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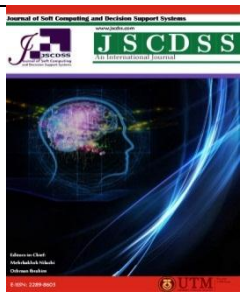

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Investigating a New Framework for the Impact of Knowledge Management Strategy on Organizational Performance

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Abstract

Understanding the relations between knowledge management strategy with organizational innovation capability and performance in both large and small firms is relevant for researchers, policy-makers and managers of large and small companies alike. Many organizations have begun to recognize that one of the main factors to building a capable of being sustained competitive advantages in knowledge economy is innovation capability. In spite of this fact, determining the innovation capability has viewed as an exclusive method, a theoretic and plenary. The studies about the effect of internal and external innovation drivers on organizational performance are few. This research addresses the deficiency of the experimental researches through development of a conceptual framework to inquire the influence of knowledge management strategy on organizational performance directly and through innovation capability assuming industry type as a moderator on the proposed relationships. A quantitative method was used to investigating the relationships lanes. A self-administered questionnaire was used for collecting data of 272 automotive companies as a sample of 849 companies in automation sector in Iran. Hypothesized relations were assessed by Structural Equation Modelling (SEM) with Smart-PLS software. The result of analysis exposed the significant relation among knowledge management strategy and firm outcome. Besides that, the results disclosed that knowledge management strategy through the mediating variable of innovation capability has a positive effect on organizational performance. Furthermore, the results of Multi-Group Analysis (MGA) confirmed that industry type moderating the relationship between knowledge management strategies and organizational innovation capability is moderated by industry type. This research used both resource- and knowledge-based theory developing a new conceptual framework to prove clearly the importance of knowledge management strategy and innovation capability in improving organizational outcome. Furthermore, this paper is providing a new guide line to implement knowledge management effectively.

Keywords: Knowledge management strategy (KMS), Organizational innovation capability (OIC), Organizational performance (OP), Industry type

1. Introduction

Automaker companies need to meet requirements and interest of their customer by providing innovative product. This industry which is heavily dependent on its suppliers, capability to innovation, and providing innovative products is a clear necessity. According to the reports of the Iranian parliament, the judicial authorities and national media such as television and newspapers, there are frequent complaints about the lack of innovative products among Iranian automakers companies. This issue which originated from a non-competitive business environment created by protective tariffs collectively caused frequent and successive delays in the growth and development of the industry. Moreover, potential customers are not enthusiastic to buy the companies' products. According to Iranian scholars and practitioner in automotive industry one reason for the inability is failure to effectively execute knowledge management in their supply chain especially among their suppliers. One of the crucial factor that influence on effectiveness of knowledge management program is an appropriate strategy for it execution. Nevertheless, organizations don't have any strategic approach to establish and implement knowledge management program (Ariss, 2014). Nevertheless, It is important for companies to know that investment in knowledge management could enhance their innovation capability and performance (Vrontis and Thrassou, 2013). Previous scholars have counted a little weight to knowledge management strategy (KMS) in the investigating knowledge management (KM) program on

innovation capability and performance (Choi *et al.*, 2011). Moreover, they did not provide any scholarly evidence on the effect of intra-industry effect on the effectiveness of KM program in the different sectors of the same industry that according to Sanchez and Hence (2012) have remained largely unexplored. Because, in the manufacturing industry, production process determines its human resource attribute. In some of the sectors, physical features of individuals are preferred over educational qualification. Execution of KM program requires educated people as a result of enjoying some technical tools. Accordingly, it is expected that the effectiveness of a specific KM Program may not be similar for firms operating across the industry. To have a better understanding on the effectiveness of the KM program on the companies in different sectors of the industry, it seems to be necessary to consider intra- industry effects and its role on the effectiveness of the KM program. Consequently, the main objective in present research is investigating influence of KMS on organizational performance (OP), directly and through organizational innovation performance (OIC). This study adopts a comprehensive approach to KMS (codification, personalization) as well as multi-dimensional approach to OIC drivers trying to develop and test a new platform to improve OIC and OP in the automotive industry. The present study attempts to investigate these research questions as follows:

- To what extent KMS influence on OP?
- To what extent KMS influence on OIC?
- To what extent OIC influence on OP?
- Does industry type moderate the relation between KMS and OP?
- Does industry type moderate the relation between KMS and OIC?
- Does industry type moderate the relation between OIC and OP?
- Does OIC mediate the relationship between KMS and OP?

2. Literature review

2.1 Knowledge Management Strategies

Knowledge management strategy refers to an organization's effort to gain a competitive advantage by capturing and using the intellectual assets held by its employees and customers. As knowledge is one of the most strategic sources that can enable organization to gain sustained increasing in profitability knowledge management is crucial (Choi and Lee, 2002). Many firms are expecting that managing their knowledge is carried out efficiently because of influence and change the knowledge into sustained competitive advantages. Kamara *et al.* (2002) stated that knowledge management strategy is required for facilitating knowledge management enablers; they determined how to use knowledge as a resource and capability (Beckman, 1999; Zack, 1999). Knowledge management strategy is defined as the method that a firm aims to use for aligning the knowledge resources and its competencies to the knowledgeable necessities of its strategies, so reduction the gap of knowledge that exists among the knowledge a firm have to have for execute strategies and the knowledge is exist in it (Zack, 1999). Another description of this strategy is offered by Bierly and Daly (2002) who stated that knowledge management strategy is a collection of strategic selections and ways that address creating knowledge in a firm. These two definitions contain the facilities of knowledge management obviously through an explicit strategy of knowledge. Organizations during managing tacit and explicit knowledge have to have a universal and constant road map and different ways for implementing knowledge management system. The overall the firm have to distribute a common knowledge management orientation because knowledge management is main factor to their capability to growing and competing (Salojärvi *et al.*, 2005). Review of significant contributions (Table 1) explains a well cognition of the concept and implications of knowledge management strategies. A crucial factor in knowledge management is that in firms should be observed the balance among the knowledge creating, knowledge discovery, and knowledge acquiring and knowledge purification, knowledge recycle, and to centralize the productivity of managing the resources of knowledge (March, 1991). Bierly and Chakrabarti (1996) categorized organizations based on the method they manage their knowledge. They explained that more aggressive knowledge management strategies, performed by more innovative firms, cause higher financial performance. In a same way, Zack (1999) offered two strategy orientations: conservative strategy against aggressive strategy. Hansen *et al.* (1999) typology of knowledge management strategies differentiate between knowledge personalization and knowledge codification. Based on this taxonomy personalization strategy is related to explicit knowledge, and codification strategy is related to tacit knowledge (Martini and Pellegrini, 2005). The firms that follow codification strategy exploit their knowledge from individuals. The personalization strategy emphasizes on discussion among employees as shown in Table 2 The present study is according to knowledge management strategy taxonomy that presented by Hansen *et al.* (1999). Because, firstly, the study has been cited 5045 times by July 2015 and many scholars used it for their studies in knowledge management area. Second, it contains former significant typologies (i.e. exploring versus exploiting presented by March (1991)). In addition human-oriented versus system-oriented presented by Choi and Lee (2003). Thirdly, the conceptions of personalization and codification strategy in managing knowledge are easy to understanding by researchers and practitioners.

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Table 1
Knowledge Management Strategies

Row	Author	System-oriented	Human-oriented
1	Hansen *et al.* (1999)	Codification	Personalization
2	March (1991)	Exploitation	Exploration
3	Bierly and Chakrabarti (1996)	Exploiters	Innovators, Explorers
4	Jordan and Jones (1997)	Explicit-oriented	Tacit-oriented
5	Zack (2002)	Conservative	Aggressive
6	Choi and Lee (2003)	Systems-oriented	Dynamic, human-oriented
7	Garavelli *et al.* (2004); Martini and Pellegrini (2005)	Market Community	Community Codification ; Network-based; Traditional
8	Mom *et al.* (2007)	Exploitation	Exploration
9	Moitra and Kumar (2007)	-	Socialization
10	Wu and Lin (2009)	Copier, continuous improver	Socialization Skill acquirer, innovator

Table 2
Codification and Personalization KM Strategies

No.		Codification	Personalization
1	Economic motivation	Knowledge reuse	New solutions and knowledge development
2	Knowledge managed	Explicit	Tacit
3	Focus	Person-to documents	Person-to-person
4	Use of IT	Heavy it investment: connecting people and reusable knowledge,	Moderate IT investment: facilitating dialogue and tacit knowledge sharing
5	Main tools	Decision support systems ; Document repositories; Knowledge maps Workflow ,Best practices databases	Mentoring Groups ,Videoconferencing ,Bellow pages, E-mail, Discussion forum
6	Human resources Management	E-learning, Rewarding the use of and contribution to databases	Mentoring, Rewarding knowledge sharing with others
7	Advantages	Economies of scale Time savings ,No need of reinventing the wheel , Quicker and wider access and distribution of knowledge	Improvements in clients image Management of unmodifiable knowledge
8	Disadvantages	High cost Codified knowledge loses richness	Unwillingness to share Inappropriate culture

Source: Adapted from Hansen *et al.* (1999), Alvesson and Kärreman (2001), Hansen and Haas (2001), Flanagin (2002) and Inuzuka and Nakamori (2004).

2.2 Codification strategy

Codification strategy has defined as to extract the explicit knowledge and storing in knowledge databases, for access and re-use by knowledge workers. The main objective of codification is increasing the security of employees knowledge and users by collection, classification, documentation, acquisition, and recording processes (Ajith Kumar and Ganesh, 2011; Greiner et al., 2007). This is demonstrated by researches on storage of knowledge/recovery (Goodman and Darr, 1998), managing-codified knowledge (Hansen and Haas, 2002), how persons interact with technology (Boh, 2005), and the role of IT and communication technology in knowledge management (Boland Jr et al., 1994). This study defines codification as acquisition and storage explicit knowledge in a centralized-knowledge repository (Boh, 2005; Walsham, 1995). Information technology supports this storage recovery and exploration of explicit knowledge by customers through the company at whenever. According to codification strategy, the customer does to contact to the knowledge creator, however may utilize the files and records. A codified technique has great width of audience, or one too many, i.e., one repository serves many consumers simultaneously. Whilst personalization strategy is related to the employees who develop the knowledge is shared via directly person-to-person communications.

2.3 Personalization strategy

Personalization strategy as a reuse system of knowledge transfer emphasizing the transfer of knowledge from people to people, who know each other, or at least know each other's identities. In personalization, communication during reuse is informally tailored to meet the needs of the recipient rather than formally recorded in a style intended to be accessible to anyone (Hansen and Haas, 2002). In this strategy employee-to-employee interaction can be arbitrated by IT tools such as e-mail, telephone, or web-meeting applications (Kankanhalli *et al.*, 2005). In personalization strategy communication between knowledge workers is interactive query, a conversation by as a minimum two person. During this interaction the opportunity cost of time is caused by the knowledge creator

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to responding process. According to Hansen *et al*. this strategy in the literature is called the network model, because interaction between knowledge workers is done in the communication network.

Table 3
Types of Knowledge Management Strategies

No	KMSs	Year
1	Codification	Runar Edvardsson (2008) ; Hansen *et al.* (1999) ; Maier (2013); Schulz and Jobe (2001) and Rhodes *et al.* (2008)
2	Personalization	Runar Edvardsson (2008) ; Hansen *et al.* (1999) ; Maier (2013); Schulz and Jobe (2001); Rhodes *et al.* (2008)
3	Cognitive model and community model	Swan *et al.* (2000)
4	Technocratic organizational and spatial	Earl (2001)
5	Codification and tacitness	Schulz and Jobe (2001)
6	Systems-oriented and human-oriented	Choi and Lee (2003); Lee and Choi (2003) and Ju *et al.* (2006)
7	Exploration and exploitation	Bierly and Daly (2007)

2.4 Organizational Innovation Capability

Innovation capability is defined the degree to which a firm possesses resources and capabilities presumed necessary for innovation (Hillman *et al.*, 2009). An organizational innovation capability may be explained at many different levels and from various perspectives (Olsson et al., 2010). Akman and Yilmaz (2008) defined it as a critical factor for develop an innovative organizational culture, the specifications of internal promoting processes, and contingency responding to the competitive environment. Innovation capability of an organization in addition may be defined as its capacity of progress innovations in reacting to a competitive market (Olsson *et al.*, 2010). Tuominen *et al.* (2004), propose two type of managerial innovation capability and technological innovation capability as entities of innovation capability. According to Martinez-Roman *et al.* (2011) company, knowledge and knowledge worker are elements of organizational innovation capability, this three elements have a managerial innovation perspective. In this paper, innovation capability is described as containing of some elements affecting abilities of a firm to managing innovation. As a result of literature review, these elements and determinants has recognized (Jarrar *et al.*, 2007; Laforet, 2011; Paalanen *et al.*, 2009; Saunila *et al.*, 2014; Tidd *et al.*, 2001). As Saunila and Ukko (2013) proposed, in this paper seven factors are considered as dimensions of organizational innovation capability, including: individual activity, knowledge regeneration, external knowledge, know-how development, participatory leadership culture, work climate and wellbeing, and ideation and organizing structure. Participatory leadership culture is considered as the activities and resultants that facilitates and enable innovation, made by managers. The last one refer to infrastructures and organisms which are the requirements of sustained and successful innovation. Development of knowledge and skills of knowledge workers is requested for development of innovation capability, this activity is gain by know-how. For achieving the overall organizational innovation capability, obtaining the external knowledge from external network is very important. Regeneration refers to ability of firms to learn from earlier experience and usage experience in order to create innovations and to develop their processes. Also employees' individual activity in developing innovations is requested to form the organization's overall innovation capability. Table 4 demonstrated different definition of the innovation capability.

2.4 Organizational Performance

Business organizations are facing a competitive and complex environment than ever before. An individual firm alone cannot guarantee the business success, but it also requires the supplying organizations and chain of delivering. The performance of an organization is reflected in the actual organizational output when compared with the intended organizational outputs, goals, or objectives. There are few consistent definitions and measures of organizations' performance, which is surprising given its importance in evaluating the effectiveness of firms' strategies and competitiveness (Kirby, 2005). Sources of competitive advantage, according to recourse based view (RBV), instigate with the concept that firm resources might be immobile and heterogeneous (Barney, 1991). Basically the variability in performance is owing to the unique capabilities and resources that are non-substitutable, inimitable, rare and valuable (Barney, 1991; Wernerfelt and Montgomery, 1988). Furthermore, competitive advantage of a firm can be continued only when it implements a strategy that cannot simply be replicated by its competitors (Barney, 1991). For a firm, how to control resources in sustaining and creating competitive advantage has gained a central attention of marketing scholars who associate numerous types of market-based assets (Srivastava *et al.*, 1998, 1999) and capabilities (Day, 1994) with the ultimate firm's performance (Hunt and Morgan, 1995; Srivastava *et al.*, 2001; Wu *et al.*, 2006).The performance concept along with its role in organizational effectiveness for a long time still remains one of the thorniest issues to academics as well as to business practitioners (Ravichandran *et al.*, 2009). Consistency in the definition and operationalization performance has eluded researchers for a long time (Kirby, 2005). The literature on research addressing this issue is increasing while concurrently becoming divergent, thus

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diminishing the chances of consensus on the basic terminology and definitions (Richard *et al.*, 2009). However, there is an agreement that business performance (in this study, business, firm and organizational performance are used interchangeably) is affected by the strategies and operations in the market and non-market environments (Orlitzky *et al.*, 2003). Performance is an extensively recognized notion in numerous areas. Performance is generally a measure of the extent to which a process/mechanism accomplishes its purpose. Moullin (2007), describes a performance of organization in enterprise management as "the value the organization delivers to customers and other stakeholders" and "how well the organization is managed. The delivery time and dependability to market as performance measures was used by Wang *et al.* (2005), whereas firm performance demarcated by profitability, market share growth and sales growth are employed in other researches (Narasimhan and Kim, 2002; Narasimhan and Talluri, 2009).There have been countless definitions of organizational performance, with some studies stressing financial measures, whereas others emphasizing operational measures. For example, DeGroote (2011) used two types of performances such as financial performance and operational performance. He mentioned that financial performance consists of sale, market share and profitability while operational performance consists of speed to market and customer satisfaction. In order to imitate overall organizational performance, various studies have nominated a combination of relevant financial and operational measures. Vereecke and Muylle (2006), for instance, used factor analysis to evolve five constituents of performance connected to quality, delivery, procurement, flexibility and cost. Through four distinct dimensions, (Tracey *et al.*, 2005) measured performance, including financial performance, perceived value, market performance and customer loyalty. Likewise, Tan *et al.* (2002) used six items for performance comprising average selling price, product quality, return on assets, customer service, market share and competitive position. In order to evaluate the financial performance of the purchasing firm, hen used buyer and supplier performance. Vickery *et al.* (2003), as the performance constructs, used customer service performance subsequent to financial performance. Lastly, Jin (2006) operational performance through three lines of performance measures: financial, operational and strategic. Financial performance is measured through return on sales and return on investments, operational performance is assessed by lead-time performance and strategic performance is evaluated by sales growth and market share. Tan *et al.* (2002), for example, suggested that owing to a lack of agreement with respect to a valid cross-industry estimate of corporate performance, management's perceptions of a firm's performance in contrast to that of major competitors can operationalize the performance. This study focuses on financial and non-financial performance to dimensionalize organizational performance.

Table 4
Definition of Innovation Capability

Author (Year)	Definition of Innovation Capability
Francis and Bessant (2005)	An organizational property that underpins an ample flow of multiple, value-creating and novel initiatives.
Akman and Yilmaz (2008)	An important factor that facilitates an innovative organizational culture, capabilities of understanding and responding to the external environment and characteristics of internal promoting activities
Elmquist and Le Masson (2009)	Consists in generating new ideas and knowledge to take advantage of market opportunities.
Malaysia Productivity Corporation (2009)	The capability to generate new ideas which lead to higher performance, create new opportunities, increase future capacity, technological leadership as well as increased knowledge base through managing technological changes.
Wonglimpiyarat (2010)	The ability to make major improvements and modifications to existing technologies, and to create new technologies
Laforet (2011)	Availability of resources, collaborative structure and process to solve problems
Withers *et al.* (2011)	The degree to which a firm possesses resources and capabilities presumed necessary for innovation
Ngah and Ibrahim (2011)	A firm's ability to generate knowledge in the form of intellectual property such as a pattern

2.5 Conceptual Framework of the Study

The purpose of this study is to investigate the effect of Knowledge management strategy on organizational performance directly and through mediating variable innovation capability considering moderation impact of industry type on relationships among knowledge management strategy, innovation capability, and organizational outcome. The study by integrating explicit-oriented with tacit-oriented of knowledge management strategies seeks to provide a sustainable way to improve organizational innovation capability and performance. In the study personalization and codification are adopted as two dimensions of knowledge management strategy. Moreover, seven variables namely, culture of participating leadership, ideational and establishing structure, climate of work, developing know-how, knowledge regeneration, knowledge from external sources, and personal activ[illegible] have been accepted as dimensions of organizatio[illegible] innovation capability. Finally, financial and non- financial performances have been accepted as dimensions of organizational performance. Knowledge-based and resource-based theories have assumed as key conceptual frame to explain and interpret the proposed relations in the conceptual framework. Consequently, based on this clarification, the conceptual framework is shown in Fig. 1.

H1

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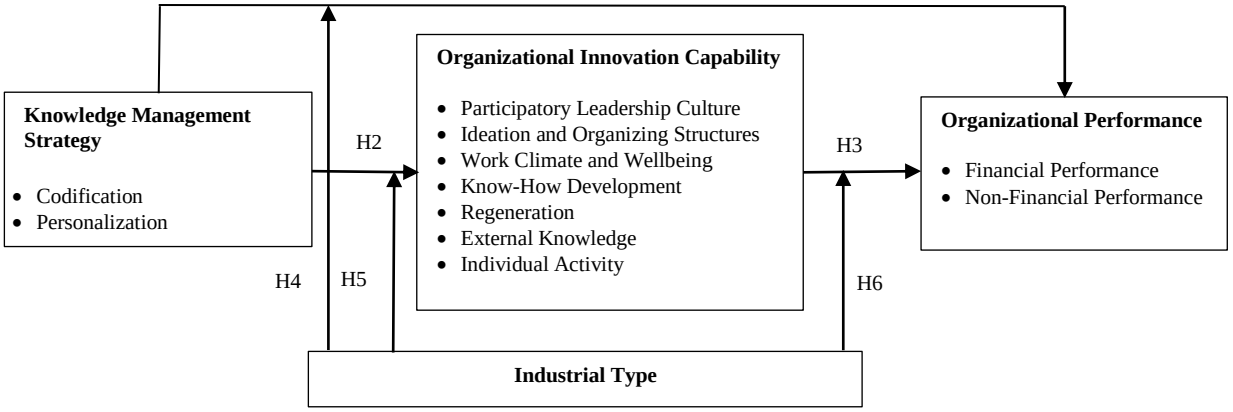

Fig. 1 Conceptual Framework of this study

2.6 Developing the Hypotheses

2.6.1 The Relationship between KMS and OP

Bierly and Chakrabarti (1996) suggested that KMS has a main role in enhancing the organizational performance from perspective of the knowledge-based theory. Moreover, the researchers publicized that only personalization strategy has a positive related to organizational performance. In the similarity way, Choi *et al.* (2008) state the deficiency of practical researches investigative the relation among KMS and organizational performance. They inquire effects of two dimensions of knowledge management strategies namely explicit-oriented as well as tacit-oriented on organizational performance. The results confirmed a positive and significant relationship between two aforementioned variables and organizational performance. They proposed the additional necessity for additional empirical researches. Also, Keskin (2005) has examined the relations of knowledge management strategies with organizational performance from perspective of the knowledge-based theory. They divided knowledge management strategies into explicit-oriented and tacit-oriented strategies. The results indicated that knowledge management strategies have a significant and positive effect on organizational performance. Moreover, the results verified that effect of knowledge management strategies on organizational performance is higher in organizations with the explicit-oriented strategy than the tacit-oriented one. In addition, Choi suggested that the system-oriented strategy and human-oriented strategy are considered as two main elements in sustaining a high organizational performance. Yu *et al.* (2006) explained the relationship between KMS, containing the codification strategy and personalization strategy with organizational performance. The results found that codification strategy has a significant and positive effect on organizational performance while personalization strategy has a significant and negative effect on organizational performance. Moreover, they suggested that future researcher should consider more variables in the relationship between knowledge management strategies and organizational performance. Nevertheless several empirical researches have examined the relationship between knowledge management strategies and organizational performance, the consequences to date remains uncharted. To bring some more scholarly evidence on the relationship between knowledge management strategy and organizational performance, the following hypothesis is formulated:

H1: There is a positive and significant relationship between KMS and OP.

2.7.2 *The Relationship between KMS and Innovation Capability*

Knowledge management strategy is explained as the processes of gaining and gathering, codification and transferring both explicit and tacit knowledge between knowledge workers in the right place and at the right time in order to survive in the changeable and competitive environment. Organizations need an appropriate KMS to effectively implement knowledge management programs. The coordination between KMS and total strategy of organization is necessary for an effective organizational innovation capability (Akman and Yilmaz, 2008). The knowledge management strategy determines the ways that a firm formulates, implements and monitors its knowledge management process (Cohen and Cyert, 1973). A comfortable strategy involves an efficient framework to make sure that knowledge management process is able to improve an organization's innovation capabilities (Saleh and Wang, 1993). The influence of knowledge management strategy on organization's innovation capability often depends on the internal collaboration among different functional departments (De Clercq *et al.*, 2009; Poon and MacPherson, 2005). An organization with more suitable innovation strategy may better be ready to implement, as well as, to adopt instruments and methods related to innovation processes (Nijssen and Frambach, 2000). In organizations it is possible to create further new

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ideas, to develop innovative methods and processes, and to utilize environment opportunities to increase market share by human capital motivating and enforcement (Scarbrough, 2003). To evaluate the effect of knowledge management strategy on organizational innovation capability the following hypothesis is proposed:

H2: knowledge management strategy is positively related to organizational innovation capability

2.7.3 The Relationship between Innovation Capability and OP

Innovation activities may result the new process of production, new products and services, and new administration services (Hult *et al.*, 2004). Because of considering the capability of innovation as a multidimensional concept, and by reason of diversity of aspects of managing innovation, researchers and scholars there is no communal way to study it (Perdomo-Ortiz *et al.*, 2006). Based on Neely *et al.* (2001) an organizational innovation capability is explained as innovation ability for produce innovative outcomes. Lawson and Samson (2001) have defined it by clear aspect as "the ability to incessantly metamorphose knowledge and ideas into new products, processes and systems for the benefit of the firm and its stakeholders". Furthermore, it differs firm by firm based on various elements (Silva *et al.*, 2012). The former researches on innovation capability field define it based on classification of various kinds of innovations. It have resulted that innovation focused firms are more productive than non-innovative ones and have greater economic growth. Ability to innovation is important significantly in for premier innovation outcome, for instance, the products with short life cycle and greater frequency of new products. To bring more empirically evidence about the positive effect of organization innovational on organizational performance the following hypothesis is articulated:

H3: The organization innovational capability is positively related to organizational performance.

2.7.4 Moderating Effect of Industry Type

Any type of industries needs to various resources in the form of structure and infrastructure. To have the potential for sustained competitive advantage, the resource-based theory proposes that a firm must have four attributes; (1) valuable resources; (2) rare resources; (3) imperfectly imitable resources; and (4) no substitutability of resources (Barney, 1991; Collis and Montgomery, 1995; Conner and Prahalad, 1996). In addition, the theory notes that physical resources are not on the list. Physical technology, even complex physical technology, is generally imitable. Knowledge management has become a crucial resource for innovation capability and competing in the automotive industry. The key for each individual firm to stay competitive is to make certain that its particular knowledge management system is distinctively fitted to its internal processes to maximize the efficient use of its specific resources. If a firm just have implemented knowledge management process and uses generic procedures it will not achieve a competitive advantage because in accordance with the resource-based theory, when the system can bring about competitive advantage that is uniquely tailored for the firm. Toget the maximum benefit of any knowledge management program the organization should focus on to effectively implement the system and continually improve its effectiveness. According to the knowledge-based theory, the effectiveness of the system depends on the degree to which an organization goes beyond the minimal requirements. Effective and superior implementation of the any knowledge management system, which includes some engineering techniques are dependent on resources. Based on the resource-based theory the structure of human resource in a specific company is consistent to the intrinsic features of the firms, that means the qualification of human resource will vary according to the nature of the industry (Barney, 1991; Lippman and Rumelt, 1982). There are studies that have examined the effect knowledge management elements on organizational performance among different business sectors of i.e., Service and manufacturing. Nevertheless, there are few studies that have examined the effect of the system on organizational performance through taking into consideration intra–industry effect. There are some limitations, i.e., Physical characteristic and working condition that makes it difficult for some firms to obtain required resources especially human resource. Therefore, the following hypotheses are developed to underline how following relationships are changed among sectors of the same industry.

H4: Industry type moderates the relationship between KMS and OP.
H5: Industry type moderates the relationship between KMS and OIC.
H6: Industry type moderates the relationship between OIC and OP.

2.7.5 The Mediation Effect of Organizational Innovation Capability

According to Teece *et al.* (1997) capability to creating innovative outcomes in a firm is the main source for sustained competitive advantages and determining firm success. Consistent with Thornhill (2006) and Varis and Littunen (2010) innovation capability has a positive impact on organizational outcome. In this vein scholars such as Rosenbusch *et al.* (2011); Ozmen and Deniz Eris (2012); Atalay *et al.* (2013) and Sok *et al.* (2013) claim innovation positively and significantly impact the organizational outcome. Based on Yetkiner (2012) innovation drivers (internal and external) are the most important factors that might affect innovation capability. Organizations which have superior drivers of innovation capability are more likely to have the potential for innovation and thus ability to better performance. According to Camisón and Villar-López (2014), innovation ability has a positive effect on

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process of innovation as well as innovation in products and services. Prahalad and Hamel (1990) explained that the firms focus on their competency improvement or capability improvements by developing their capacity of innovation are successful firms. Moreover, Kyläheiko *et al.* (2011) and Kim *et al.* (2012) claimed that organizational innovation drivers have positive relationship with organizational performance through organizational capability. Cohen and Levinthal (1990), enlighten that organization with superior innovation capability has more efficient and better chance to develop the ideas of new product development. In addition, Huang (2011) verified that innovation driver's affects innovation capability and thus the improve its performance. According to the aforementioned discussion, the relationship between internal innovation drivers' such as knowledge management strategy and organizational performance might mediate by organizational innovation capability. To examine the mediating effect of organizational innovation capability on the relationship between knowledge management strategy and process and organizational capability, the following hypotheses are formulated:

H7: The relationship between KMS and organizational performance is mediated by organizational innovation capability.

3 Research Methodology

In this study data was collected by use of self-administered questionnaires based on a methodology of quantitative survey in order to assess the constructs presented in the conceptual model (i.e. KMS, OIC and OP). By this questionnaire the multiple-items measures through 7-point Likert scale was used to measurement of variables, which accepted and adjusted utilized one. In this research, a pilot study was conducted before the main survey, because of making certain of wordage of it is comprehensible and reasonable, as well as the equivalency and face validity of measures are happened. The data were analyzed using firstly, the Statistical Package for Social Sciences (SPSS) version 22 for analyzing of the preliminary data and descriptive analyses. Secondly, the Structural Equation Modeling (SEM) using smart PLS for testing the measurement model by Confirmatory Factor Analysis (CFA). Two phases of assessing the measurement model and structural model was operated through SEM. The first phase was operated in two steps. These two steps involve assessing the unidimensionality, through assessing the constructs reliability and validity.

3.1 Scale Development

This section of the paper explains the selection of scale items that are utilized to measuring the variables in the conceptual framework. Knowledge management strategy with two dimensions namely personalization and codification; organizational innovation capability with seven dimensions namely, culture of participating leadership, ideational and establishing structure, climate of work, developing know-how, knowledge regeneration, knowledge from external sources, and personal activity, and organizational outcome with two dimensions namely financial performance and non-financial performance are the constructs of the study. All scales used have been adapted from studies with valid and reliable measures of corresponding constructs. Moreover, the scales have been developed from the reviewed literature that is presented in Table 5. In the original questionnaire, total 91 items are used to measure the constructs in the model.

3.2 Target Population

The target population refers to the group of people, units, or things that at least have the same characteristics. The target population of the study is 849 ISO/TS16949 certified companies part and component producer in the automotive industry in Iran (http://www.iso.org/iso/home.html) that based on the statistic of Iran Khodro (IKCO) are classified in three main groups, namely, metallic, electric and polymeric. These firms are located in a relatively broad geographic area across Iran.

3.3 Sample size

Sample size is an important task of any empirical study and the need to be sufficient. When the sample size is less than the determined size the outcomes do not meet the required reliability and validity (Hair *et al.*, 2012). In contrast, a sample size that is too large leads to unnecessary expenditure of time, effort and finance (Bryman, 2012). According to Kotrlik and Higgins (2001) and Israel (1992) scholars use numerous methods to specify the size of sample, include imitating the homogeneous researches, by use of published and valid table, and using formulas. In this study due to being large the population, imitating the sample size by census is not applicable. Therefore, in this study the published valid table (Morgan table) and formulas are used for determining the sample size. The sample size of the study on the basis of Cochran (1977) is 384. Moreover , the sample size of the study on the basis of Yamane (1967) criterion is 272. Furthermore, the sample size according to the Morgan table is 265. As can be seen, there are just little differences between sample sizes based on Morgan table and the sample size calculated by the formula that proposed by Yamane (1967). In addition, there is a huge difference between sample size determination by Morgan table and sample size calculation of Cochran's formula. In this research the greater sample size is selected rather than smaller one. Accordingly, the sample size for this study will be 272. Table 6 shows the distribution of the Sample size of the study based on the size and type of industry.

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Table 5
Total Number of Scale Items Used in this Study

Construct	Dimension	Items	
		No.	Source
Knowledge Management Strategy	Codification	5	Ajith Kumar and Ganesh (2011)
	Personalization	5	
Knowledge Management Process	Acquisition	12	Gold and Arvind Malhotra (2001)
	Conversion	10	
	Application	12	
	Protection	10	
Organizational Innovation Capability	Participatory Leadership culture	6	Saunila *et al.* (2014)
	Ideation and organizing structures	6	
	Work climate and wellbeing	5	
	Know-how development	3	
	Regeneration	3	
	External knowledge	3	
	Individual activity	3	
Organizational Performance	Financial performance	8	Kannabiran and Bhaumik, 2005; Khan and Pillania, 2008)
	Non-financial performance		
Total		91	

Table 6
Distribution of the Sample Size Based on the Size and Type of Industry

Sub - Sector	Distribution of Sample frame			Sampling size
	Small	Medium	Large	
Electric	33	28	20	81
Metallic	45	41	28	114
Polymer	29	24	24	77
Total	107	92	72	272

3.4 Data Collection

There are several types in collecting the data. Researcher should select the best way of collecting data to significantly boost the value of research because each with its own impacts (Sekaran and Bougie, 2013). In addition, data collections methods contain interview (face-to-face, telephone and electronic media), observation, projective test or questionnaire that is either personally or electronically administrated and a variety of other motivational techniques. This study relies on a self-administered questionnaire that is a set of questions for gathering data from individuals. This method has some advantages in obtaining data in terms of more efficient, time, cost and maintaining participants' privacy. Respondents of the study are business managers of the respondent companies, because they have full information about all of organizational processes.

4 Data analysis

4.1 Pilot Study

In pilot study the sample size is determined according to recommendations of literature. The sample size in pilot study, generally, is lesser, approximately till 100 samples. (Diamantopoulos and Siguaw, 2000) or between 10 to 30 (Malhotra *et al.*, 2000). In this study the sample size of pilot study was 30 respondents from 30 part and component producer company of automotive industry in Iran. Respondent rate of the pilot test was eighty percent.

4.2 Response Rate

This study was set up to comprehensively and theoretically examines the impact of knowledge management strategy on the aforementioned companies directly and through organizational innovation capability. Totally, 272 was returned from 350 questionnaires were distributed among target population and in sample companies, business managers were respondents of questionnaire.

4.3 Reliability of Pilot Test

To ensure that 'measures are free from the error and therefore yields consistent results', during process of purifying of constructs, reliability of questionnaires have to be measured (Peterson, 1994). Furthermore, in order to validate reinforcement of the scales by data, exploratory

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factor analysis (EFA) was conducted. In piloting test the overall reliability was α=0.812 or 81.2%. this indicator is greater than 70%, standard amount (Nunnally, 1978). Ranges of reliability of singular construct were from 70.7% to 95.2% (see table 7). Based on EFA, indicators of Kaiser-Mayer-Olkin (KMO) for all questionnaires was greater than 60% that endorsed (Kaiser, 1974). Based on results of test of Bartlett of Sphericity for total variables show that correlation indicator between items is greater than 30% and was appropriate for exploratory factor analysis (Hair, 2009). According to analysis of responses amount of sum up variance among constructs was greater than 0.60 (Hair, 2009).

Table 7
Cronbach's α Value of the Instruments

Variables	Number of Items	Cronbach's α	KMO	Bartlett's test Sphericity	Variance Explained
KMS	10	0.952	0.831	0.000	60.084
OIC	29	0.942	0.833	0.000	66.606
OP	8	0.819	0.848	0.000	66.661

4.4 validation of the Measurement Model

The SEM process contains two phases: validation of measurement model and fitness of structural model. The validation of measurement model, as the first phase of SEM process, was done principally via Confirmatory Factor Analysis (CFA), after that the test of fitness of structural model was done mainly by path analysis of latent variables. By measurement model researcher can examines reliability of observed variables. Observed variable measures the unobserved one. A weak or strong fitness of data is presented by measurement model, as well as unreliability of observed variables.

4.4.1 Measuring the Reliability of Item-Level

The first principle of measurement model appraisement is evaluating the interior steadiness the measurement of observed variables/items with each other. Specially, according to Gotz *et al*., item reliability is used for determine that latent variable how clarify variance of items. A general supposition being that utter correlation, for instance, standardized outer loadings should be greater than 50% that unobserved variable enlighten (Chin *et al.*, 2003). Nevertheless, value above 0.7 (Henseler and Fassott, 2010) and value no less than 0.4 (Churchill Jr, 1979) are suggested. Results on Table 8 displays the absolute correlation among construct and its items of measuring manifest, for example, factor loading was greater than 40%, the minimum threshold criterion. The factor loading have range between 0.663 and 0.927. Then fulfilled the requirements of the test of psychometric reliability (Churchill Jr, 1979; Henseler and Fassott, 2010).

4.4.2 Reliability Measurement (Construct-Level)

The reliability of construct-level ensures items that assigned to similar variables disclosed higher relationship with each other. Despite the fact, former reliability item calculated in individual-level was sufficient enough. As respects it is recommended observing reliability of constructs measured jointed by group of items inside the same construct (Bagozzi, 1984). In present research, reliability of construct level was examined using Cronbach's alpha and composite reliability. Where, Cronbach's alpha measured the one-dimensionality of multi-item scale's internal constancy (Cronbach, 1951). Also composite reliability measures if the constructs how well be measured by their determined items (Götz *et al.*, 2010). Table 8 shows that the Cronbach's alpha was higher than the required value of 0.6 (Cronbach, 1951) and composite reliability was higher than the recommended 0.7 value (Nunnally, 1978) .

4.4.3 Measuring the Convergent Validity

In general, the validity determines that to what extent a group of measurement item signifies the concepts of proposed conceptual framework (Hair *et al.*, 2012). Specially, convergent validity clarifies the correlations among answerers achieved by different ways signify the same constructs (Niedergassel, 2011). Convergent validity in this study was examined by AVE (average variance extracted). Table 8 presents the AVE that adapted for each construct, was greater than defined amount 0.5 (Fornell and Larcker, 1981).

Table 8
The Result of Convergent Validity

Variables	AVE	Cronbach's α	Composite Reliability
KMS	0.505	0.877	0.902
OIC	0.506	0.951	0.955
OP	0.512	0.863	0.893

4.4.4 Measuring the Discriminant Validity

Discriminant validity at construct-level was examined by means of Fornell and Larcker (1981) standard. This

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indicator at item-level was examined by means of Chin (1998) measures. Fornell and Larcker norm proposes that square-root of average variance extracted for every variable should be more than another correlation of construct with each other, for instance inter-construct correlation. As shown in Table 10 none of correlation of inter-construct amount is greater than square-root of AVE. Chin (1998) recommended examining the cross loading inside factor loading at item level discriminant validity. Table 9 approves that every measurement item related to constructs is greater than every one of its cross-loadings in column and row. Actually, every cross-loading was smaller than 0.4 that suggested by Hair *et al*., (2012).

Table 9
Measurement of Discriminant Validity

	KMS	OIC	OP
KMS10	0.609	0.406	0.441
KMS2	0.718	0.497	0.690
KMS3	0.752	0.591	0.405
KMS4	0.679	0.500	0.525
KMS5	0.707	0.534	0.551
KMS6	0.744	0.620	0.537
KMS7	0.719	0.689	0.532
KMS8	0.782	0.463	0.483
KMS9	0.673	0.485	0.501
OIC10	0.568	0.753	0.578
OIC11	0.550	0.730	0.562
OIC12	0.569	0.753	0.570
OIC13	0.591	0.772	0.550
OIC14	0.591	0.779	0.586
OIC15	0.579	0.665	0.564
OIC16	0.533	0.764	0.683
OIC17	0.584	0.742	0.655
OIC18	0.557	0.767	0.443
OIC21	0.524	0.695	0.500
OIC22	0.577	0.711	0.521
OIC23	0.567	0.674	0.575
OIC27	0.510	0.642	0.550
OIC28	0.484	0.686	0.590
OIC29	0.556	0.710	0.511
OIC4	0.515	0.571	0.420
OIC5	0.575	0.661	0.594
OIC6	0.565	0.630	0.373
OIC7	0.560	0.745	0.473
OIC8	0.609	0.712	0.653
OIC9	0.525	0.740	0.328
OP1	0.404	0.547	0.682
OP2	0.318	0.497	0.690
OP3	0.552	0.591	0.705
OP4	0.557	0.667	0.743
OP5	0.515	0.571	0.620
OP6	0.525	0.640	0.728
OP7	0.568	0.463	0.778

Table 10
The Results of Discriminant Validity

	KMS	OIC	OP
KMS	0.710		
OIC	0.390	0.711	
OP	0.149	0.216	0.715

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4.5 Structural Model Evaluation

Table 12 shows all path were significant. The relationship between KMS -> OP was the first hypothesis. The results indicated that KMS and OP are related positively and significantly (β = 0.335; t = 7.760) it implies KMS has direct effect on OP.The second hypothesis expressed the relationship between KMS -> OIC. The results of the hypothesis recognized a significant and positive relationship between to constructs (β = 0.790 ; t = 27.133). The third hypothesis suggests that the relationship between OIC -> OP. The results of the hypothesis publicized a positive and significant relationship between knowledge management strategy and organizational performance (β= 0.651 and t = 16.467). It is important to be noted that contrary to confirmative SEM models (e.g., LISREL), explorative PLS models still do not have such global indicators that would assess the overall goodness of fit of model. Then amount of global fitness (GoF) was calculated. The GoF is a geometric average of all communalities and R^2 in the model. The GoF is an index that can be used to validate models with PLS. The R^2 coefficients were 0.624 and, 0.881 for OIC and OP respectively that displays OIC and OP were explained 62.4 % and, 88.1 % of the variability in the performance results. Because of GoF> 0.5, the group of structural equations is well defined. Also it offers a correct demonstration of the dataset and validity. GoF for present framework is 0.618. In other words it may be considered as 61.8 % of the reachable fitness.

$$\textbf{GoF}= \sqrt{\overline{Communality} * R^2} \quad (1)$$

Table 11
GoF for the structural model without moderator

	Communality	R Square
KMS	0.505	
OIC	0.506	0.624
OP	0.5116	0.881
AVERAGE	0.508	0.752
GoF	0.618	

Table 12
Test of the Total Effects Using Bootstrapping

	Original sample	Std. Error	T-statistics	P value
KMS -> OP	0.335	0.043	7.760	0.0010
KMS -> OIC	0.790	0.029	27.133	0.0002
OIC -> OP	0.651	0.040	16.467	0.0102

4.6 Testing for Mediation

Mediation analysis seeks to go beyond the question of whether an independent variable causes a change in a dependent variable. The goal of mediation is to address the question of how that change occurs (Hayes, 2009). A mediator variable is the variable that causes mediation in the dependent and the independent variables (Saunders *et al.*, 2011). In other words, the mediator variable explains the relationship between dependent and independent variable. However, there are some recommendations for examining the mediation effect, that may be categorized into three methods (MacKinnon *et al.*, 2002). The first one, explained as the causal steps approach and uses the regression analysis, is presented by Judd and Kenny (1981) and Baron and Kenny (1986). The article of Kenny (1981) has been cited over 8,120 times till now based on ISI web of science citation database (Bontis *et al.*, 2007). The second method is defined as the method that examines regression coefficients before and after the mediating variable. The third method is explained as the result of coefficients, involving paths in a path model approach. The latter two methods use the goodness-of-fit indicators and provided by covariance-based SEM. The path coefficients generated by PLS provide an indication of relationships and can be used similarly to the traditional regression coefficients (Gefen *et al.*, 2000). Baron and Kenny (1986) laid out several requirements that must be met to form a true mediation relationship as follow: regress the dependent variable on the independent variable. In other words, confirm that the independent variable is a significant predictor of the dependent variable and regress to the mediator on the independent variable. In other words, confirm that the independent variable is a significant predictor of the mediator, as well as, the mediator is a significant predictor of the dependent variable, while controlling for the independent variable. Finally, when the mediator is added, consequently, the correlation between the independent and dependent variables must be significantly decreased. Moreover, the relationships between the independent and dependent variables as well as the independent and mediator variables should be theoretically supported by the literature. In this study these four steps has been followed using PLS software. Visual inspection of the coefficient cannot evaluates the significance of the reduction of the relationship between the

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independent and dependent variables; It must be assessed mathematically (Bontis et al., 2007). Sobel (1982), provided an approximate significance test for the indirect effect of the independent variable on the dependent variable via the mediator :

$$Z = \frac{ab}{\sqrt{b^2Sa^2+a^2Sb^2+Sa^2Sb^2}} \quad (2)$$

In the formula "a" is the regression coefficient for the relationship between the independent variable and the mediator, "b" is the regression coefficient for the relationship between the mediator and the dependent variable, "Sa" is the standard error of the relationship between the independent variable and the mediator, and "Sb" is the standard error of the relationship between the mediator variable and the dependent variable. To evaluate the significance of path coefficients and estimation of standard error it is necessary to use bootstrapping procedure (Hair *et al.*, 2012). According to the theoretical framework of the study, organizational innovation capability is proposed as a mediating variable. The indirect effects of these variables have been examined as below:

4.6.1 Mediation Effect of OIC on the relationship between KMS and OP

To examine the mediating effect of the OIC on the relationship between at-purchase KMS and OP Baron and Kenny criterions were exercised as below: Table 13 indicated that requirements regarding mediation specified by Baron and Kenny have been achieved. Firstly, KMS is directly, significantly and positively related with OP (β=0.878 and t=64.127).Second, KMS is directly, significantly and positively related with OIC (β=0.804and t=30.072). Third, OIC is directly, significantly and positively with OP (β=0.926 and t= 113.073). Finally, the absolute effect KMS on OP is reduced from 0.878 to 0. 3985 When the mediating variable is introduced. From Table 13, a Sobel z-value of 29.142 with p-value < 0.000 and the beta weight for the relationship between KMS and OP (β= 0.486, p < 0.001) was attributable. These consequences show that: first, meanwhile the Sobel z-value with a p-value is less than 0.05; it suggests that relationship between KMS and OP is mediated by OIC. Second, because of being relationship between dependent and independent variables decreased to significant level (from 0.878 to 0. 398), partial type of mediation was also recorded. Third, the index ratio of 22.49%, was given by (0.878 -0. 398) /0.878 *100), implies that 54.67% of the impact of KMS on the OP goes by customer satisfaction. It means about 45.33% of this influence is directly.

Table 13
The Mediating Effects of OIC on the Relationship between KMS and OP

	KMS -> OP	KMS -> OIC	OIC->OP	KMS -> OP Mediated by OIC		
				KMS -> OP	KMS -> OIC	OIC->OP
Beta	0.878	0.804	0.878	0.335	0.790	0.651
SE	0.014	0.0267	0.014	0.043	0.029	0.040
t-value	64.127	30.072	64.127	7.760	27.133	16.467

Type of mediation : Partial
Sobel Z value : 29.142 significance at p< 0.000
Standardized Coefficient of KMS on OP

4.7 Testing the Moderating Impact

Moderator variable is defined as a variable that influence the path of a relationship between two variables of dependent and independent including the qualitative variable and quantitative one (Baron and Kenny, 1986). There are two different and regular approaches for testing the moderating impact inside structural model, namely, interaction-effect or product-term effect method and Multi-group Analysis (MGA) method. According to Henseler and Fassott (2010) moderation impact is characterized with new structural relations in structural model. Therefore, the impact of moderator variables within conceptual framework in this study have to be tested including: (a) the impact of moderator on dependent variable, (b) the impact under consideration, and (c) the interaction impact of independent variable on moderator variable. Moreover, if path c fulfill to meaningfully no bigger or smaller than zero, then it signifies being the moderating effect (Baron and Kenny, 1986). This way for examining moderation impacts is missed in covariance-based SEM methods due to the presumption that the correlation between unobserved variables have to be zero (Eberl, 2010). In fact, this method is unacceptable to adopt when one of variables is operationalized with determinative scales (Chang and Kuo, 2008; Eberl, 2010). Despite of that interaction effect method has some conditions; the second method is Multi-group Analysis (MGA). This method extensively recommended when independent variable or moderator variable is naturally categorical (Henseler, 2012). Generally MGA is accepted in covariance-based SEM approach for testing the moderation impact (Sörbom *et al.*, 2001). Also researchers lately interested in using it in PLS space (Chin and Dibbern, 2010; Eberl, 2010). In Multi-group Analysis (MGA) method, moderator variable are evaluated through categorizing and organizing samples to subsamples along with the moderator variable. Then the same PLS is used for analysis of subsamples (Chin and Dibbern, 2010). This study compared the path differences between two groups. Also investigates significance of parametric t-test. Accordingly, the effect of moderator variables on relationship between independent and dependent variables is examined through using PLS-based Multi-group Analysis. In this study the PLS-based Multi-group Analysis method is preferred rather than interaction method, because, the moderator variable was examined was

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naturally categorical, as well as, every predictors were determined by reflective indicators. Therefor according to the presumption of works of Rigdon *et al*. (1991) and Eberl (2010) the Multi–group Analysis method is the most suitable method instead of the interaction-effect method.

4.7.1 Steps to Examine the Moderating Impact Using MGA

The purpose of execution MGA is verifying significantly differences paths between groups. If significant difference among the groups exists, then moderator variable does have effect on the path strength and direction. The variables existing in the framework were measured with moderating variables in much similar stepwise approach of hierarchical multiple regressions developed by Cohen (1983). The work of Chin (1998) reinforces the process of step-wise. In this method, in the beginning all data was divided to preferred subsample sets. The path-relationships of independent variable(s) are regressed with dependent variable(s) with one subsample at time. Each model reflected to be accepted in terms of goodness of fit. It means discriminant and convergent validity, as well as composite reliability and Cronbach's alpha. Also explanatory power in dependent variable (R^2) was done. In this study in following stage, in order to gain standard error of structural path in considered subsamples, bootstrap method was executed 300 times, to re-sample the data. In next stage, in order to signifying the t-test, distinctions among the path estimators are tested. The t-static would be calculated using the measure presented by Chin (2000), when the calculated standard errors of path estimators are presumed to be equal.

$$t = \frac{Path\ sample1 - Path\ sample2}{\sqrt{\{\frac{(m-1)^2}{(m+n-2)} * SE(\text{path sample})^2 + \frac{\left(n^{(1)}-1\right)^2}{(m+n-2)} * SE(\text{path sample})^2\} * \{\sqrt{\frac{1}{m}+\frac{1}{n}}\}}} \quad (3)$$

Where;
m is Sample Size in Group One, n is Sample Size in Group Two

SE means Standard Error of Mean

This would pursue at t-distribution with $m+n-2$ degree of freedom. As m and n are subsample one and two. In situations that assumption of inequality of standard errors is existing, the differences between the path estimators of two groups should be tested through Smith-Satterthwait test (Chin, 2000) as follow:

$$t = \frac{paths\ (sampel1) - path(\ sample2)}{\sqrt{\text{s.e}\ (sample1)^2 + \text{s.e}\ (sample2)^2}} \quad (4)$$

4.7.2 Results of MGA for Industry Type

The feature of moderating variable of the study was categorical, where one category were suppliers of automotive parts in a metallic industry (n= 81, 39%) i.e., forging, forming and casting industry and the other were the suppliers in the electrical industry (n=62, 30%) i.e., computer part and electrical manufacturers, and polymeric industry (n=64, 31%) e.g., manufacturer of rubber and plastic products. Table 14 revealed that the AVE computed for the metallic industries were higher than 0.5. Within sample of electric and polymeric industries, also AVE was greater than the thresholds. According to Fornel and Larker (1981) the greater AVE, the more satisfy convergent validity norm. In examining the discriminant validity at construct-level, square-root of AVE was compared with the inter-construct correlation. Total qualified correlations are greater than inter-constructs one. Then, the norm of discriminant validity is justified. Table 15 shows the overall view of the three models. According the table reliability values Cronbach's alpha and composite reliability were more than acceptable range (>0.7) and fulfilled the requirement of the internal consistency of the measurement items with their specific latent variable (Cronbach, 1951; Werts *et al.*, 1974). The shared variance explained by the independent variable into dependents variable for OP was 72.3% in metallic industries model.

For polymeric industry the values was 84.7 %, whereas for the electric industries it was 84.3%. Based on chin (1998), criterion R^2 values of 0.67, 0.33 or 0.19 endogenous variable described as substantial, moderate and weak. Therefore, based on the criterions R^2 values for all three endogenous latent variables were well fitted into substantial category. The communalities for three models were above 0.50 (Hair *et al.*, 2012). While they recommend that variance resulted by the items related to underlying construct should be greater than half of the shared variances in compare with others.

The results for three models (see Table 4.9), for GoF values, indicated that the value exceeds the cut-off value of 0.36 for large effect sizes of R^2 and allows us to conclude that the model performs well compared to the baseline values defined above.

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Table 14
Inter-Construct Correlation and AVE for Moderating Variable

	AVE	SQRT(AVE)	KMS	OP	OIC
Correlation among the construct (polymeric)					
KMS	0.725	0.851	0.851		
OIC	0.653	0.808	0.488	0.808	
OP	0.774	0.880	0.379	0.459	0.880
Correlation among the construct (Electric)					
KMS	0.797	0.893	0.893		
OIC	0.607	0.779	0.451	0.779	
OP	0.6708	0.819	0.370	0.498	0.819
Correlation among the construct (Metallic)					
KMS	0.509	0.713	0.713		
OIC	0.533	0.730	0.551	0.730	
OP	0.519	0.720	0.470	0.398	0.720

Table 16 gives the standardized estimate path amounts of the relationships in total sample and three subsamples. The findings disclose that all of three paths inside of metallic subsamples and total sample are different. For example, KMS -> OP (β=0.26 or 26 % and t=4.72) differ from KMS -> OIC (β=0.46 or 46 % and t=8.44). The significant path in metallic industry by highest amount was between KMS -> OIC (β=0.46 or 46 % and t=8.44). The lowermost significant path was between KMS -> OP (β=0.26 means 26 %; t=4.72). The polymeric enterprises were different from total sample. For example, KMS -> OP (β=0.45or 45 % and t=8.22), KMS -> OIC (β=0.83or 83% and t=33.28). The greatest significant path in subsample of polymeric enterprises was between KMS -> OIC (β=0.83or 83% and t=33.28) and the smallest significant path was KMS -> OP (β=0.45 or 45F% and t=8.22). The path results for the electric enterprises were also different from total sample. In addition, OIC -> OP (β=0.80or 80% and t=21.67), KMS -> OIC (β=0.46 or 46 % and t=11.85). Distinction among the subsamples of paths of metallic, polymeric and electric enterprise was calculated by use of Smith-Satterwait test and t-test. The results show differences of paths in relationships at the all three group. For instance KMS-> OIC was significant (t=2.32, t=3.12) in metallic firm subsample but the path strength had decreased from (β=0.79 to β=0.46). None of the groups were similar to the overall sample. Looking at the results, hypotheses H4, H5, H6 fully supported.

Table 15
Overall Overview of Results and GoF of Moderator Industry Type

Construct	Composite Reliability	R^2	Communality	Cronbach's Alpha
Reliability and goodness of fit of the model (Metallic)				
KMS	0.925		0.651	0.946
OP	0.859	0.723	0.562	0.709
OIC	0.901	0.694	0.561	0.871
Average		0.7085	0.591	
GoF	0.647			
Reliability and goodness of fit of the model (polymeric)				
KMS	0.941		0.809	0.935
OP	0.865	0.847	0.656	0.927
OIC	0.935	0.735	0.624	0.923
Average		0.791	0.696	
GoF	0.742			
Reliability and goodness of fit of the model (Electric)				
KMS	0.935		0.866	0.947
OP	0.902	0.843	0.709	0.969
OIC	0.939	0.767	0.712	0.906
Average		0.805	0.762	
GoF	0.783			
GoF= SQRT(Average R-squared * Average Communality)				

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Table 16
Overall Overview of Results and GoF of Moderator Industry Type

Hypothesis	Combined Dataset n= 207			Metallic n=81			Parametric test of difference	Smith-Satterthwait test
	β	t	R^2	β	t	R^2		
KMS -> OP	0.34	7.76	0.65	0.26	4.72	0.72	2.16	3.84
KMS -> OIC	0.79	27.13	0.76	0.46	8.44	0.51	2.32	3.12
OIC -> OP	0.65	16.47	0.83	0.44	4.83	0.50	2.02	3.65
Hypothesis	Combined Dataset n= 207			Polymeric n=64			Parametric test of difference	Smith-Satterthwait test
KMS -> OP	0.34	7.76	0.65	0.45	8.22	0.72	2.05	3.67
KMS -> OIC	0.79	27.13	0.76	0.83	33.28	0.51	2.28	3.25
OIC -> OP	0.65	16.47	0.83	0.75	19.82	0.50	2.02	3.84
Hypothesis	Combined Dataset n= 207			Electric n=62			Parametric test of difference	Smith-Satterthwait test
KMS -> OP	0.35	7.76	0.65	0.46	11.85	0.84	2.42	4.50
KMS -> OIC	0.79	27.13	0.76	0.86	34.52	0.76	3.22	4.68
OIC -> OP	0.65	16.47	0.83	0.80	21.67	0.82	2.38	4.85

5 Conclusions

The study investigate the effect of KMS on organizational performance directly and through organizational innovation capability by considering moderating effect of industry type on the relationship between knowledge management strategy and organizational innovation capability as well as organizational innovation capability and organizational performance . In this paper three different objectives have been fulfilled, firstly, an attempt has been made to demonstrate whether knowledge management strategy has a positive effect on organizational performance. Secondly, this study tried to find to whether knowledge management strategy positively impact organizational innovation capability. Thirdly, this research sought to bring more empirical evidence about the relation between OIC and OP. Fourthly, the paper attempted to bring more scholarly evidence for the mediating role of organizational innovation capability on the relationship between knowledge management strategy and organization performance and lastly this study tried to investigate the moderating role of industry type on the relationship between knowledge management strategy and organizational performance, knowledge management strategy and organizational innovation capability as well as organizational innovation capability and organizational performance .The SEM results provided empirical evidence that hypothesis H1 fully supported (β =0.335, t= 7.760) and presented that there is a significant relationship between knowledge management strategy and organizational performance. These results support the theoretical literature (Barney, 1991; Grant and Baden-Fuller, 1995; Nonaka and Takeuchi, 1995) and are consistent with previous empirical research (Keskin, 2005; Yu *et al.*, 2006).Moreover , the results delivered an empirical evidence that hypothesis H2 fully supported (β =0.790, t= 27.133) and presented that there is a significant relationship between knowledge management strategy and organizational innovation capability. The result obtained from this hypothesis is consistent with findings of (Akman and Yilmaz, 2008) those believed that knowledge management strategy is essential for an efficient organization innovation capability. Moreover, the results is in line with (De Clercq *et al.*, 2009) and Poon and MacPherson (2005) those who asserted that knowledge management strategy through internal collaboration enhance organizational innovation capability. Furthermore, the results bring more empirical evidence that hypothesis H3 fully supported (β =0.651, t= 16.467) and presented that there is a significant and positive relationship between organizational innovation capability and organizational performance. The result obtained from this hypothesis is reliable with result of (Chen *et al.*, 2009; Kör and Maden, 2013) which mentioned that organizational performance is positively related to organizational innovation capability . In the next phase of this study was examined the mediating role of OIC on the relationship between KMS and OP by Baron and Kenny criteria. Moreover, Sobel test was used to examine if mediation effect is statistically significant. The result confirmed that the relationships between knowledge management strategy and the organizational performance have been mediated by organizational innovation capability. And the last phase of the study was to investigate the moderating role of industry type on the proposed relationship using a Multi-group Analysis and parametric t-test of Chin, as well as non-parametric t-test of Smith-Satterthwait (Chin, 1998). Table 15 reveals that the relationship between knowledge

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management strategy and innovational capability has been moderated by industry type. The results, formulate a number of important additions to the existing knowledge management literature. First, the results confirmed the role of firm resources (firm effect) on variation in different antecedents of firm performance. Moreover, the results validated that it is necessary to consider intra-industry effects which affect subgroups of firms within the industry. Second, the findings verified that the existence of significant intra-industry effects may stimulate practicing managers to align the firm's corporate strategy within the industry context.

5 .1 Implications

5.1.1 Theoretical implications

The first theoretical significance is about OIC. Based on reviewed literature, organizational innovation capability has overwhelming positive influence on organizational performance. Previous scholars have examined the effect of innovation capability on organizational performance by a restricted approach. It is obvious that the results of such studies cannot express the actual capacity of the organizational innovation capability. This study put forward a theoretical model proposing a more comprehensive multi-dimensional measure of comprehensive set of organizational innovation capability. The present study in line with the resource-based theory introduced more components of organizational innovation to measure its impact on organizational performance. Therefore, the results might provide more explanation about the effects of innovation capability on organizational performance. The second theoretical significance is linked to industry type and its impacts on the effectiveness of knowledge management activities in the organizations. This study attempted to examine how to change the effectiveness of the knowledge management strategy in different sectors of the same industry (intra-industry effect). According to the knowledge and resource-based theories, providing the needed resources and effective utilization of them may enhance the firm's performance. But, due to some limitation, it may not be possible for some companies to employ required resources, therefore, the present study with intra-industry approach want to give some new clarification which is not known in the body of existing knowledge about the reasons of the success and the failure of the knowledge management activities in some sectors of manufacturing industries. The third theoretical significance is related to developing a comprehensive and theoretical framework for enhancing organizational performance through organizational innovation capability and knowledge management strategy. Based on literature review the impact of some aspects of innovation on organizational performance has been studied by researchers. In line with knowledge and resource-based theories, the present research went to addition stage to examine the impact of organizational innovation capability on organizational outcome. Additionally, there have been very few studies conducted to investigate the effects of two intangibles drivers of organizational performance namely knowledge management strategy and organizational innovation capability in a single model. This study in line with resource and knowledge –based theories and by incorporating three important intangible assets of organization developed a comprehensive theoretical framework to provide a more scholarly explanation about improving organizational performance through intangible assets such as knowledge management strategy and innovation capability.

5.1.2 Practical Implications

The results of this study provide several practical significances for practitioners. The first one is related to improve organizational achievement thorough innovation capability. The research provides a comprehensive roadmap pertaining to organizational performance by integrating two momentous intangibles elements of organizational performance e.g., knowledge management strategy and organizational innovation capability.

Therefore, the results of the comprehensive study may provide a practical solution to business managers and other practitioners of organizational performance and policy makers especially in automotive industry. The second is related to operationalizing of innovation drivers and capability to improve organizational performance. The study provides a unique framework that with a comprehensive approach to identify innovation capability drivers and components. Therefor the results of the comprehensive study may help to business managers to obtain a more comprehensive knowledge about different innovation capability drivers and components as valuable resources of organization.

5.2 Research Limitations

Similar to any research, researcher was faced with some limitations in doing this research. The limitation of the study is related to use a sample of Iranian automotive industry for testing the hypotheses. Considering the sample population the results of this study are cautiously generalizable to the automotive industry in other contexts. In other word, using a limited sample of Iranian automotive industries that operate in a developing country under specific circumstances, limits the generalizability the results of the study to other contexts especially in developed country context.

5.3 Future Research Directions

First, since this study was chiefly a quantitative study, a qualitative study may complement it in order to present discretion of innovation capability in automotive industry. The profound study is needed to research the requirements and ways to facilitate deep understanding of innovation capability. As organization size and intra–industry effect considered being important for firm innovation capability, it is beneficial to consider this issue in the future study. Second, in order to formulate scales for determinants of

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OIC, as well as organizational performance, additional qualitative researches are needed. Third, Further studies should identify more factors, that the moderate or mediate the relationship between knowledge management strategy and firm performance.

Finally, since in this study has been used a variance-based Structural Equation Modeling (SEM) for data analysis by Smart-PLS software, future researchers may duplicate this study by using covariance-based SEM method by AMOS or LISREL software. Moreover, future researcher can duplicate the study by applying the nonlinear relationship between knowledge management strategy and organizational innovational capability and organizational performance. Artificial Neural Networks (ANNs) and make a comparison between the results to have more empirical evidences about the effect of knowledge management strategy on firm innovation capability and performance.

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