

MEDIATION EFFECT OF SUPPLY CHAIN INNOVATION AND EFFICIENCY
ON THE RELATIONSHIP BETWEEN MARKET ORIENTATION AND
ORGANIZATIONAL PERFORMANCE

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*Particularly dedicated to my treasured parents, my beloved wife and sibling and to
the memories of my cherished grandparents who have left our family*

Long live all in my memory!

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Do not judge me by my successes, judge me by how many times I fell down and got back up again. Nelson Mandela (May his soul rest in peace)

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ABSTRACT

Recently, market orientation has drawn significant attention in the manufacturing sector because of its noteworthy impact on performance. The relationship between market orientation and organizational performance has been widely investigated by many academics and practitioners. However, the relationship is not yet fully understood. This study explored the mediation effect of supply chain innovation and efficiency on the relationship between market orientation and organizational performance. Six hypotheses including direct and mediation effects were tested in the study. Additionally, structural equation modelling (SEM) approaches were used to collect data from 314 Iranian companies in the manufacturing sector of Tehran, Shiraz and Kermanshah which are listed on the Tehran Stock Exchange (TSE). Managers of these organizations including middle, executive and top managers were identified as respondents for the questionnaire survey. This study used Amos to analyze the data. Findings suggest that market orientation is positively and significantly related to supply chain innovation, and efficiency has a direct positive and significant impact on organizational performance. In addition, it is evident from the study that the relationship between market orientation and organizational performance is partially mediated by supply chain innovation and efficiency. The findings have provided valuable insights to guide manufacturers to collectively improve organizational performance through supply chain innovation and efficiency. Recommendations on how to improve market orientation and organizational performance through supply chain management are provided accordingly. Further, through supply chain management, market orientation can assist firms to enlarge customer value, customer satisfaction, and competitive advantage and supply chain member's capabilities that can support their ultimate goals in achieving sustainable performance.

ABSTRAK

Akhir-akhir ini, sektor pembuatan mendapat perhatian besar dalam orientasi pasaran kerana kesannya yang nyata terhadap prestasi organisasi. Hubungan antara orientasi pasaran dengan prestasi organisasi banyak dikaji oleh ahli akademik dan pengamal pasaran. Namun begitu, hubungan tersebut belum dapat difahami sepenuhnya. Kajian ini meninjau kesan pengantaraan inovasi rangkaian bekalan dan kecekapan terhadap hubungan antara orientasi pasaran dengan prestasi organisasi. Enam hipotesis termasuk kesan secara langsung dan pengantaraan telah diuji dalam kajian ini. Pendekatan terkini, iaitu Pemodelan Persamaan Struktur (SEM) digunakan untuk mengumpul data daripada 314 syarikat sektor pembuatan di Tehran, Shiraz dan Kermanshah, Iran yang tersenarai dalam Bursa Saham Teheran (TSE). Responden bagi tinjauan borang soal selidik terdiri daripada pengurus organisasi peringkat pertengahan, eksekutif dan pihak atasan. Perisian Grafik Amos digunakan untuk menganalisis data dalam kajian ini. Dapatan kajian menunjukkan bahawa orientasi pasaran secara positif dan signifikan berkaitan dengan inovasi rangkaian bekalan, dan kecekapan pula mempunyai kesan positif langsung dan signifikan terhadap prestasi organisasi. Di samping itu, kajian ini dengan jelas menunjukkan bahawa inovasi rangkaian bekalan dan kecekapan menjadi perantara separa terhadap hubungan antara orientasi pasaran dengan prestasi organisasi. Dapatan kajian memberikan pencerapan yang berharga dalam membimbing pengeluar untuk mempertingkatkan prestasi organisasi dengan menyeluruh melalui inovasi rangkaian bekalan dan kecekapan. Kajian ini mengemukakan cadangan tentang cara untuk mempertingkatkan orientasi pasaran dan prestasi organisasi melalui pengurusan rangkaian bekalan. Selanjutnya, melalui pengurusan rangkaian bekalan, orientasi pasaran yang boleh membantu syarikat untuk membesarkan nilai pelanggan, kepuasan pelanggan, dan keupayaan berdaya saing ahli kelebihan dan rangkaian bekalan itu yang boleh menyokong matlamat utama mereka dalam mencapai prestasi yang mapan.

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LIST OF ABBREVIATIONS

SC	-	Supply Chain
SCM	-	Supply Chain Management
SCI	-	Supply Chain Innovation
SCE	-	Supply Chain Efficiency
IL	-	Innovation Leadership
MO	-	Market orientation
IT	-	Information Technology
PI	-	Process Improvement
OP	-	Organizational Performance
R&D	-	Research and Development
OP	-	Organizational Performance
MRP	-	Materials Requirements Planning
JIT	-	Just In Time
CSF	-	Critical Success Factor
EDI	-	Electronic Data Interchange
RFID	-	Radio Frequency Identification
CPFR	-	Collaborative Planning, Forecasting And Replenishment
ECR	-	Efficient Consumer Response
ERP	-	Enterprise Resource Planning
IMIS	-	Industrial Management Information System
ERP	-	Enterprise Resources planning
CFA	-	Confirmatory Factor Analysis
SEM	-	Structural Equation Modelling

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CHAPTER 1

INTRODUCTION

1.1 Introduction of the Study

Market orientation is a foundation and the central concept of the marketing discipline (Slater *et al.*, 1995). Many studies have examined the relationship between market orientation and performance (Jaworski and Kohli, 1993; Kohli and Jaworski, 1990; Narver *et al.*, 1998; Slater *et al.*, 1995), with the general empirical support that market orientation enhances firm's performance (Calantone *et al.*, 2002). A central idea in the marketing literature is the proposition that any firm that is able to raise its level of market orientation will improve its performance in the marketplace (Narver and Slater, 1990). Market-oriented firms are defined by their superior understanding of customers' current and future needs and by their ability to offer solutions to those needs that are superior to rivals' offerings (Slater and Narver, 2000).

Market orientation in the marketing literature is analyzed in terms of different aspects, such as source (Narver and Slater, 1990), decision-making instrument (Noble *et al.*, 2002), behavior and actions (Kohli and Jaworski, 1990), and organization culture (Grewal and Tansuhaj, 2001; Matsuno *et al.*, 2002; Narver and Slater, 1990). The concepts, become prominent on the basis of behavior (creating market information and the spreading of this information within the organization) and processes (formation of the marketing plan to satisfy customer wishes), and in terms of cultural orientations (competitor orientation and customer orientation as well as inter-functional coordination) (Narver and Slater, 1990). Empirical studies are generally carried out based on these two approaches. Studies conducted in recent years also discuss different dimensions in the measurement of market orientation.

However, Naver and Slater, (1990), two of the researchers conducting primary studies concerning the concept in the early 1990s, together with Kohli and Jaworski (1990), assessed these two dimensions in market orientation through different assessment tools aimed at customers' existing requirements (responsive) and customers' requirements, which they are not yet aware of (proactive).

Besides, some studies proposed that market orientation will be substantially more effective with the help of innovation (Kohli and Jaworski, 1990; Matsuno *et al.*, 2002). The nature of innovation was investigated in a wide range of concepts such as tools, reasons and methods. In addition, innovation is the most important factor in organizations growth and companies' success that must be adopted by technology application (Baker and Sinkula, 2009; Boso *et al.*, 2012). Earlier, in the same line, Grewal and Tansuhaj (2001) highlighted that technology helps the organization to introduce the innovation management concept and gain competitive advantage.

Supply chain management has been defined by Ayers (2001) as a process of implementing, managing, planning, and developing the operations of the supply chain and its value in the whole network process. There are different definitions of supply chain management within the literature. Traditionally, all activities in the supply management system such as, products movement, services and management are known as logistics. However, the supply chain management concept is used in many studies that generally are associated with production, globalization and attraction for manufacturers to source their inputs globally (Ayers, 2001; Handfield and Nichols, 1999). In the international market, an important characteristic of the supply chain is the on-time arrival of goods in order to coordinate between distributors and suppliers (Burgel and Murray, 2000).

As explicitly mentioned by researchers who studied the market orientation concept, market orientation and other related variables generally discussed in Western countries must be deliberated in developing economies too because there is a lack of empirical studies in developing countries (Mavondo and Farrell, 2003; Morgan *et al.*, 2009; Naidoo, 2010). However, some theoretical and empirical studies

have been carried out examining the supply chain innovation and supply chain efficiency and relationship between market orientation and organizational performance (Hurley, 2015; Mavondo and Farrell, 2003; Morgan *et al.*, 2009; Pulendran *et al.*, 2015). A group finds a negative relationship and a group finds a positive relationship which in manufacturing sectors cause to reduce the cost and lead time (Amara and Landry, 2005; Santamaría *et al.*, 2012). Consequently, innovation in supply chain context is the vital step of the manufacturing sector, especially in their supply chain systems. Hence, the current study focused on market orientation and its impact on supply chain innovation to develop the manufacturing industry through supply chain efficiency and achieve organizational performance goals. However, the model in this study is still new in Iran and, therefore, no comprehensive analysis has been conducted. The model has yet to test by the manufacturing sector, which is the main research field of the study.

1.2 Background of the Study

In recent years, manufacturing sector has become a critical issue in the world, along with the increased concerns for product safety, product errors, and product costs (Maleki *et al.*, 2011; Mehralian *et al.*, 2012). Also, in today's intensively competitive market, effective market orientation (MO) and supply chain management (SCM) plays a critical role in improving organizational performance and competitive advantage (Fawcett *et al.*, 2014; Iddris *et al.*, 2014; Prahalad and Krishnan, 2008). The competitive environment requires organizations to provide high quality products and services, deliver rapid service response, and develop dynamic capabilities that are congruent with the rapidly changing business environment (Cadogan *et al.*, 2009; Jaworski and Kohli, 1993; Morgan *et al.*, 2009; Noble *et al.*, 2002).

Market orientation pertains to an organizational culture that emphasizes aspects such as customer orientation, competitor orientation, and inter-functional coordination as keys to organizational success (Kohli and Jaworski, 1990; Narver and Slater, 1990). However, most of the studies in this area have been conducted in the developed countries particularly in the western countries such as the United

States of America (Lee *et al.*, 2011a). In general, Naidoo (2010) conducts a study on market orientation in developing economies, and in particular, emerging economies of Asia. Boso *et al.* (2012) highlight that the conducted empirical studies are mostly concentrated on industries and businesses located in Western countries. But, in contrast, Cadogan *et al.* (2009) provided a positive perspective about market orientation in developing countries. Therefore, this study focuses on market orientation and organizational performance through Iranian manufacturing industry as a developing country.

Many researchers concluded that, only a small number of market orientation studies investigated the mediating effect of supply chain management variables on the relationship between market orientation and firm performance (Kohli and Jaworski, 1990; Narver and Slater, 1990; Pelham, 2015; Slater *et al.*, 1995). But, in other studies, a stronger relationship between market orientation and performance was established (Grewal and Tansuhaj, 2001; Wang, 2008). The explanation for this stronger relationship shows the fact that the managers who are operating in more turbulent market become more sensitive to market changes and developments. It is mentionable that, a strong growth market shows a high degree of environmental turbulence with respect to unemployment, fluctuating economic growth, inflation rates, and company performance changes. Colgate and Lang (2001) indicate that there is the emergence of burgeoning stronger consumer markets as well.

Besides, prior researchers highlighted that market orientation is an important issue as it is considered as a broad and general construct (Jaworski and Kohli, 1993; Kohli and Jaworski, 1990). Researchers such as, Narver *et al.* (2004) asserted that, in general, market orientation plays an important leadership role in changing a culture, and in particular, for creating an innovation.

In today's competitive market, effective supply chain management is a prominent factor which plays a key role for competitive advantage and organizational performance (Li *et al.*, 2006). In parallel, Davenport (2013) argues that the organizations must provide their delivery system with the rapid service

response, developed dynamic capabilities, increased quality products and services that are in agreement with the rapid change in the business environment.

Jansen *et al.* (2006) highlight that innovation is an integral tool for firms to achieve their competitive advantage and develop their performance. Furthermore, innovation for the manufacturing sector is similar to economic survival because of the pressure of market changes, the insurance companies, and reduces manufacturing sector costs through efficiencies. Therefore, some manufacturing sectors have reacted through consolidating and merging while other manufacturers have endeavored to be innovative with new services (Darroch, 2005).

In addition, innovation can influence on SCM operation to increase effectiveness, facilitating incremental and radical innovation capabilities. However, new applications of information technology lead to customers value creation (Horvath, 2001), quality product (Brynjolfsson, 1993), increased accuracy and efficiency of product delivery (Davenport, 2013). Furthermore, supply chain innovation helps firms to gain quality management practices and supply chain efficiency expected to enhance organizational performance.

As the expenses within manufacturing sector including supply chain costs grow, previous studies related to supply chain management have concentrated on diminishing the delivery cost of the supply chain, overall organizational performance, and relationship with suppliers in the manufacturing industry system (Chong *et al.*, 2011; Hsu *et al.*, 2011). Moreover, Rahman *et al.* (2011) conclude that leaders of manufacturing sector concentrate on cost control with lower acquisition prices of material supply while keeping the quality at a high level.

The manufacturing industry is no longer simply about making physical products due to barriers such as changes in consumer demand, the nature of products, the economics of production, and the economics of the supply chain have led to a fundamental shift in the way companies do business (Horvath, 2001). Customers demand personalization and customization as the line between consumer and creator continues to blur. Further, as technology continues to advance exponentially, barriers

to entry, commercialization, and learning are eroding. However, new market entrants with access to new tools can operate at much smaller scale, enabling them to create offerings once the sole province of major incumbents. While large-scale production will always dominate some segments of the value chain, innovative manufacturing models are arising to take advantage of these new opportunities. Meanwhile, the boundary separating product makers from product sellers is increasingly permeable. Manufacturers are feeling the pressure (and gaining the ability) to increase both speeds to market and customer engagement (Davenport, 2013). Also, numerous factors are leading manufacturers to build to order rather than building to stock. In this environment, intermediaries that create value by holding inventory are becoming less and less necessary.

However, there are some issues in Iranian manufacturing industry such as, first, lack of information which this factor is included information quality (accuracy, adequacy, conciseness, credibility, and timeline) and information sharing (trust, deep and intensity). Second, need to the new equipment which new equipment is referred to new infrastructure for applying SCM such as the IT infrastructure, production systems, inventory adjustment system, distribution systems, and all other activities requirements. Third, need to the expert employee which employee should have proper knowledge about the notion of SCM (strategy, planning, implementing, obstacles, problems, advantages, and etc.) to implement supply chain management. Fourth, increasing production time which strategy and planning of production might be changed during applying SCM and it takes the time to be set up. Fifth, increasing designing time which SCM implementation requires changes in the structure of products design and it takes the time to be established. Sixth, increasing distribution time which very often old methods of transportation such as scheduling and transportation systems should be changed by the new techniques and rules of transportation and distribution. Finally, lack of time which SCM implementation needs to change and many current projects take the time to be completed and there is not any appropriate time to allocate the SCM implementation.

Therefore, current study objective focuses on market orientation in the different business and cultural environment of Iranian manufacturing sector.

Therefore, this research focused on mediation effect of supply chain innovation and efficiency on the relationship between market orientation and organizational performance among managers of Iranian manufacturing sector. While the focus of the study is on manufacturing industry sections of the country, the researcher used the empirical methodology to achieve the significant issues such as, lack of information, need to the new equipment, need to the expert employee, increasing product stock time, increasing production time, increasing designing time, increasing distribution time, increasing tooling time and lack of time.

1.2.1 Supply Chain Management in Iranian Manufacturing Industry

The concept of supply chain management (SCM) as “evolved around a customer-focused corporate vision, which drives changes throughout a firm’s internal and external linkages and then captures the synergy of inter-functional, inter-organizational integration and coordination” was defined by Zailani and Kumar (2011). The environmental pollution is now notified and concerned by every society during the last decade and thereby industrial development is more bolded. Because of the relationship between industrial development and supply chain management they are being addressed together and so do for supply chain management (Mehralian *et al.*, 2012). Manufacturing industries are critical almost for most countries and they play a key role in the growth of their economy. In Iran, almost 28% of businesses are manufacturing industries and they are responsible for 36% of employment (Salavati and Hashim, 2015). It is so obvious that manufacturing industries regarding their numbers represent a significant element of the economy, and they have a considerable impact on their environment. Although individually, manufacturing industries may have limited impact on the environment, but collectively, their impact is believed to be significant (Thakkar *et al.*, 2008).

Fawcett *et al.* (2008) indicated that the main supply chain management focus is to provide right product to the right customers at the right cost, right time, right quality and right quantity. The short-term strategic goal of supply chain management is to reduce cycle time and inventory and thus increasing productivity, whereas the

long-term goal is to improve profits through customer satisfaction and market share (Hsu *et al.*, 2013a). According to Zailani and Kumar (2011) and Hsu *et al.* (2013a), the quantifiable benefits of supply chain management include lower supply chain costs, forecast accuracy, delivery performance, inventory reduction, overall productivity, as well as fulfillment cycle time and fill rates.

Adoption of supply chain management may deliver a number of potential benefits to the organizations. Different criterion has been used to measure organization performance such as financial, non-financial, innovation performance, market share and customer satisfaction (Govindasamy, 2010). For example, the benefits include operation costs reduction (Rasli *et al.*, 2004), customer satisfaction (Rasli, 2005), order fulfilment lead times (Thakkar *et al.*, 2008), inventory improvement (Stevens, 1989), responsiveness to customer requests (Chin *et al.*, 2012), remain competitive; on-time delivery, increased flexibility, increased sales, increased internal coordination between departments, increased supplier and customer coordination, improved supply chain communication, a reduction in risk and a reduction in the duplication of inter-organizational processes (Chin *et al.*, 2012).

Besides, there is voluminous research literature available on supply chain management potential benefits (Manzouri *et al.*, 2010; Monczka *et al.*, 2008) but till now there is a limited study to reveal the actual benefits of supply chain management in the Iranian manufacturing sector. However, supply chain management plays a key role in enlarging manufacturing performance. Therefore, a manager can develop supply chain management roadmap more easily for drive superior supply chain performance. However, there is a lack of empirical research confirming these significant benefits of supply chain management in Iranian manufacturing sector (Maleki *et al.*, 2011; Mehralian *et al.*, 2012). Therefore, the present study attempts to fill this gap through exploring the actual benefits of supply chain management in Iranian manufacturing industry sector.

1.3 Statement of the Problem

Market orientation is a foundation and the central concept of the marketing discipline (Dobscha *et al.*, 2015; Narver *et al.*, 2004). Many studies have examined the relationship between market orientation and performance (Kirca *et al.*, 2005; Matsuno *et al.*, 2002; Mavondo and Farrell, 2003), with the general empirical support that market orientation enhances organizational performance. However, researchers have generated much debate on the exact role of market orientation and the process through which it influences performance (Noble *et al.*, 2002).

According to Narver and Slater (1990), market orientation theory can be displayed as a triangle with three behavioral components: customer orientation, competitor orientation and interfunctional coordination; in supposing that the company's goal is long-term profit. To ensure long term profit, the company has to focus on generating high value for its customers through the aiming or focus on customers, competitors and interfunctional coordination. Furthermore, market orientation plays a key role in improving operational and strategic performance as part of the organizational performance (Morgan *et al.*, 2009).

Customers' orientation, which is the successive knowing of the needs of both the present and prospective, focus on buyers and utilize the information for developing the value of a customer. Then, competitor orientation, which is the successive abilities knowing, primary present techniques, prospective optional satisfiers of the object buyers and utilize this information in developing the customers' superior value. Next, inter-functional coordination is all features synchronization in the marketing by using buyer data to create superior customer value. Therefore, manufacturing sector would benefit from understanding the importance of profitability, coordinated marketing, and customer focus, which need to be incorporated into supply chain management strategies for enlarging organizational performance (Pulendran *et al.*, 2015). Despite the significant relationship between market orientation and organizational performance in the manufacturing sector, it has received limited research attention, especially in an emerging economy context (Hurley, 2015; Mavondo and Farrell, 2003; Morgan *et al.*, 2009; Pulendran *et al.*, 2015). Besides, the supply chain management through

which market orientation influences performance in the manufacturing context yet to be explored.

Based on the resource-based view of the firm, Ketchen *et al.* (2007) argue that market orientation as a resource only has potential value. Similarly, Hunt and Davis (2008) stresses that resource as tangible and intangible entities facilitate an organization to efficiently and/or effectively produce a market offering that has value for customers. Considering these debates, since market orientation and performance are not directly related, it is imperative to focus on the process through supply chain innovation and efficiency in examining the market orientation and performance relationship. Previous studies have investigated the mediating role of supply chain innovation and competitive advantages in the market orientation and performance relationship (Matsuno *et al.*, 2002; Morgan *et al.*, 2009). Yet, there is limited knowledge in revealing the exact process supply chain innovation and efficiency through which market orientation influences organizational performance.

This study addresses the critical gaps in both market orientation and resource-based literature theoretically and empirically through capturing the important roles of the supply chain in Iranian manufacturing sector as an emerging economy context. As reported by Kiani and Ahmed (2014) the manufacturing industry in Iran composes about 20 percent of the gross domestic product (GDP) of US\$D 406.3 billion in 2014, ranking second after the service sector. Iran's industrialization started in mid-70 when the first oil price hike brought in a huge capital.

The manufacturing sector in Iran has undergone many changes over the past three decades. First, being supported by the self-sufficiency policies, the manufacturing sector industries did not have to compete in the world market, which requires the quality improvement and lower costs. Second, the manufacturing sector industries were badly affected by revolution and then the eight years war between Iran and Iraq (Gholami *et al.*, 2004). Thus, many plans had shut down or to decrease their already low capacity utilization. The growth in the value added of the manufacturing industry sector was 16 percent on average in 1974-78, declined to 5 percent in 1993-1997. Third, being dependent on the foreign technology, the

manufacturing industry does not have an active research and development (R&D) program to develop new technology and to reduce the costs. Fourth, the government is very involved in the manufacturing industry sector. The government owns and runs the most important manufacturers, allow domestic and foreign credits to the manufacturing sector by the banks which most of them are public (Motamedzade, 2013). Finally, the past war policies in recent the socio-economic development plans were designed to improve the state of the economy by increasing the growth and decreasing the unemployment.

In accord with Kiani and Ahmed (2014), in modern countries, the manufacturing industry has been adopted with the latest technology to increase their efficiency. But, in Iranian manufacturing industry sector, the new technology system has not well adjustment to enlarge the efficiency and consequently improve the products quality (Salavati and Hashim, 2015). Therefore, the main challenges in Iranian manufacturing sector are facing the new technology system and competing in the global market to increase the product quality and decreasing the cost of the product (Gholami *et al.*, 2004). Thus, this study attempts to fill this gap by investigating the impact market orientation on organizational performance in Iranian manufacturing sector through efficiency.

This study provides significant contributions to the marketing and the literature of supply chain management. Based on the debates on market orientation and resource-based view as a backdrop, this study resolves existing deficiencies in the extant literature by capturing the market orientation through supply chain which influence performance in the manufacturing sector (Motamedzade, 2013). In the review of articles on resource-based view, surprisingly no empirical studies have examined the important role of marketing on performance mediated by supply chain, although it is widely recognized that marketing affects organizational performance (Ketchen *et al.*, 2007).

Lee *et al.* (2011a) highlight that as the supply chain concept is included in an organization's network in the effort of delivering and producing an end product to the customers. Prahalad and Krishnan (2008) examine the concepts of the supply

chain in different disciplines containing strategic management, operations management, marketing management, information systems, and other social science fields. The supply chain management domain comprises a potential area for making competitive advantages of innovation. Moreover, to achieve the competitive landscape, decision makers must improve a new supply chain management concept for comprehending their logistics, communication network, and global supply chain (Fawcett *et al.*, 2014; Iddris *et al.*, 2014; Prahalad and Krishnan, 2008). Thus, focus on the earlier studies in which the focus is on the relationship between supply chain and performance.

The Iranian government is well aware of the importance of its manufacturing sector, which is a significant factor in the industrial community. Nowadays, in the era of globalization, many companies are urged and strived to find ways to effectively implement the supply chain management in order to achieve competitive advantage and minimize the manufacturing operation costs (Langlois, 2002; Lee *et al.*, 2011a; Soroor and Tarokh, 2006). Chong and Ooi (2008) state that, supply chain management offers organizations approach to maintaining their competitiveness in the international market and the approach inspire the organizations to improve their quality control, enhancing industrial networks, customer satisfaction and preserving the quality product. Consequently, one of the vital factors in upgrading the competitiveness is improving performance quality to reach world-class standard level through supply chain management (Chong *et al.*, 2009).

According to the Iran government's plan, the focus of improvement programs will be of service and product excellence. Some of the main policy thrusts will reinforce quality implementation techniques such as supply chain management. However, the adoption of strong quality techniques and processes are increasingly becoming more consequential in the survival of manufacturing sector in Iran (Gholami *et al.*, 2004). Thus, Iranian manufacturing sector managers have to adopt the latest available supply chain management process to stay ahead in their business. In addition, it is necessary to study the current supply chain and issues surrounding in order to help manufacturing sector to manage and solve their supply chain problems such as, industrial networks, and customer satisfaction. Increasing global competition

has urged and forced industries to look outside for reliable and potential suppliers or networks in order to achieve supply chain goals, such as reduction in costs and customer satisfaction.

The Iranian manufacturing sector is less concerned with the methods of supporting the development of supply chain management in information technology application, integrating relationship between members of the supply chain, and adapting new technologies. However, manufacturer managers do not take the initiative to overcome these constraints by giving more attention on the implementation of supply chain management. Moreover, Hsu *et al.* (2011) indicate that the employees are not well trained to ensure the quality of information in making a proper forecasting due to lack of knowledge, skills, abilities, and other characteristics. Besides that, the companies must be sensitive towards new technologies in either software or hardware to stay up-to-date. Several factors have been contributed to the implementation of supply chain management such as; strategy, and value chain optimization and its performance, ability to share the information, partnership approach, process management, vision and directions of supply chain management, speed, and IT integrated infrastructure (Wisner *et al.*, 2015). Some contributing factors that lead companies to effective SCM implementation are the lack of interest by other parties in the supply chain development process, power in the supply chain, leadership skills, skilled individuals to drive supply chain development, and minimum required experience in managing improvement programs (Stadtler, 2015).

However, supply chain efficiency is an important factor to increase the communication speed, removing unnecessary steps, and to reduce the waste and cost of the product through process improvement and information technology applications as part of the supply chain innovation (Dehning *et al.*, 2007). Therefore, successful supply chain management may require obtaining valuable information from the end-user, and link resources throughout processes using the information technology system for the speedy exchange of information. However, speed is a key for successful supply chain efficiency because the speed of activities can be accomplished to meet customer needs (Morgan, 2004). Besides that, lower operating

costs and reduced waste are the benefits that grow out of supply chain efficiency. Organizations may add consequential advantages in terms of reducing cost, saving time, and increasing visibility to enlarge organizational performance through supply chain efficiency.

This study provides a good avenue to investigate market orientation and organizational performance through supply chain innovation and efficiency. However, the previous studies reflect the lack of a comprehensive operational and management framework that includes the market orientation, supply chain innovation, efficiency and organizational performance. Therefore, this study intends to improve upon past supply chain management studies in Iran and further understand the determinants or relationships in Iranian manufacturing industries' supply chains. Finally, this study enlarges the existing body of knowledge about market orientation, supply chain innovation, supply chain efficiency and organizational performance in Iranian manufacturing sector.

1.4 Research Questions of the Study

The current study focuses on the mediation effect of supply chain innovation and efficiency on the relationship between market orientation and organizational performance. The current study objective is to examine how market orientation has been improving organizational performance through supply chain innovation and supply chain efficiency. Following research questions has been focused on the current study:

1. What is the influence of market orientation on organizational performance?
2. What is the influence of market orientation on supply chain innovation?
3. What is the influence of supply chain innovation on supply chain efficiency?

4. What is the influence of supply chain efficiency on organizational performance?
5. What is the mediating effect of supply chain innovation on the relationship between market orientation and supply chain efficiency?
6. What is the mediating effect of supply chain innovation and supply chain efficiency on the relationship between market orientation (i.e. information technology and process improvement) and organizational performance?

1.5 Objectives of the Study

This study has the following objectives:

1. To explore the influence of market orientation on organizational performance.
2. To examine the influence of market orientation relationship towards supply chain innovation.
3. To develop the influence of supply chain innovation relationship towards supply chain efficiency.
4. To investigate the influence of supply chain efficiency relationship towards organizational performance.
5. To explore the mediating effect of supply chain innovation on the relationship between market orientation and supply chain efficiency?
6. To examine the mediating effect of supply chain innovation and supply chain efficiency on the relationship between market orientation (i.e. information technology and process improvement) and organizational performance.

1.6 Significance of the Study

The present study contributes theoretically and practically in the field of marketing management and organizational performance. Theoretically, this study shows the market orientation's impact on supply chain innovation to enlarge manufacturing sector through their process improvement and information technology application in addition to the impact of consequent supply chain innovation through supply chain efficiency on organizational performance. The manufacturing sector is the fastest growing sector in the world because of its remarkable contribution in the country's gross domestic products (Kiani and Ahmed, 2014; Maleki *et al.*, 2011). In Iran, manufacturing sector contributes about 20 percent the gross domestic product in 2014. Recently, Iranian manufacturing is facing several issues in their supply chain management implement (Motamedzade, 2013). These factors have created a huge problem for the managers which contributes to the market management such as strategy, speed, value chain optimization and its performance, ability to share the information, partnership approach, process management, vision and directions of supply chain management, and IT integrated infrastructure (Wisner *et al.*, 2015). These aspects might help market manager practitioners to resolve the issue.

Besides, market orientation is important to manufacturing sectors due to its prolonged impact on organizational performance (Lee *et al.*, 2011a). However, the studies of market orientation have not received sufficient attention in academic research in the context of Iranian manufacturing sectors. This study is significant because it attempts to determine the market orientation for Iranian manufacturing sectors to improve their competitive edge. Such research findings would provide the manufacturing sector with indicators and guidelines for a successful implementation of market orientation.

From the perspective of theoretical contribution, this study extends previous supply chain management frameworks in Western countries and advances the understanding of the relationship between market orientation and organizational performance in the context of manufacturing sectors (Katou and Budhwar, 2006). Nevertheless, this study does not only focus on the relationship between market orientation and organizational performance of Iranian manufacturing sectors but also

emphasizes on indirect relationship through supply chain innovation and efficiency. This new relationships employ landmark theories such as, market orientation theory, resource-based view and relational view to support framework of the study. Therefore, this study is beneficial to Iranian manufacturing sectors because it can reduce the cost and lead time through effective information technology application and process improvement (Davenport, 2013; Katou and Budhwar, 2006). In addition, this study can improve the supply chain management system through supply chain innovation and efficiency by creating a new ways of adoption of supply chain management in Iranian manufacturing system to develop of current supply chain management.

1.7 Scope of the Study

This study selects market orientation, supply chain innovation, supply chain efficiency and organizational performance as the constructs of the study. Competitor orientation, customer orientation, and inter-functional coordination are the dimensions of market orientation. These constructs are considered the foundation of SCM implementation given the resource constraints of manufacturing sector. In addition, most of the supply chain management studies conceptualize a theoretical framework and begin with a single industry based on data collection before concluding and expanding the model to other industries (Boso *et al.*, 2012; Davenport, 2013; Katou and Budhwar, 2006; Lee *et al.*, 2011a). Thereby, this study attempts to focus on the manufacturing sector in Iran. The scope of this study is limited to Tehran Stock Exchange listed firms of Iran because Tehran Stock Exchange is the most comprehensive which are leading manufacturing industries in Iran and contact with all other provinces. However, the present study does not only contribute to existing knowledge regarding organizational performance, market orientation, supply chain innovation, and supply chain efficiency but, also generalize the previous studies along with the direction to the future researchers.

1.8 Operational Definition

1.8.1 Supply Chain Management

Lambert *et al.* (1998) indicates that SCM is the management of the flow of goods and services. It includes the movement and storage of raw materials, work-in-process inventory, and finished goods from point of origin to point of consumption. Similarly, Monczka *et al.* (2008) have defined SCM as a planning, maintenance, and processes activity of SC for the consumers' needs satisfaction.

1.8.2 Supply Chain Innovation

Supply chain innovation is a key source of competitive advantage (Attaran and Attaran, 2007). Also, supply chain innovation has been explained as a change through the supply chain network, supply chain technology or supply chain processes (Lee *et al.*, 2011a) that can take place in an organization function, within an organization, in a supply chain in order to increase new value creation for the stakeholders. However, process improvement and information technology are parts of supply chain innovation which are considered in the current study. Process improvement is related to organization pursues continuous innovation in core processes, focuses on innovation to reduce cost, focuses on innovative solutions and concentrate on innovation to decrease process. Information technology is related to the IT system in the organization is convenient to access information or provides tasks that directly relate to the system, pursues new technological innovation and the IT system in the organization is a well-informed guide material for using the system.

1.8.3 Supply Chain Efficiency

Supply chain efficiency is related to whether a company's processes are harnessing resources in the best way possible, whether those resources are financial, human, technological or physical (Morgan, 2004). Similarly, the supply chain is a system of organizations, people, activities, resources, information and technology

involved in moving an item or product from a supplier to a customer (Beamon, 1999). However, waste elimination and speed are parts of supply chain efficiency which are considered in the current study. Speed as a part of supply chain efficiency is related to reduce transportation cost, waste reduction in processes, provides on time delivery, service speed and standardizes operation processes. Waste elimination is related to organization builds to the delivery of emergency orders, emphasizes efforts to reduce transport steps, emphasizes efforts to reduce storage cost for special products and provides an overall average delivery lead time of formal orders.

1.8.4 Market Orientation

Market orientation is a business approach or philosophy that focuses on meeting and identifying the stated or hidden needs or wants of customers (Kohli and Jaworski, 1990). Similarly, market orientation is a company philosophy focused on discovering and meeting the needs and desires of its customers through its product mix (Grönroos, 2004). Competitor orientation, customer orientation and inter-functional coordination are dimensions of market orientation which are considered in the current study. Customer orientation is related to customer satisfaction, the level of commitment in serving customers' needs, the value of customers, measure customer satisfaction and pay close attention to after-sale-service. Competitor orientation is related to competitor information, competitive actions, competitors' strengths and weaknesses. Inter-functional coordination is related to share resources with other business units, information communicated throughout the organization, visit customers and increasing customer value.

1.8.5 Organizational Performance

Organizational performance is an ability of the organization to fulfill its mission through strong governance, sound management and a persistent rededication to achieving results (Li *et al.*, 2006). Effective non-profits are mission-driven, entrepreneurial, customer-focused, adaptable, outcomes oriented and sustainable.

Organizational performance comprises the actual results of an organization as measured against its intended results (or goals and objectives). Strategic performance and operational performance are two main dimensions of organizational performance which are considered in the current study. Strategic performance is related to leadership, strategy plan, competitive position and customer satisfaction. Operational performance is related to product quality of suppliers, total cost on the supply chain, services level of the suppliers and productivity of the suppliers.

1.9 Organization of the Thesis

Chapter 1 presents the introduction of market orientation on organizational performance. In addition, both supply chain innovation and supply chain efficiency impact on organizational performance as well. Chapter 2 reviews the relevant literature on SCM and the innovation imperative in the organization performance. Chapter 3 develops the theoretical basis and the hypotheses to be tested and also describes the research processes and research methodology. In addition, describes the research methodology and procedures. In Chapter 4, the theoretical foundation of the study is reported. In Chapter 5, data analysis procedures and results are reported. Chapter 6 concludes with a discussion of the results, contributions and suggestions for future research.

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