RELATIONSHIP BETWEEN CULTURE OF EXCELLENCE AND ORGANIZATIONAL PERFORMANCE WITH KNOWLEDGE SHARING AS MEDIATING ROLE

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A thesis submitted in fulfilment of the requirements for the award of the degree of Doctor of Philosophy (Mechanical Engineering)

Faculty of Mechanical Engineering
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I dedicate this dissertation to my beloved family;

my beloved wife, Dr. Forgoogh Khosravi;

my dear mother of wife for his patience; my dear father;

and my merciful mother, for her encouragement
ACKNOWLEDGEMENT

In the name of Allah, Most Gracious, Most Merciful. I thank Allah for granting me perseverance and strength I needed to complete this thesis.

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ABSTRACT

High performing organizations are those which practice exemplary Culture of Excellence (CoE). Global competition dictates that only high performing organizations will survive in the long term. However, most previous studies have paid less attention to CoE especially in developing countries. In particular, little has been written about the effects of knowledge sharing and efforts on CoE and organizational performance relationships. The main objective of this study was to develop a conceptual framework between CoE and organizational performance with knowledge sharing as a mediator. Past developments, recent progress and future trends in establishing such relation was comprehensively overviewed. The subject area of this research was selected Iranian manufacturing companies. First, three theories namely Denison’s theory, social exchange theory, and resource-based theory were identified and applied in this study. 12 hypotheses were proposed to develop a conceptual framework based on structural equation modelling (SEM). Managers from 222 EFQM excellence award-winning manufacturing companies in Iran were selected to participate in a survey. The model was validated using SEM-PLS and the path modelling among the studied variables was developed. The structural model results proved that CoE has a significant impact on organizational performance. This study also stated that knowledge sharing is an important mediator between CoE and organizational performance. The features of the structural model suggest that CoE can act as a recommendable management system to effectively support organizational competitiveness. Organizations must incorporate and encourage the practice of knowledge sharing into their CoE practices. Findings of the current study, can also contribute to the development of superior organizational performance by creating a valid and reliable measurement instrument for CoE. The author further asserted that the proposed conceptual framework should benefit both practitioners and researchers.
ABSTRAK

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<th>Description</th>
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<tr>
<td>AMOS</td>
<td>Analysis of Moment Structure</td>
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<tr>
<td>AVE</td>
<td>Average Variance Explained</td>
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<td>BR</td>
<td>Business Result</td>
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<td>CB-SEM</td>
<td>Covariance-Based Structural Equation Modelling</td>
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<td>CFA</td>
<td>Confirmatory Factor Analysis</td>
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<td>CoE</td>
<td>Culture of Excellence</td>
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<td>CR</td>
<td>Composite Reliability</td>
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<td>CS</td>
<td>Customer Satisfaction</td>
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<td>CST</td>
<td>Clear Vision and Strategy</td>
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<td>DE</td>
<td>Direct Effect</td>
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<td>DF</td>
<td>Degree of Freedom</td>
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<td>DV</td>
<td>Dependent Variable</td>
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<tr>
<td>EEN</td>
<td>Engaging and Challenging Environment</td>
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<td>EFA</td>
<td>Exploratory Factor Analysis</td>
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<tr>
<td>EFQM</td>
<td>European Foundation for Quality Management</td>
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<tr>
<td>EM</td>
<td>Expectation Maximisation</td>
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<tr>
<td>ES</td>
<td>Employee Satisfaction</td>
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<td>ETR</td>
<td>Excellent Training and education</td>
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<td>HMO</td>
<td>High Degree of Motivation</td>
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<td>HTE</td>
<td>Highly Empowered Team</td>
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<td>IE</td>
<td>Indirect Effect</td>
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<td>ILE</td>
<td>Inspiring Leadership</td>
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IV - Independent Variable
KS - Knowledge Sharing
MTR - Mutual Trust
OCO - Open and Transparent Communication
OP - Organizational Performance
PLS - Partial Least Squares
PLS-SEM - Partial Least Squares Structural Equation Modelling
QA - Quality Assurance
RBT - Resource-Based Theory
SCL - Seamless Collaboration
SCT - Strong Commitment
SEM - Structural Equation Modelling
SmartPLS - Statistical Software for Partial Least Squares Structural Equation Modelling (PLS-SEM)
SPSS - Statistical Product and Service Solutions
VIF - Variance in Factor
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CHAPTER 1

INTRODUCTION

1.1 An Overview

This Chapter presents the background of this study with an emphasis on culture of excellence (CoE), knowledge sharing (KS) and organizational performance (OP). The problem statement that forms the basis of this research is described. In addition, the objectives, questions, scope, definitions of terms and significance of this study are presented. Finally, an overview on the content outline of this thesis is provided.

1.2 Background of the Study

According to by Peter Drucker (2000), the foundation of organizations in the 21st century not only refers to money, capital, or even the technology and it relates to the knowledge (Schwartz, 2006). These days, criteria for organization’s success are intellectual capital rate, existence of the special knowledgeable capital, the competitive compensations it delivers, and the ability for request and creation knowledgeable capital. Furthermore, David and Fahey (2000), Lai and Lee (2007), and Leonard-Barton (1995) identified the importance of knowledge in companies to attain and preserve a competitive advantage. From the perspective of Davenport and Pruzak (2000), knowledge is a critical aspect to an organization’s existence.
knowledge management is a significant subject in the sector of modern management (David and Fahey, 2000). According to Coakes (2004), the application of knowledge management in companies will lead to efficiency, increased productivity, superior cooperation, and improved revenue. From the process point of view, KM consists of knowledge creation, knowledge retrieval, KS and knowledge application (Nonaka, 1995). According to Grant (1996), and Jashapara (2005), KS is considered as a main procedure in knowledge management activities.

According to Yang (2004) KS is defined as the distribution of information and knowledge over the whole section and/or organization. Lin (2007b) considered that KS is a procedure that knowledge and skills are conveyed from one person to another person. The behaviour of KS can be fostered at the level of individuals (Huang et al., 2008) and effective sharing of knowledge among workers in the companies is useful to improve a long-term sustainable competitive advantage of the organization (Wang, 2009; Lin, 2007a; Ruhi, 2003). It also encourages innovation and creativity (Apostolou et al., 2008; Hong et al., 2004), which creates an environment for generating information needed for decision making (Kearns and Lederer, 2003). Thus, an organization must ensure to find the ways for KS within the organization and among the people who will require or need of this knowledge.

According to David and Fahey (2000), the primary study in the area of knowledge management concentrated on technology sector as the main enabler for information transmission. According to Benbya (2006), practitioners have made important investments in information technology with the aim of promoting knowledge management creativities. As considered by DeTienne et al. (2004), many of these knowledge management initiatives have failed to produce the expected results. KPMG conducted an organizational survey in 2000 among leading industries in The United States of America and Europe. The results indicated that 62 percent of the sample were using some type of knowledge management system or in the process of setting it up (KMPG, 2000). Large organizations in the United States (>500 employees) had an average budget of $2.7 million on knowledge management activities in 2000 (Dyer and McDonough, 2001). Unfortunately, study has shown that realizing the expected benefits from knowledge management initiatives has
proven to be difficult and uncertain. Despite the increasing sophistication of knowledge management technologies, significant failure rates of these implementations have been reported (Malhotra, 2005). Davenport et al. (2008), believes that although knowledge-management efforts is considered useful in some ways, but it does not improved goods and services. According to Chin-Loy and Mujtaba (2011), nowadays, academicians have emphasized the need to study about the human factors which is involved in the knowledge management. Knowledge is invisible because it is created in human brains and can be articulated only when people are persuaded to create, reveal, share and use it (Semertzaki, 2011).

Determining the factors that majorly affect the KS concept in an organization is critically challenging. Knowledge capitalization and business flourishing go hand in hand. Numerous factors are believed to have an effect on the achievement of a company. According to Alavi et al. (2006) organizational culture influences the readiness and ability of staffs to share the knowledge with their co-workers who might require such knowledge intended for effective performance.

The Dictionary of Finance (2011) defines an organizational culture (OC) as what is considered satisfactory or offensive, wrong or right, abnormal or normal, significant or insignificant, and predictable or un-predictable in that company. According to Montana and Charnov (2008), organizational culture controls what is to be completed, in what way it is completed and who does it in each company and all memberships of that company that contribute to that way of doing things at all periods and in any settings. As considered by Alavi and Leidner (2001), academics have recognized organizational culture as a significant construct in the way an organization manages its knowledge. They stated that culture performed as a fence or an enabler of knowledge formation and transmission. In the perspective of Chin-Loy and Mujtaba (2011), the organization must generate a culture that endorses KS in order to achieve its goals. Conversely, the culture of excellence is considered as one of the most important kinds of OC.

Wardell (2010) explained the meaning of CoE as the attainment of culture once the workers in a business group systematically perform together to efficiently
and effectively achieve the aim of the organization. Lately, the intense global business economic competition has imparted further impetus towards the development of CoE conceptualization. Considerable attention to CoE philosophies and procedures are made by diverse organizations contribution in international trade and global competition. Over the decades, CoE became attractive to several researchers in sundry areas due to the wide acceptance of its practices by various organizations worldwide. According to Ruuska (2005), CoE is a key indicator to KS, where people must be connected to secure single and shared purpose that could be achieved through a shared OC.

There are several constructs to create a CoE. By referring to review of the literature (Day and Leggat, 2015; Moon and Lee, 2014; Cantey et al., 2013; Burris, 2012a; Sinha and Arora, 2012; Al-Adaileh and Al-Atawi, 2011; Basir et al., 2011; Štok et al. (2010b); Aulawi et al., 2009; Nantana, 2008; Al-Alawi et al., 2007; Oliver and Kandadi, 2006; Neo, 2002; Gruber, 2001; Zeitz et al., 1997; Broadfoot, 1994; Bettinger, 1989) the main factors to create a culture of excellence are Inspiring Leadership (ILE), Open and Transparent Communication (OCO), High Degree of Motivation (HMO), Clear Vision and Strategy (CST), Highly Empowered Team (HTE), Excellent Training and education (ETR), Engaging and Challenging Environment (EEN), Strong Commitment (SCT), Seamless Collaboration (SCL), and Mutual Trust (MTR).

Furthermore, the Iranian Vision 2020 document prospected Iran to become the technology leader in the entire Southwest Asia by 2020. To achieve such a technological leadership, it is essential to cultivate and implement CoE practices. Nowadays, the national quality/excellence frameworks (EFQM excellence award) and their criteria were usually accepted by several companies as a powerful tool for evaluating a company along the quality and excellence path (Meers and Samson, 2003). For conducting the current study, the researcher had selected the companies that received EFQM excellence award in Iran. It was done as there was yet not any framework to evaluate the excellence of the companies in Iran apart from EFQM. Therefore, it is natural to use it as a starting point. The recipient of European Foundation for the Quality Management (EFQM) excellence award by Iranian
manufacturing companies constitutes the most significant industrial sector in the nation. These businesses include car makers, spare part manufacturers, chemical producers, and metal manufacturing companies, and so on. A total of 550 business organizations succeeded in receiving the EFQM award between 2003 and 2013. It is emphasized that a well-managed CoE programme accompanied with a robust KS culture are prerequisite for a manufacturing industry to maintain its competitiveness in accomplishing this prestigious award.

Ironically, the CoE is not yet executed and practiced at the same pace in the different parts of the world. Earliest implementations took place in the USA and Europe, and later in the developing countries. However, to compete in the global market, the developing nations need to implement CoE practices and KS across various sections of their industries. Even though several academics have deliberated the idea of knowledge management, Serenko et al. (2010) mentioned that more study is needed to measure the influence of organizational culture that promotes on operatives’ inclination to share knowledge. Knowledge is generally entrenched in the organizational procedures, practices, and their employees (Serenko et al., 2010). On the other hand, the effect the culture has on KS is still unclear (Serenko et al., 2010). The literature has mentioned the significance of an organizational culture that supported sharing of knowledge. There is an absence of consideration of the constructs that promotes an individual’s willingness to involve in KS at work. Riege (2005) noted that there is a need to conduct more research on how to increase effectiveness of KS to organizational competitiveness and performance.

Other investigators (Trivellas and Dargenidou, 2009) acknowledged that studies on organizations CoE are still very limited. Durst and Edvardsson (2012) reported similar facts for developing countries such as Iran. In fact, most of the works on CoE are dedicated to western nations. It is worth noting that knowledge management not only acts as a precursor to organizational competence, but operates as a medium among managerial constructs and efficacy. Consequently, many issues pertaining to CoE are not given enough attention, despite their value (Antony and Bhattacharyya, 2010).
Despite numerous research to establishing relationship between OC and OP, systematic empirical investigation regarding the influence of CoE practices on OP and KS behaviour in the Iranian manufacturing sector is still lacking. A comprehensive, reliable, and valid measurement tool to determine the CoE is far from being achieved. In addition, positive or negative impact of KS in this relationship is not clear. Consequently, the key objective of this study is to develop and test empirically a conceptual framework to examine the relationship between CoE and OP by considering the mediating effect of KS among Iranian manufacturing companies.

1.3 Problem Statement

According to Booker et al. (2008), modern organizations are employing KS as a strategic tool to boost their client service and to gain in profitability and market share. Ajmal and Koskinen (2008) believed what is significant to note is that study has shown most of the knowledge that organizations need to gain productivity and development usually is already within that organization. The previous CEO of Hewlett Packard, Lew Platt, once said, while only HP knew what it knows it would make three times more profit tomorrow (Davenport and Pruzak, 2000) (p 47-53). As cited by Weiss et al. (2004) an international data group IDC estimated that an organization with 1000 employees might easily suffer a cost of more $6 million each year in lost efficiency when staffs are unable to find present knowledge and need to reconstruct knowledge that was actually obtainable; but it could not be found. As reported by So and Bolloju (2005), regularly, six percent of income, as a percentage of the budget, is missing out of the failure to explicitly obtainable knowledge. According to McNichols (2010), what is vital in knowledge management is the ability of an organization to recognize, cultivate and enable the transmission of the knowledge they previously had in their staffs, practices and procedures, from those who have it to those who requisite it. The problematic issue is that however the staff themselves may not be eager to share the knowledge that they have. Employees need a high degree of motivation in order to share knowledge (Syed-Ikhsan and Rowland, 2004). Thomas and Laurence (1998) stated that the lack of trust, lack of time and
lack of good environment are considered to inhibit knowledge transfer. On the other hand, Ajmal and Koskinen (2008) maintained that most of the knowledge that a company takes such as that gained in the effective application of projects is frequently lost, when the project is accomplished and when the experienced personnel leave. New personnel who replaced skilled staffs that left the organization would have costs and efforts to retrieve the experiences of the previous worker (Ajmal and Koskinen, 2008). Pillania (2006) mentioned that even when the staffs are still employed together, some particular companies do not promote the sharing of knowledge among the novice and knowledgeable workers. By implementing CoE practices, it is believed that workforce KS, workforce productivity, and production efficiency will be improved to be more competitive and customer focused.

It is commonly recognized among practitioners and academics that knowledge is the most significant asset nowadays (Teece, 2007), and OC is frequently emphasized as the main reason behind the failure of knowledge management creativities (Green and Stankosky, 2010). According to Pillania (2006) in a study conducted among Indian companies, the organizational culture has not yet comprised as the major role as an enabler of knowledge management, and most knowledge-management initiatives are unsuccessful due to the shortcomings of an OC. According to Van Dyke et al. (2007), part of this undesirable feature of culture is the reluctance of workers to share organization-relevant knowledge as part of the knowledge management strategies of the organization.

Middle East is the biggest potential in the global market, because they provide 70 percent of oil. Therefore, it is very important to study this concept in Middle East in general and in Iran as one of the countries in Middle East. Iranian manufacturing companies facing competition from other countries in terms of quality, productivity and cost. They also have the challenge to improve their business performance in order to achieve the Iranian vision in 2026 (the technology leader in the whole of Southwest Asia). In addition, in many western and developed countries CoE is well established and used by the organizations that intend to improve the OP. Understanding the culture is very well understood in the developed countries, but in the developing countries like Iran it was not focused and well understood.
Developing countries like Iran, faced with economic sanctions and isolated from the world and from the latest state of development especially with respect to CoE, this culture has not reached the suitable level. Therefore, it was important for the researchers to investigate reasons, obstacles, and solutions that are related to the Iranian companies. It should be noted that, the Iranian industries can reach to the standards and level of performance that is used in western companies if these reasons are understood and overcome.

Meanwhile, culture is considered as one of the key factors in transforming an ordinary organization to an excellent one (Sinha and Arora, 2012). Sharir (2013) affirmed that a company with well-built CoE creates organizational capacity and acquires a structure that focuses, engages and empowers workers. There has been limited research looking into a CoE in a developing country such as Iran and most research activities have been conducted in western countries (Durst and Edvardsson, 2012). As there is a huge lack of (empirical) literature of investigating the role of knowledge sharing (KS) in strengthening the CoE and OP relationship, this research tries to fill this gap.

The main problem addressed in this study is to determine how knowledge sharing impacts both the culture of excellence and organizational performance. Previous research has not investigated the role between the two from a knowledge sharing point of view. A comprehensive, reliable and valid measurement tool to determine the CoE is far from being achieved. It is believed that the findings of this research will help manufacturing companies in their effort to become more effective and competitive.

1.4 Research Objectives

The research has four main objectives, which are as follows:

i. To identify and assess the CoE constructs and organizational performance measures for Iranian manufacturing companies.
ii. To develop a CoE performance model with knowledge sharing as a mediator.
iii. To analyse the relationship of CoE, knowledge sharing and organizational performance in Iranian manufacturing industries.
iv. To recommend CoE performance model and guidelines for Iranian manufacturing companies to improve their organizational performance.

1.5 Research Question

Three research questions to be addressed in this research are:

i. To what extent do Iranian manufacturing companies implement CoE?
ii. Do CoE practices contribute to organizational performance in Iranian manufacturing industries?
iii. Do the individual factors in CoE have significant relationship with organizational performance?
iv. What are the rankings of individual CoE constructs towards organizational performance?
v. Does knowledge sharing act as a mediator between CoE and business performance?
vi. What are the relationships among KS, CoE, and organizational performance?

1.6 Scope of the Research

To make the study more manageable and effective, the research scope of this study focused on two main areas, which are as follows:

i. The selection of companies consists of winners of the EFQM excellence award in Iranian manufacturing industries.
ii. The population and samples of survey respondents targeted in this research were based on the latest list of EFQM excellence award directory in Iran.

1.7 Significance of Research

This study reported the role of KS in strengthening the CoE and OP relationship in the context of Iranian manufacturing sectors. The objective of this research was to improve CoE performance model connecting three theories: social exchange theory, Denison’s theory and resource-based theory in testing the effect of CoE and OP. The developed model identifies KS as a mediator involved in the Iranian manufacturing companies. The mixture of the three theories, as noted in a conceptual model, was examined to develop the related proposed model of CoE performance.

Understanding of CoE is expected to be enhanced together with development of a model of CoE unique to developing countries. In addition, there has been limited research looking into a CoE in a developing country such as Iran and most research activities have been conducted in western countries (Durst and Edvardsson, 2012) and there is a lack of empirical research that identify and assess the CoE constructs and KS behaviours for Iranian manufacturing companies. Manufacturing companies are important to the Iranian economy. Accordingly, the current study is concerned with the comprehensive framework with KS as a mediator, as well as the relationships among CoE and OP over Iranian context that was not studied before.

Outcomes of the current study are expect that CoE has a significant effect on OP and improved confidence for the manufacturing players to perform CoE in related organizations. The proposed model for this study is expected to simplify and facilitate the CoE implementation procedure for manufacturing companies, and to recognize their weakness. Therefore, the necessities of the Iranian manufacturing companies about the effective CoE implementation are significant to work in a competitive market economy.
Another significance of this study is to aid organizations in identifying important factors of CoE that influences KS among knowledge workers and organization performance. This should help organization successfully implement knowledge management systems. Moreover, the information from this thesis should help practitioners to reap the full benefits of an existing knowledge management system. Top management should be able to increase the value of their current knowledge management system and transfer knowledge more easily with the results gained from this thesis. The company studied would have a better understanding of the most important factors that influence those aspects of their organizational culture of excellence that impact KS and OP. With this insight, they can manage their knowledge transfer better and more effectively. The outcome of this research should benefit both academics and practitioners.

1.8 Contribution of the Study

Current research contributes in empirical research on the significance of CoE and KS to the manufacturing companies and academic. First, this study has extended the research in manufacturing companies, particularly in a developing country, Iran. According to Durst and Edvardsson (2012), there has been limited research looking into a CoE in a developing country such as Iran and most research activities have been conducted in western countries. Present findings might contribute to the development of superior OP through the creation of a valid and reliable measurement instrument for CoE. The developed and tested content of this research fills the research gap by providing a useful and reliable reference material on the critical factors of CoE implementation on KS and OP. Current research attempts to improve managers to devote resources and time to do CoE and KS in their companies. The effective KS and CoE development helped to OP of the organization. Current study results can improve business players to do CoE and KS to develop related OP. Indirectly, it would contribute to Iranian economic improvement and Gross Domestic Product (GDP) per capita. Economic transformation programme (ETP) offers a new challenge to Iran and manufacturing companies for changing to a high-income nation. Therefore, this study proposed comprehensive CoE performance framework
with KS as a mediator, which were not studied before, especially in Iranian setting. It could be considered as a guideline for companies for improving their competitiveness for competing in a worldwide marketplace.

The contribution for experts was to develop significant guidelines about manufacturing companies to implement CoE with KS as a mediator. The measurement tool improved over the current research must be an instrument regarding the companies to assess and compare related present activities. The research prepared useful framework for manufacturing practitioners for increasing their OP. This is a managerial and theoretical suggestion, which can improve limited present works about culture of excellent.

1.9 Definition of Terms

The following definitions are adopted in the context of this thesis:

a) Direct Effect (DE)
Direct effect is a directional relationship between two variables with no intervening variables (Hoyle, 1995).

b) Endogenous Variables
Endogenous variables are those influenced by factors that are inside the structural model (Mueller, 1996).

c) Exogenous Variables
Exogenous variables are those influenced by factors that are outside the structural model (Mueller, 1996).

d) Indirect Effect (IE)
Indirect effect is the effect of one variable (independent) on another (dependent) through one or more mediating variables (Hoyle, 1995).
e) Knowledge Management
Each practice or process of making, obtaining, capturing, sharing, and applying knowledge, if it resides, to develop performance and learning in companies (Armstrong, 2012)

f) Knowledge sharing
The transfer and exchange of knowledge among persons, groups, and organizations to improve the competitiveness of the organization through the effective integration, exchange, and synergy of knowledge (Lawson et al., 2009).

g) Latent variable
Latent variable is an unobserved variable.

h) Organizational Performance
Performance measurement of a company's goals and achievements (Lam et al., 2011).

i) Structural Equation Modelling (SEM)
Structural Equation Modelling is a multivariate analytic tool, which incorporates both the theoretical and empirical aspects of research and is supported by powerful computer software packages such as AMOS (China, 2009) and SmartPLS.

j) Organization culture
Organizational culture as the shared and basic assumptions that an organization learnt while coping with the environment and solving problems of internal integration and external adaptation that are taught to new members as the correct way to solve those problems (Park et al., 2004).

k) Culture of excellence
The culture attained once a business group of workers work together methodically to efficiently and effectively achieve the goal of the organization (Mark Wardeel, 2010).

1) Tacit knowledge
Tacit knowledge is individual knowledge based on individual experience, commitment, involvement, and action in a specific context (Noe, 2002; Nonaka, 1994).

m) Explicit knowledge
Explicit knowledge is often considered as visualized or codified knowledge, that is transferred in the form of systematic and formal language (Nonaka, 1994).

1.10 Outline of Thesis

This thesis is organized into five chapters as shown in Figure 1.1. The first chapter has highlighted the background of the research. It has also outlined the problem statement, research objectives, questions, scope, significance of this research, research contributions and definitions of terms.

Chapter Two presents some reviews of literature to understand the issues of the research. The review describes about knowledge, knowledge management, KS, culture, organizational culture, CoE, OP, previous studies on CoE and OP. This is followed by a brief review on the theoretical framework. This Chapter critically reviews the development and analysis of CoE constructs, KS and performance measure constructs. Based on that, a proposed research model has been developed and used in this study for Iranian manufacturing companies. Finally, this chapter develops research hypotheses.

Chapter Three contains the procedures and methods that have been used in the research. It gives a detailed description of the research procedures and discusses
each of the research stages. This chapter starts with a research design, a discussion on the overall structure of the research methodologies, and survey methodology. In the survey methodology section, a detailed explanation has been provided on questionnaire development, expert validation, translate to Persian language, pilot study, population and sampling of the study, data collection, exploratory factor analysis, confirmatory factor analysis, reliability, validity, second order factor, inner model evaluation and statistical analysis.

Chapter Four presents the results of the survey. It discusses the preliminary data analysis, the respondents' general descriptive statistics, validation of the survey instruments by using validity and reliability test. The chapter presents a set of hypothesis testing included to test relationship between CoE practices, OP and mediator analysis.

Chapter Five provides an overall discussion of research findings to make the results of Chapter 4 clear. This chapter concludes the findings, implication, limitation of the research, recommendations for further research and conclusions.

![Figure 1.1 Organization of the Thesis](image_url)
1.11 Summary

This chapter has laid the foundation for the thesis. Among others, it has introduced the background of the research and described the scope and objectives of the research. The research significance is briefly described, research contributions are highlighted, definition of terms used in this research is presented, and the organization of the thesis is outlined.
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