# Surveying the effect of implementation of the integrated management system on the performance of employees in PMO[1]- Central Headquarter

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## *Abstract*

*Nowadays, management systems are used for making targets and guiding organizational activities in many fields in most of organizations. The integrated management system is designed to combine three standards, ISO 9000 (quality management standard), ISO 14000 (environmental management standard), and OHSAS 18000 (Occupational Health and Safety Management), to achieving a comprehensive management system. On the other hand, the efficiency and performance of human resources in organizations as the most important and valuable resource, has the most significant effect on other factors and also, the productivity of the organization. During this research which conducted to survey the effect of the implementation of the integrated management system on the performance of employees in the PMO (Central Headquarter), 178 staff who had bachelor degree or above were questioned; and ultimately by using linear regression and T test, we achieved to this result that implementation of the integrated system had effect on performance of employees in mentioned organization. Using multiple regression results indicate when three variables including quality management system, environmental management system and occupational health and safety management system are surveyed simultaneously, the variable of quality management system has its highest impact and the variable of environmental management system does not have any meaningful effect.*

**Key words**: integrated management system, quality management, performance of employees, Occupational Health and Safety Management

[1] Port and Marin Organization

**Introduction**

International standard organization has edited and published numerous international standards in association with the world's leading experts and also experts in standard institutions of member countries since 1942 when it was established. Each published standards protocols cover and focus on a particular area of operations and activities. Before establishment of quality management systems based on international standards; ISO 9000 was used to provide customers' needs and establishing a management system; however, ISO 14000 was used to reduce the pollution and preparing a green and committed organization about society's health. In addition, managers could provide suitable background for establishment of a safety management system. Management systems can survey activities, products and services in an organizations from many aspects and perspectives. On the other hand, in each system, the satisfaction of especial group was attempted more than others. These groups included customers, staff, owners and shareholders, suppliers, contractors, communities, government, and other parties. If the organization considers all parties' satisfaction, it should consider its activities in many aspects and it needs to establish a variety of management systems in the organization. However, establishment and use of many management systems with its involvements, makes complexity and confusion in the organization, it wastes resources, creates large amounts of documents, makes rework, reduces performance, and makes contradiction between the policies and defined objectives for all systems. To achieve the advantages of implementation and maintenance of these systems together, we see just a reasonable solution, and it is integration and merging all management systems into a single system (Zutshi,A. , Sohal, 2005; 221). So, researchers are looking to answer this question that does, the establishment of integrated management system in PMO which is one the most important and prior governmental organization in the collection of "Ministry of Roads", have any effects on the staff's performance?

**Research literature**

The integrated management system is an integration of below management systems in an organization indeed:

1- Quality management system ( ISO 9001)

2- Occupational Health and safety Assessment Series (OHSAS)

3- Environmental management system (ISO 14001)

**Standard of quality management system**

Evolution of management system's standards began with standard of the quality management. These standards had expanded because the organizations needed to control their services and products' quality and also they needed to invent regular methods to ensure about the quality of their various activities. However, the first standard of quality management was BS 5750, that was published in 1997; nowadays, the most well-known standard of the quality management is the series of ISO 9000 (Shakeri & Eyvazian; 2003:131). The requirements of the quality management system are specified in ISO 9001 (2008), and indicate the supplemental specified requirements for products or services. These international standards can be used by internal or external parties including certification organizations to evaluate the abilities of an organization in fulfil customers' demands, legal and regulatory applicable requirements to the products or services, and finally the organizations' requirements. These international standards encourage the acceptance of a process approach during creating, implementing and improving the effectiveness of the quality management system to increase customers' satisfaction through providing customers' demands (Jalali; 2013, 1).

**Standard of environmental management system**

Environmental standards have been created because of the growth of environmental regulations and shareholders' interests and they focus on the environment. In addition, organizations tend to decrease their cost through optimizing using the energy resources and minimizing environmental waste which is important regarding to society, environmental and organizational perspectives. The purpose of environmental standards is creating organizations with disciplined approach to manage and monitor the activities, services, production and products' development affecting on environment. BSI[2] was the first publisher of environmental management system called BS 7750 in 1992; however, the most famous and useful standard is the series of ISO 14000. In addition, European Commission has proposed a standard of environmental management system as a program of surveying and managing the European Commission were presented in two editions. This standard is as same as ISO 14000, however, it is more comprehensive (Masoudi; 2013:58).

The environmental management system is an organizational strategic decision, plan, and its implementation in an organization under the effect of changing needs of an organization, its specific objectives, services and conducted processes in that organization. The management system of ISO14000, originally seeks to identify and regular utilization of this system, its integration and documentation. This work includes identification of major areas affecting on environment in an organization and the formulation and implementation of procedures and vital control measures. The aim is to respect the legitimate demands of the society regarding the environment protection and the health of its beneficiaries. This approach also provides a suitable background for continuous improvement.

[2] British standards institution

**Occupational safety and health management system standards**

BSI was the first publisher of this standard for helping the organizations to monitor the occupational safe and health from threats, which had been called and published as BS 8800 by British Standards Institute in 1996; however, the first edition of OHSAS 18001 was published in 1999. OHSAS 18001 was based on BS 8800 and other standards and has been set by verified international organizations and national standards institutions. This standard continued with OHSAS 18001 (2004), and this edition OHSAS 18001 (2007) is available now. Jorgensen, Malad and Reiman stated that OHSAS 18001 (2004) was developed to more compatibility with ISO 9001 and ISO 14001 (Masoudi; 2013, 59).

Occupational safety and health management system standard applications are:

a) Eliminate or minimize the risk of employees and other relevant parties that can be in occupational health and safety risks in an organization's activity.

b) Establishment, maintenance and continuous improvement of occupational health and safety management system

c) The organization's confidence from compliance of the professional health and safety policy that has itself stated.

**Performance**

Performance has many definitions. Armstrong, 1994, defined it as "achieving objectives which their quality and quantity are determined". Oxford English dictionary defines it: "Implementation; applying; doing everything ordered or committed" (Armstrong, 1994; P: 7). However, this definition is related to outputs, it shows that the performance is related to doing a task and also the achieved results. So, performance can be considered as behavior. Performance was defined in this way too: "The performance is the joint function of effort, ability and comprehending of a role" (Trance, 1997:22). Kane (1996) argues that the performance is a process that a person does not pay attention to it and it is separated from the purpose. Bernadin (1995) believes that the performance must define as work's results, because these results make the strongest relation to the strategic goals of the organization, customers' satisfaction and economic participation. Behavior not only does not mean achieving results, but in turn, it is a consequence of mental and physical activities and it can be considered apart from the results (Armstrong, 2007:21). Performance means behaviors and results. Behaviors are caused by people and they change the performance from mental states to practical mode. Behaviors not only are objects to achieve results, but also they can be evaluate apart from the results (Armstrong, 2012:12).

**Theoretical framework**

Theoretical framework is like a skeleton model. An effective model should aid to predict events. And this symbol of prediction includes three factors including high precision, high-grade mixture, and high-level of appropriation or the power of organizing. Accordingly, in this study, to survey the effects of the implementation of the integrated management system on the staff performance, and to identify the factors and indicators of integrated management system in conceptual framework, Belek (1998) and Picard (1998) theories have been used. These theories define the integrated management system as a managerial system including three dimensions (quality management, environmental management, and occupational Health and Safety Management). The areas where the impact of the integration can be studied include: reduce rework, easier acceptance by staff, increase motivation, and reduce the conflict in the organization's activities; also, the efficiency and effectiveness of training programs for the staff (Belek, 1998; Picard, 1998; Del Rio Fernandez, 2001; Weight, 1999). In relation with the staff performance, Armstrong, Fred Luthans, Turner and Lawrence, Hickman and Vel over, Hackman and Oldham, Bernadin, Trance, Bramach, Hersey and Goldsmith models had been studied and ultimately, this model was used. Performance is a function of the ability, desire, job's recognition, organizational support, environmental compatibility, feedback of performance and validity (Hersey & Goldsmith; 1980: 38-40).

Introducing seven factors of Achieve Model

Managers can evaluate current and potential performance effectiveness and efficiency of employees in the context of a specific task. Then, they should take necessary steps to solve the problem in accordance with those particular unique reasons. 7 factors of "Achieve Model" are:

- Ability (expertise and knowledge)
- Clarity (role imagination or conception)
- Help (organizational support)
- Incentive (desire or motivation)
- Evaluation (education or feedback)
- Validity (Valid acts and legal rights of personnel)
- Environment (Environmental suitability) (Hersey & Goldsmith; 1980:44) So the conceptual model is illustrated in figure 1 and the main hypothesis of stydy is :

  H1: Integrated management system has effect on the staff's performance in PMO- Central Headquarter

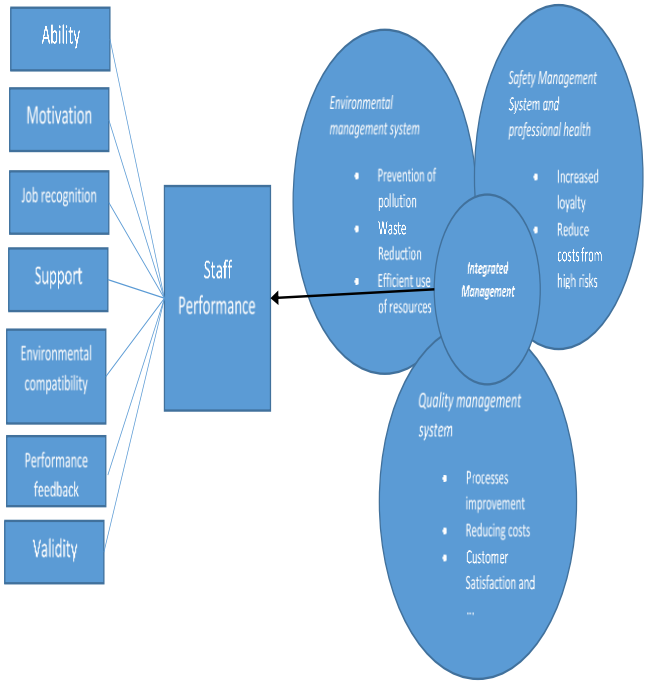


**Figure 1: research's conceptual framework**

*Figure 1: Black (1998); Picard (1998); Goldsmith (1980)*

**Methodology**

This study outlines the current condition without the intervention of the researcher's opinion and, and it uses the questionnaire for collecting data, so this research is descriptive - surveying. In addition, it is a practical survey according to purpose, because it analyses the problems of a specific organization.

The statistic's society of this study is all employees of PMO organization- central headquarters who have bachelor degree or above. The employees' numbers is 329, so random sampling method is used. The sample size is determined by the limited sampling formula and sample size includes 178 individuals.

In this study, the library method was used for gathering the context in the literature section and field methods were used for collecting data to confirm or refute the hypotheses, furthermore, the tool for data gathering was questionnaire.

In this study, a standard questionnaires included study's variables, beside experts' ideas and opinions in PMO were used. To test the validity, Cronbach's alpha coefficient was used and double ratios test was used to verify the reliability.

**Results**

To survey the study's hypothesis, linear regression was used and the hypotheses are mentioned below.

$H_0$: Integrated Management System does not have impact on the performance of PMO's staff -central headquarter.

$H_1$: Integrated Management System has an effect on the performance of PMO's staff -central headquarter.

According to the "Durbin-Watson statistic test" (2.232) which obtained at the distance of 1.5 – 2.5, the hypothesis of "No Correlation between Errors" was not rejected , so using the regression was possible. In addition, according to value of F test and its meaningfulness with a confidence level of 95%, regression equation has been valid and the results were available to analyze. Also, results indicate that regression remains were normally distributed

*Table 1: Regression coefficient*

| Variable | B | Standard error | BETA | t | Meaningfulness rate |
|---|---|---|---|---|---|
| **Fix number** | *0.907* | *0.185* | - | *4.893* | *0.000* |
| **Integrated management system** | *0.734* | *0.165* | *.0649* | *11.225* | *0.000* |

Ultimately according to table 1, it is considered that the meaningful level of the variable of integrated management system (0.000) is less than 0.05 (=0.05$\boldsymbol{\alpha}$ and sig<0.05); as a result the variable enters in regression model. Hence, integrated management system effects on the staff performance of PMO. According to beta coefficient, it can be said that integrated management system has a direct, positive impact on staff Performance.

**The effect of integrated management system on subsystems**

Variable factors of integrated management system include: quality management system, environmental management system and occupational health and safety management system. To determine the factor which has most powerful impact on the staff performance, "Multiple Linear Regression" has been used. As a result, according to the table 2, it is considered that the meaningful levels of the variables of quality management system and occupational health and safety management system (0.000) are less than 0.05 (α=0.05 and sig<0.05), so these variables enter into the regression model. Thus, quality management system and occupational health and safety management system impact on staff

performance in PMO. According to Beta coefficient, it can be said that they have a direct and meaningful effect on staff performance. Therefore, according to standardized Beta coefficient, it can be said that quality management system has more effect on staff performance rather than occupational health and safety management system.

The meaningful level of environmental management system is 0.102, more than 0.05; therefore, this variable does not enter into regression model. therefore, when three variables of quality management system, environmental management system and occupational health and safety management system simultaneously examined, the most effective variable is quality management system; however, environmental management system does not have any meaningful effect.The sixth hypothesis is approved, by the meaningful number, because it is more than 1.96 (4.73>1.96). Hence the Perceived value has a direct, meaningful effect on Satisfaction.

The seventh hypothesis is approved, by the meaningful number, because it is more than 1.96 (8.24>1.96). Hence the Perceived value has a direct, meaningful effect on Loyalty.

The eighth hypothesis is approved, by the meaningful number, because it is more than 1.96 (12.37>1.96). Hence the trust has a direct, meaningful effect on Loyalty.

The ninth hypothesis is approved, by the meaningful number, because it is more than 1.96 (6.63>1.96). Hence the Loyalty has a direct, meaningful effect on repurchase intention.

The tenth hypothesis is approved, by the meaningful number, because it is more than 1.96 (15.12>1.96). Hence the Loyalty has a direct, meaningful effect on word of mouth.

The eleventh hypothesis is approved, by the meaningful number, because it is more than 1.96 (8.38>1.96). Hence the Loyalty has a direct, meaningful effect on pay more.

***Table 2: Regression rate test***

| Variable | B | Standard error | BETA | t | Meaningful rate |
|---|---|---|---|---|---|
| **Fix number** | *0.466* | *0.2* | *-* | *2.337* | *0.021* |
| **Quality management system** | *0.475* | *0.076* | *0.405* | *6.215* | *0.000* |
| **environmental management system** | *0.101* | *0.062* | *0.116* | *1.644* | *0.102* |
| **occupational health and safety management system** | *0* | | *9* | *1* | |

**Conclusion**

According to the organizational functionality model, sustainable competitive advantage for any organization is achieved by its staff (Hull, 2010:264). The expected product or output of human resource improvement system, is increasing vision, knowledge and ability of the staff who are working in an organization (Mirsepasi; 2001:219). Staff evaluation is done to assess the relative amount of vision, expertise, knowledge and strive of the staff and improvement of these abilities (Mirsepasi; 2000, 244). According to mentioned content, integration in an organization can be an advantage and this conclusion can be achieved that having an approach to integration in managerial system in an organization can cause the improvement of staff performance of the organization. In addition, below suggestion are presented regarding to this study's results:

1- According to the quality management system's factor and index of agility and process improvement, the reasons of duplication and parallel works be considered; and measures taken to resolve them. In addition, it is suggested that senior managers support long-term process merely to improve performances.
2- According to the quality management system and the index of customers' satisfaction, some programs must be implemented to increase international customers' satisfaction and improve the services equal to global standards.
3- According to the environmental management system and the index of optimize use of natural resources, it is suggested to make proper plans to reduce energy consumption; and regarding to implementation of using "Paperless program", it is offered to conduct other plans to reduce the consumption of natural resources.
4- According to the occupational health and safety management system and index of reducing the cost of risk, the situation of this organization was suitable and it is suggested to hold more educational courses for working groups; and use more proper equipment and tool rather than before in the organization.
5- According to the factor of performance with index of ability, it is suggested that the objectives and strategies of the organization to be explained better and more convenient for staff, and increase staff's awareness in this area. Alternatively, with supportive policies by the managers to staff, suitable background be available for maximum use of capacity.
6- According to the factor of performance with index of feedback, it is suggested that the organization provides more consistent and regular programs to present proper feedback to staff about their successful or unsuccessful performances; and make

its staff familiar with methods of improving performance.

7- Based on the factor of performance with the index of validity, it is suggested that the organization takes measures to increase the staff trust to the organization, policies, and mangers' decisions, so, in light of this confidence, staff performance would be improved.

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