



## The Impact of Organizational Innovation on the Performance of Manufacturing Firms Through Innovation Capabilities in Process and Product

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### Abstract

Innovation is considered as a critical factor for organizations to create value and sustainable competitive advantage in today's complex and changing environment. Organizations with more innovation, in response to the changing environments and creating development of new capabilities will be more successful that allows them to achieve better performance. The aim of current study is to investigate the impact of organizational innovation on the performance of manufacturing firms in Rasht Industrials Park through innovation capabilities in process and product. This research paper is a kind of descriptive and correlation study. The statistical population includes all companies in the industrial city of Rasht ( $n = 157$ ). Simple random sampling method has been applied using SPSS 20 and warppls5 software in order to analyze acquired data. The results indicated that there is a positive relationship between organizational innovation and process innovation capabilities. There was also a positive relationship between organizational innovation and performance through process innovation capabilities. Also a positive relationship between product innovation and company performance and a positive relationship between organizational innovation and performance through product innovation capabilities were observed.

### Keywords:

organizational innovation  
product innovation  
process innovation  
performance

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## INTRODUCTION

Organizational innovation is very important because it can provide sustainable competitive advantage (Weerawardena et al., 2009). Most of organizations are facing with abundant competitive problems in their environment, and such problems are because of rapid changes in the environment, especially technological changes. In this regard, managers and employees have to use the power of creativity and innovation in order to adapt and keep pace with rapid changes, product lines, management practices and production processes (Hazlett et al., 2005).

In the new business environment which is characterized by turbulence and the increasing complexity, the ability of a company to establish and maintain competitive advantages lies in its knowledge (Elahi, 2014). In today's world, adaptability changes management is identifies as the main factor of success and survival of any organization, and acquiring these capabilities requires the organization's attention to creativity and innovation of individuals. Successful organizations are organizations whose creativity and innovation make up the tip of their movement (Tabarsa & Dori, 2014). In other words, today's organizations must be dynamic and their managers and staff should be creative and innovative in order to adapt the organization to these evolutions and to meet the needs of society if they want to survive. It can be uttered that in current global economic system and increasing competition, creativity and innovation are considered to be the key of survival and success of the organizations (Luis, 2015). Performance is defined as the effectiveness of marketing activities of organizations, and is evaluated with issues such as pursuit of customer satisfaction, creating value for cus-

tomers, retain customers and achieve optimal market share. In general, a market-oriented organizational culture has an indirect effect on performance. Performance appraisal is one of the most important agendas of management; because it is the key to continuous improvement in the ability to evaluate and continuously evaluation of the organization's performance. Many organizations have realized the importance of continuous evaluation and use various performance appraisal systems (Shaemi, 2013). The current study tests separate effects of the process and product innovation capabilities on the performance of the firm. The question that arises is whether organizational innovation influences firms' performance regarding innovation capabilities in product and process?

## THEORETICAL FRAMEWORK

The conceptual model of the research and its components has been presented in this section. As you perceive, in this model independent variable is organizational innovation and dependent variable is performance of the firm. Mediator variable is considered to be the process innovation capabilities and product innovation. Its aim is to investigate the impact of organizational innovation through innovation capabilities in process and product on the performance of manufacturing firms in Rasht Industrial Park. There was also a positive relationship between organizational innovation and performance through process innovation capabilities. Also a positive relationship between product innovation and company performance and a positive relationship between organizational innovation and performance through product innovation capabilities were observed.

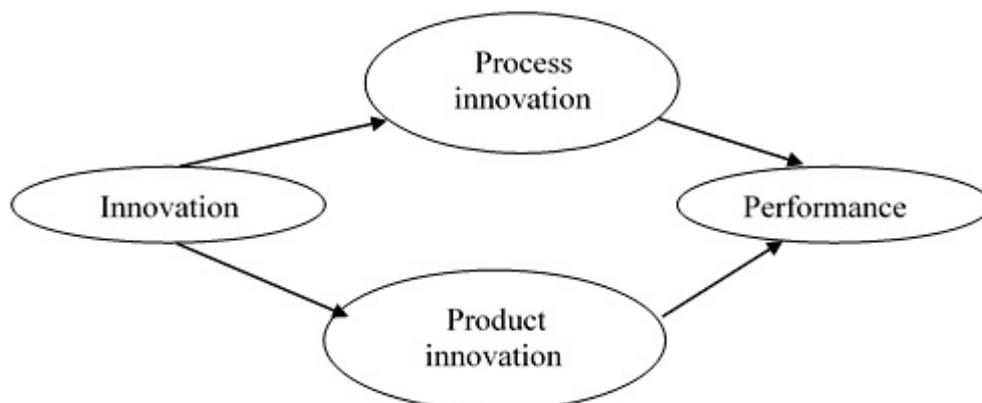


Fig.1. The conceptual model (Camisón and Villar-López, 2014)

## RESEARCH HYPOTHESES

1. There is a positive relationship between organizational innovations and process innovation capabilities in manufacturing companies in Rasht Industrial Park.

2. There is a positive relationship between organizational innovations and corporate performance in manufacturing companies in Rasht Industrial Park.

3. There is a positive relationship between product innovation capabilities and performance in manufacturing companies in Rasht Industrial Park.

4. There is a positive relationship between process innovation capabilities and performance in manufacturing companies in Rasht Industrial Park.

## LITERATURE REVIEW

Seyyed Javadin (2015) has investigated the effects of high commitment work system on knowledge sharing and organizational innovation. This research has been conducted aiming at investigation of the relationship between high commitment work system and organizational innovation. The present study is identified as an applied research and in terms of data collection method is descriptive-co-relational. Simaran enterprise knowledge workers were selected as the population of this study. According to findings of the research, high-commitment system both directly and through a mediator variable of perceived organizational trust will have a significant and positive impact on knowledge sharing. Results also indicated that knowledge sharing has a significant and positive impact on innovation.

Elahi (2014) has investigated the impact of process capabilities of knowledge management on performance of innovation through the mediating effect of process of innovation in high-tech organizations. The main objective of this study was to investigate the effect of process capabilities of knowledge management on innovation performance through the mediating effect of innovation in high-tech organizations. The research method is descriptive survey. The population of the research is 285 unit of research and development of high-tech companies in Tehran. Findings confirmed the two hypotheses of significant effects of process capabilities of knowledge man-

agement on the innovation process and innovation performance. But the hypothesis of significant impact of the innovation process on innovation performance and naturally indirect effect of process capabilities of knowledge management on innovation performance were not approved.

Baversad and Delavaripour (2014) investigated the relationship between innovation, organizational learning and organizational performance. The aim of this research paper was to examine the relationship between three variables of innovation, organizational learning and organizational performance. Findings indicated that both variables of organizational learning and innovation positively contribute to the efficiency of business environment and that innovation influences organizational learning. One of the findings of this study indicated that the age of company modified this relationship.

Jafari (2014) surveyed the impact of organizational innovation on product innovation, innovative performance and market of the company. The aim of this study was to examine the impact of organizational innovation on product innovation, market performance and innovative performance of the companies. Findings indicated that organizational innovation has significant impact on product innovation, market performance and innovative performance of the company.

Leal-Rodríguez et al. (2014) investigated lack of organizational learning, efficiency of innovation, and performance. The population of the research was 145 companies from the sector of manufacturing automotive components in Spain. The model of structural equations and the tool of PROCESS were used in order to analyze the data. The results indicated that efficiency of innovation is partly due to the effect of lack of organizational learning on the overall performance of the firm, and that the size of the company would negatively influence this indirect effect.

Nieves (2014) studied the knowledge-based resources and innovation in the service industries. This paper aims to present empirical evidences about the role that knowledge-based resources play in determining innovation activities in hospitality tourism companies. Data from 109 hoteling companies in Spain suggest that intangible assets as an explanation of the innovation of the

company should be put in attention. The results indicated that there is no statistically significant difference for each variable.

Moustaghfir (2013) conducted a survey of the relationship between learning and innovation and performance in the organizational level. This paper was analyzed based on a comprehensive analysis of management literature regarding the nature, role and relevance of knowledge. Findings suggest that innovation and organizational learning has a positive and significant relationship with the firm's performance.

Tajeddini (2012) studied the impact of organizational culture, strategic orientation and innovation on product performance in Malaysian firms. The aim of this study was to evaluate the impact of organizational culture, strategic orientation and innovation on product performance in large and small companies. The population was 65 large and small manufacturing companies in Malaysia, and structural equation modeling were used in order to analyze the collected data. The results indicated that increased innovation has a positive and meaningful effect on the firm's performance.

Keskin, (2010) examined the impact of inno-

vation capabilities on the organization's performance. The aim of this research paper was to investigate the effect of innovation capabilities on organization's performance. Data were collected from 246 middle and senior managers in Turkey, and were studied by multiple regression analysis. The findings indicated that innovation has an impact on organizational performance.

### METHODOLOGY POPULATION AND DATA ANALYSIS

The present research paper is descriptive of correlational type. The population included all companies in the industrial Park of Rasht (n = 157), and simple random sampling method was used. In this study, descriptive statistics and inferential statistical methods were used to analyze the collected data. In fact, at first by using SPSS 20 each variable was described in the form of statistical Tables and indicators. And then in order to analyze the data, hypothesis testing, and in total in order to generalize the results of the sample to the whole population structural equation modeling (based on partial least squares PLS) was used.

Table1: Cronbach's alpha

Row	Variable	Number of questions	Cronbach's alpha
1	Organizational Innovation	6	0.879
2	Product innovation	5	0.864
3	Innovation process	10	0.860
4	company's performance	5	0.815

Table2: Description of variables

	Number	Min	Max	Mean	SD	Variance
Organizational Innovation	60	2	4.33	3.3016	0.5037	0.254
Product innovation	60	2.2	5	3.5429	0.75519	0.57
Innovation process	60	2.56	4.56	3.4471	0.50142	0.251
company's performance	60	2	4.6	3.481	0.58778	0.345

Table3: Kolmogorov-Smirnov test One-Sample Kolmogorov-Smirnov Test

		Organizational Innovation	Product innovation	Innovation process	company's performance
<b>N</b>		60	60	60	60
<b>Normal Parameters<sup>a,b</sup></b>	<b>Mean</b>	3.3016	3.5429	3.4471	3.4810
	<b>Std. Deviation</b>	.50370	.75519	.50142	.58778
<b>Most Extreme Differences</b>	<b>Absolute</b>	.084	.109	.081	.102
	<b>Positive</b>	.082	.105	.081	.102
	<b>Negative</b>	-.084	-.109	-.074	-.088
<b>Kolmogorov-Smirnov Z</b>		.546	.709	.528	.664
<b>Asymp. Sig. (2-tailed)</b>		.927	.696	.943	.771

a. Test distribution is Normal.

b. Calculated from data.

## HYPOTHESES TESTING

Table4: Hypotheses testing

Path	Indirect effect	Sig
Organizational Innovation → Innovation process → performance	0.34	0.001>
Organizational Innovation → Innovation process → performance	0.16	0.001>

## CONCLUSIONS

After data analysis and hypothesis testing and research findings, the following results can be achieved.

Regarding the model it is observed that a significant level corresponding to the significant relationship between organizational innovations and process innovation capabilities is significant and is less than 0.05. Thus, the research hypothesis is accepted. Also, the relationship between organizational innovations with process innovation capabilities in manufacturing companies of Rasht Industrial Park is 0.71.

Regarding the confirmation of the routes of the organizational innovation with process innovation capabilities and process innovation capabilities with organizational performance it can be inferred that there is positive relationship between organizational innovation and performance through the process innovation capabilities in manufacturing companies of Rasht Industrial Park, that considering the results of the route analysis is 0.34.

Regarding the model it is observed that significant level corresponding to a significant relation-

ship between product innovations and performance is significant and is less than 0.05. Thus, the research hypothesis is accepted. Also, the relationship between product innovation and performance in manufacturing companies of Rasht Industrial Park is 0.26.

Regarding the confirmation of organizational innovation routes with product innovation of the organization and product innovation capabilities with organizational performance it can be concluded that there is positive relationship between organizational innovation and performance through product innovation capabilities in manufacturing companies of Rasht industrial Park, that considering the results of the route analysis is 0.16.

Generally, the results showed a significant relationship between organizational innovation and process innovation capabilities. And there is a positive relationship between organizational innovation and performance through process innovation capabilities. A significant relationship was observed between product innovation and company performance. And a positive relationship be-

tween organizational innovation and performance through product innovation capabilities were observed.

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