of official commercial originating from the United States was taught in several US universities as a separate business course, at the beginning of the twentieth century. And it is understood that, as commercial principles, it has passed through the following three stages:

- Production Period, in which marketing was restricted only by production constraints.
- Sales Period, in which the marketing would impose whatever the company produced.
- Customer Period, in which the customer was at the center of all marketing activities.

Marketing has moved into an interaction and reciprocation era. The fundamental change in the definition and purpose of marketing in the 21st century is such that it has grown as a commercial principle beyond the just facilitation of virtual exchanges and trades between producer and customers. In the beginning, the main focus of marketing was on the producer's interests including: the delivery of the right products to the customer at a reasonable time, place and price.

The initial assumption by the primary marketers was that the manufacturers have market control. Management, functions, roles and processes all centered on this model of business management, though this notion is not valid in the 21st century of information era. And what is marketing in the current early twenty-first century? A successful new model that has been accepted in the dynamism (often irrational) of global markets, the freakish and unpredictable customers who did not include in classical analysis, shopping patterns and market forecasts, increased intangible services and new segmentation and combinations of market beyond the industrial and aged categories, increased customers' power and new tools and techniques of interactive marketing; where are still not available on a large scale or have not yet been addressed in organizations and marketing processes of companies [5].

2.5. Flexible advertising

In order to derive the advertising strategy, one must answer firstly the following four questions:

1. Who are the audiences?
2. What message do we read?
3. How/when/where the audiences are available?
4. Why and at what levels are the audience selected?

2.6. Organizational Performance

Financial performance is assessed by return of investment, sales growth and profitability. Operational performance is evaluated by examining the market share, introducing a new product and the success rate of market. Organizational effectiveness is investigated by employee satisfaction and the spirit of organization [6]. Organizational performance indicates financial performances and organization marketing as comparing to the average industry scale [7]. In this regard, Camino explored the impact of benefit owners and managers on green marketing strategy and organizational performance in a related research. Past studies imply that interest owners and managers play an important role in organizations and markets, but there is no comprehensive approach to examining the relationship between holder's management and the green marketing strategy. Marketing researchers have found that interest holders possess an important role in influencing on performance of organizations and markets [8]. The use of clean energies and green technologies in the United States significantly affected market leadership and the jobs created by this technology in US increased more than double in labor market rate [9].

3. Background studies and research hypotheses

Shin et al. [10] examined the effect of agile production strategy and organizational performance based on environmental accountability. They provided practical pattern of organizational agility associated with concepts such as organizational learning, flexible technology, collaborative innovation and domestic agility. They showed that organizational agility leads to improvement in organizational performance. They realized that environmental accountability led to the optimal performance of organizations, and this variable has an mediational effect on the agility-performance relationship. Rezabakhsh et al. [11] investigated the relationship of organizational obsolescence with agility and organizational performance and indicated that organizational forgetfulness (i.e organization's ability to prevent the loss of basic information in organization) is related to organizational agility and leads to performance improvement. The mentioned studies answer some of the questions in the mind before the above concepts, but some of them remained unanswered that are presented in the form of hypothesis of current research. In other words, according to the performed works, the hypotheses and research model are as follows:

- Hypothesis 1: Operational responsiveness to environmental conditions has a positive impact on organizational performance.
- Hypothesis 1-1: Operational responsiveness to environmental conditions has a positive impact on customer retention.
- Hypothesis 1-2: Operational responsiveness to environmental conditions has a positive impact on financial performance.

![Figure 1. Conceptual Model [10]](image)

4. Methodology

Based on the purpose, the current study is applicational research type since applied research employ theories developed in basic studies in order to solve practical and actual problems. According to the method of work, the descriptive research is based on a survey method. The statistical population of following study is all employees and managers of Omid Isfahan safety glass company, which their number is estimated at about 500 people, according to the conducted studies. And based on Jersey and Morgan's table, the sample size is estimated to be about 217 people, while sampling method in this research is of simple random sampling method.
4.1. Data collection and analysis tools

For collecting theoretical basis of information for explanation on subject matter of the research library, literature and documentary studies carried out. One of the main methods for collecting data in current research is the literature study. So that the theoretical topics needed for research were collected from related resources including books, papers, theses, as well as resources in databases and libraries of universities and higher education institutions. In following study, a questionnaire from Shin et al. [10] was used that describes the operational responsiveness to environmental conditions on 3 items, organizational performance on 4 items, customer retention on 3 functions, and financial performance of 2 items. The measurement dimensions of main variables in research are designed based on the Likert spectrum and are scored from very high to very low. After completing this stage, the mentioned items presented to be considered by the professors and experts to consider their views on items’ modification in order to establish the validity of questionnaire.

4.2. Validity and Reliability of the Research Tools

In current research, validity methods of qualitative formalism and qualitative content are hired. Where Qualitative formalism is performed to find the difficulty in understanding the terms and words, the appropriateness and relevance of the indices, the probability of ambiguity and inadequate perceptions of the expressions, or the existence of imperfections that may exist in the meanings of words. Therefore, the questionnaire was distributed among 30 respondents and their point of view was applied. Besides, Qualitative Content Validation is needed while considering the target group of experts and field specialists, who have the scientific knowledge necessary for the subject of review. In this case, the questionnaire was reviewed through a supervisor and a group of experts and its validation verified then

The validity of the questionnaire was assessed using Cronbach’s alpha method, which is used by SPSS21 software. Cronbach’s alpha is an estimate of reliability in research tools that identifies the correlation between internal research tools. Reliability coefficient (Cronbach’s alpha) is a function of number of questions in the questionnaire divided into heterogeneous samples in response to questions. Table 1 shows the results of the reliability test for each category of research variables.

| Components                          | Cronbach’s alpha | Number of questions |
|-------------------------------------|------------------|---------------------|
| Operational accountability to environmental conditions | 0.824            | 3                   |
| Customer retention                  | 0.782            | 2                   |
| Financial performance               | 0.745            | 2                   |
| Organizational Performance          | 0.775            | 4                   |

Data was then collected using Excel software in the form of data reference. The hypothesis testing method in this study is the research data using the Laser-L equation structure software.

5. Analysis of data and research findings

Demographic characteristics of the statistical population of following study are studied based on gender characteristics, work records, education and age. The results of this survey are briefly summarized as below:

The results indicate that 38% of respondents are women and 62% are male. This suggests that most of selection sample are male, which seems natural due to the natural structure of society. A total of 6% of respondents have high school and lower diplomas, 20% apprenticeship degree, 61% bachelor graduates, and 13% masters graduate and higher. This indicates that in the sample, the level of undergraduate education is most abundant. The frequency of respondents’ age indicates that 14% of the population are aged 20-30 years, 34% between 30 and 40 years old, 45% between 40 to 50 years old and 7% older than 50 years old, which suggests that age distribution is often between 40 and 50 years old. Frequency of respondents’ work experience shows that 20% of people have under 5 years, 32% between 5 to 10 years, 18% between 10 to 15 years, 20% 15 to 20 years, and 10% over 20 years of work experience, showing that most people have a long record of work.

5.1. Modeling the equations of the research pattern

All of the research variables are inserted to software input in the form of a general model, where the output of which is presented in following two mode of standard estimate and meaningfulness (significance).
5.1.1. Hypothesis 1

Operational accountability to environmental conditions has a positive impact on organizational performance.

In this section, the seventh hypothesis of the study is examined using route analysis, and according to figures 2 and 3, since the standard coefficient in route of the operational response to the environmental conditions (IN) and organizational performance (P) is equal to 0.77 and significance level on this path is estimated as 8.06; thus, since the significance level is greater than 1.96, the hypothesis is confirmed.
5.1.2. Hypothesis 1-1

Operational responsiveness to environmental conditions has a positive impact on customer retention.

In this section, the research hypothesis is investigated by means of path analysis. Regarding figures 4 and 5, since the standard coefficient in the operational response path to the environmental conditions (IN) and customer retention (COS) is 0.75, and significance level is estimated as 6.21 in this path, and the significance level is greater than 1.96, then hypothesis is confirmed.
Figure 6. Route analysis in standard estimation mode

Figure 7. Route analysis in significance state

5.1.3. Hypothesis 1-2

Operational responsiveness to environmental conditions has a positive impact on financial performance.

Using path analysis, the research hypothesis is evaluated in this section and in accordance with figures 6 and 7, since the standard coefficient of operational response to environmental conditions (IN) and financial performance (FIN) is 0.91, and significance level on this path is estimated to be 7.12, and level of significance is greater than 1.96, the considered hypothesis is confirmed then.
5.2. Fitness of research model

When modeling the structural equations, one can trust model estimates when the model has sufficient fitness.

Table 2. Final model fitness indices

| Indicator                        | Benchmark                        | Current status |
|----------------------------------|----------------------------------|----------------|
| $\chi^2$ (Chi square)            | The smaller the fit              | 349.49         |
| df (degree of freedom)           | Greater than zero                | 161            |
| 2/dfx                            | Smaller than 3                   | 2.16           |
| P-Value (significance level)     | -                                | 0.00000        |
| RMSEA (Root mean square error of approximation) | Smaller than 0.8 | 0.138          |
| GFI (Goodness of fitness index)  | Greater than 0.9                 | 0.94           |
| AGFI (Adjusted Goodness of Fit Index) | Greater than 0.9              | 0.94           |

All of the used fitness indicators imply that this model has a good fit, so we conclude that the research model has a high ability to measure the main variables of the research. Due to the standardization of the model, the software findings are reliable.

6. Conclusions

The functions related to the internal operations of the organization include productivity, product quality and customer satisfaction. Managers are involved in creating a constant balance between strategy changes and operational performance. Operational performance depends on the ability and capacity of the organization to meet customer needs. Operational performance has duties such as inventory levels, cash flow and functional information [12].

Hypothesis 1: Operational accountability to environmental conditions has a positive impact on organizational performance. Given the results and explanations, the hypothesis is confirmed by the researcher. Shin et al. [10] examined the effect of agile production strategy and organizational performance based on environmental accountability. They practiced organizational agility in accordance with concepts such as organizational learning, flexible technology, collaborative innovation and operational agility. They showed that organizational agility leads to improved organizational performance. It is also found out that environmental accountability led to the desired performance of organizations, and this variable has an effect of mediation on the relationship between agility and performance. In this case, the results obtained in this study appear to be reasonable. According to the results of this hypothesis, in order to improve the organizational performance, the following suggestions are made:

- Increasing operational accountability to environmental changes in the organization
- Create an independent entity in the organization to analyze the environmental conditions and make organizational decisions based on changes.

Hypothesis 1-1: Operational responsiveness to environmental conditions has a positive impact on customer retention. Given the results and explanations, the hypothesis is confirmed by the researcher. Farr [13] presented a model for evaluating the agility of the organization. In his model, he introduced the organization's ability to face changes in prices, customer changes, technological change, and economic-political changes as organizational agility. He also showed that responding to environmental conditions from different perspectives, such as customers and technology, could be one of the most important issues in improving organizational performance. In this case, it seems that the results obtained in this study are consistent with other research. According to the results of this hypothesis, in order to maintain the customer, the following suggestions are made:

- Analysis of the situation and environment conditions, relying on the needs of customers
- Enhance the organization's operational capability to meet the changing needs of customers
- Performance analysis of products in the environment and improvement of customer related processes in accordance with market conditions

Hypothesis 1-2: Operational accountability to environmental conditions has a positive impact on financial performance. Given the results and explanations, the hypothesis is confirmed by the researcher. Navarro et al. [14]
examined the relationship between the knowledge process and financial performance by relying on organizational agility. They showed that the knowledge process includes knowledge acquisition, knowledge-based discourse in the organization, and knowledge management. And in the meantime, organizational agility is dependent on the process of knowledge and directly/indirectly improves the financial performance of the organization. They showed that organizational agility by relying on organizational knowledge can also improve financial performance. In this case, it seems that the results obtained in this study seem logical. According to the results of this hypothesis, the following suggestions are made for financial performance:

- Analyzing the economic conditions of environment and flexible costing in the organization
- Paying attention to the appropriate environmental opportunities and investment in the efficient financial market.
- Demand analysis and appropriate financial orientation in line with seasonal demand of market

Further, the below restrictions of the present study can be summarized in the following dimensions:

1. The probable impact of respondents’ mental and psychological state when answering questionnaires.
2. Limited knowledge of some respondents regarding issues related to research variables.
3. Likelihood of inconsistency of respondents’ perception of reality.
4. Lack of staff confidence in the polling process
5. Not paying attention to research, especially in the humanities and behavioral sciences.
6. Creating a reluctance in respond of attendants due to long questions of survey

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