Investigating the role of strategic thinking in establishing organizational excellence model

A moderating role of organizational forgetting

Mohammad Javad Ershadi
*Department of Information Technology,
Iranian Research Institute for Information Science and Technology (IranDoc),
Tehran, Iran, and*
Rouhollah Eskandari Dehdazzi
Electronic Unit, Islamic Azad University, Tehran, Iran

Abstract

Purpose – The purpose of this paper is to study the role of organizational forgetting in the impact of strategic thinking on the implementation of an organizational excellence model. Furthermore, the factors with main effects on the implementation success of the organizational excellence model are investigated. The two main causes of organizational forgetting, including purposefulness and randomness, along with the three main factors of strategic thinking (vision, creativity and systematic thinking) also are explored. Enablers and results, which are the two key parts of an organizational excellence model are considered as well.

Design/methodology/approach – A model based on structural equations is designed, in which organizational forgetting factors, strategic thinking measures and main parts of a business excellence model are incorporated based on the literature. A total of 297 Iranian companies in which an organizational excellence model had been implemented are selected for investigation. A questionnaire is designed and distributed among the experts, middle managers and top managers of these companies. Based on Cochran's formula, the sample size of 168 is obtained, for which the response rate is 100 percent. Main statistical measures such as χ^2 ratio to degree of freedom, non-soft fitness index (RMSEA), fitness index (GFI) and modified fitness index (AGFI) are used to assess the performance of the proposed model.

Findings – According to the results of the statistical significance tests, the role of organizational obsessive mediators in the establishment of the organizational excellence model has been largely confirmed. Furthermore, the mediator role of organizational forgetting in the final impact of strategic thinking on implementing an organizational excellence model has been widely endorsed. Failure to use knowledge from learning, the inability of a company in coding and documenting knowledge and lack of incentives to share it are the most important factors in the forgetting of knowledge in companies.

Research limitations/implications – As top managers, middle managers and experts are hard to reach due to the wide geographical spread of the organization under study, a questionnaire is designed and distributed among them. The impact of organizational forgetting on other quality management systems such as ISO 9001 and ISO 4001 needs another research to be conducted in the future.

Practical implications – Using new experiences, increasing the competency of employees and managers experience through organizational learning, employee and managerial assessment and organizational strategy assessment are the main practical methods for considering organizational forgetting in the process of implementing organizational excellence models.

Originality/value – This research addresses organizational forgetting besides strategic thinking as joint main roles for implementing organizational excellence, whereas previous research works only considered strategic thinking as a factor. Furthermore, a structural equation model is developed for appraisal of effect of different factors.

Keywords Effectiveness, Business excellence, Strategic thinking, Organizational excellence, Organizational forgetting

Paper type Research paper

1. Introduction

Strategic decision making is a management tool that is designed to help companies to adapt themselves competitively to projected changes in the environment. In particular, the strategic planning process presents an attitude for a company and its environment to describe the current situation of an organization and identifies the key factors affecting its success. This approach, emphasized by the strategic management based on the interaction of managers at all levels of an organization and business, also yields certain behavioral outcomes that are characteristic of the participatory decision-making system. For this reason, the study of the diagnosis and accurate evaluation of the effect of formulating a strategy on the performance of an organization or business often requires a set of financial criteria, and so on, that evaluates the effectiveness of managers (Proctor, 2014). However, the profitability of strategic plans and environmental changes management can be sought in the development of activities, increased productivity and realization of the goals and effectiveness of the scientific management process. Strategic decision making is a process that companies use to steer their programs and activities with long-term achievements and in pursuit of goals and fulfillment of their organizational missions. Currently, these plannings are welcomed by organizations; therefore, if the strategy is correctly formulated, implemented on time, the path to excellence and realization of the dreams of an organization will be realized (Grant, 2016).

Strategic planning, by examining the internal and external environment of an organization, identifies the environmental opportunities, threats, internal strengths and weaknesses. Furthermore, this approach considers the mission and long-term goals of an organization and allows it to concentrate and provide a dynamic and continuous process of self-analytic work (Harris and Sherblom, 2018). On the contrary, organizational dialog could strongly help that a set of predetermined goals goes beyond the reach of a company (Beech *et al.*, 2017). Therefore, it is necessary to examine them separately and their differences to be considered; strategic thinking is a creative and divergent process and is related to the vision and outlook that is designed by the leaders of an organization. This requires a shift in the mindset of managers from day-to-day operations with the aim of focusing on the long-term strategic intentions of the business. Quality management and organizational learning are two main factors for the survival of organizations (Jiménez-Jiménez *et al.*, 2015). Total quality management is mainly affected by organizational learning and strategic thinking-related contexts.

Strategic thinking includes activities such as information gathering, analysis, discussion and dialog of the conditions governing an organization, and, in companies with diverse activities, it includes answering the basic questions about the organization's portfolio (Eryılmaz *et al.*, 2016).

Along with the strategic thinking, attention should also be paid to the subject of organizational knowledge. Today, organizations regard knowledge as the most valuable and strategic source for themselves and believe that they must manage their capabilities and resources in order to remain competitive. In fact, knowledge management is sought after the creation of processes that are necessary not only for learning and keeping what is important but also for avoiding knowing what is not important (Need, 2006).

In fact, the learning and protection of knowledge, besides the ability to forget, are equally important in any organization. Then, forgetfulness and organizational learning should be equally considered. On the basis of this, it can be said that organizational forgetting is the voluntary or non-voluntary loss of organizational knowledge that can lead to changes in the capabilities of an organization. The effect of organizational forgetting depends on the location and it can be harmful when it leads to the loss of the non-purposeful organizational competencies (non-purposeful forgetfulness), but when an organization needs to change, it can be considered as the first vital step for organizational renewal (Parnell and Crandall, 2016).

On the contrary, considering the current situation, achieving a comprehensive, reliable and flexible approach for performance has become one of the major concerns of organizations; therefore, by resorting to it, they can obtain accurate and sufficient information about their current position and, by looking at the future, can avoid the repetition of the past mistakes (Thompson, 2017). Organizational excellence models are a comprehensive and appropriate tool for measuring the performance of an organization that facilitates control and improvement of performance (Anjomshoae *et al.*, 2017). Studies have shown that the use of organizational excellence models has been effective in improving the performance of organizations. Considering the strength of these models, many countries have used organizational excellence models as a basis for compiling quality and efficiency awards at the national level (Quinn, 2018). In recent years, in Iran, these tools have also come to the fore. Some Iranian organizations, such as MAPNA SAIPA groups, have developed the European Excellence Model, one of the most popular models of excellence worldwide, as the base to assess their performance and efficiency.

As is resulted from comprehensive literature review, strategic thinking has main effect on successful implementation of business excellence models. The main contribution of this research is to investigate the effects of strategic thinking and organizational forgetting in implementing organizational excellence models. Therefore, in this research, the relationships between strategic thinking and organizational forgetting and their effect on the successful establishment of an organizational excellence model are examined.

Implementing organizational excellence is one of the most important strategic objectives of any organization. Continual improvement in all sections of organizations while regarding enablers and results is strongly considered in business excellence models. Nowadays, strategic planning of organizational excellence is malformed without considering knowledge management elements, especially organizational forgetting. As such, previous linkage in recent revisions of quality management standards such as ISO 9001 has been strongly considered (Hoyle, 2017). Although researchers have recognized that managers play an important role in accidental and intentional forgetting, how organizational forgetting has an effect on management system is still unclear (Mariano and Casey, 2015). As is inspired by literature review, very little research has been conducted relating to organizational forgetting and its effect on business excellence models (Mariano *et al.*, 2018). Furthermore, there is a lack of theoretical concepts to explain the organizational forgetting as a main factor for improving the reliability of implementations of business excellence models (Hamidizadeh *et al.*, 2016). Thus, there is a need for further research on this subject.

The contribution of this research is investigating the role of organizational forgetting in business excellence implementation. A structural equation model (SEM) is used for assessing unobservable latent constructs and their related interrelationship.

The structure of this paper is as follows. In Section 2, the literature review of the paper is presented. The model of this research is described in Section 3. Section 4 discusses the methodology of the paper. The main results and hypotheses of the research are described in Section 5. The discussion is explained in Section 6. The practical implications and conclusions are provided in Sections 7 and 8, respectively. Limitations of this study and some recommendations for future research works are presented in the final section.

2. Research background

Recently, many research works have been performed to explore the role of business excellence models and quality management systems in the field of knowledge management, for example, see Iqbal and Asrar-ul-Haq (2017) and Saleh and Watson (2017). Hamidizadeh *et al.* (2016) assessed the level of governance of strategic thinking and its relationship with organizational performance of Holding Tapiko. The results of the research show that the average strategic governance in the studied companies is in the range of low to moderate.

There is also a strong positive and significant relationship between the governance of strategic thinking and organizational performance.

In a study by Mazidi and Naseri (2015), an attempt has been made to investigate the relationship between in-organizational variables with strategic thinking mediation in a bank.

In a study by Habibi (2013), he points out that in today's competitive world it is not possible to achieve strategic goals without an organization. In these highly changing competitive environments, companies need to come up with plans to make the organizational boundaries more flexible and efficient.

In an independent work by Mashbaki and Khazaee (2002) in order to determine the strategic thinking in Iranian organizations, they conducted a research in relation to the design of the elements of strategic thinking in Iranian organizations. By identifying the elements of strategic thinking and determining their mutual relationships and interactions, they classified the elements of strategic thinking, in four levels based on the degree of dependence.

Chen *et al.* (2017) pointed out that the research area of the organizational learning from experience is relatively fragmented, lacks exploration for underlying learning motivation and is short of a systematic and fine-grained framework.

Huang *et al.* (2018) examined how the organizational forgetting affects innovation performance under the consideration of the environmental turbulence as a moderating factor of the analysis framework.

Dominique-Ferreira (2017) in his article pointed out that global competition forces companies to rethink on their approach of presenting products and services based on their customers. The results of Nanger's research confirm all assumptions in the form of strategic thinking on organizational excellence in the formation of competitive strategies in an organization.

How to direct business through a set of values and basic beliefs can be found in the philosophy of an organization and strategy related to it. Marketing research studies focus mainly on preserving market orientation through the implementation of the concept of marketing. Grinstein (2016) in his research stated that many research studies have been carried out on the application of other strategic orientations such as innovation orientation, technology orientation, entrepreneurship orientation, quality orientation, cost orientation and productivity orientation, and examined their impact on the performance of organizations.

Theodosiou *et al.* (2015) in their research argued that strategic orientations are principles that impact marketing activities and strategy development of an organization and serve to create appropriate behaviors that lead to better performance.

Bisbe and Malagueño (2012) examined how a strategic performance measurement system impacts organizational performance through the creation of a strategic agenda. Using archival data and data collected from 267 large or medium Spanish companies showed that there is a positive relationship between a set of strategic decisions and organizational performance.

Strategic alignment (or fitness) is a concept that is very important in organizations; establishing information technology will contribute to a real increase in performance. Bergeron *et al.*'s (2010) article explored the ideal patterns of strategic alignment and business performance in an organization.

The following part of this section is organized to explain separately three main topics. The first topic is strategic thinking as is discussed to Subsection 2.1. The second topic is organizational forgetting that is explained in Subsection 2.2. The excellence model is the third topic that is introduced in Subsection 2.3.

2.1 Strategic thinking

Researchers and thinkers in the field of management have always been concerned with the meaning and concept of strategic thinking with the word "insight." Therefore, the correct understanding of the concept of this word is essential for a proper understanding of the

subject of strategic thinking. Insight is an interesting, realistic and imaginative future for an organization. In other words, it is an explicit statement of the fate and an organization must move toward it (Cunningham, 2017). Strategy is not just in the future; it is a bridge that connects the past, the present and the future, so a strategic thinker should have a deep insight to create strategies for an organization that guides an organization to the future, in the light of its past, where it lies (Bryson, 2018). Strategic thinking in today's unpredictable environment is considered to be an appropriate approach for organization's leadership (Stoyanova, 2018), an approach that can outweigh the organization's ability to compete and bring more market share (Ghaffarian and Ali Ahmadi, 2000). According to Liedtka (1998), the term (strategic thinking) has been used so widespread today that it threatens to make it meaningless, but Mintzberg (1994) explicitly stated in his research that strategic thinking is not merely a sub-name or second name for whatever is under the umbrella of strategic management, but it is a special method of thinking with completely different characteristics. However, many attempts have been made to make the concept of strategic thinking meaningful.

Based on the results of a research conducted by Heath (2012), to identify the managerial skills needed for managers for globalization, strategic thinking was identified by all respondents as the first or second skill required to improve the performance of managers. From Mintzberg's perspective, reinforcement of strategic thinking leads to compilation of better strategies. He believes that managers with strategic thinking capabilities are able to encourage other employees to find innovative ways to succeed. They see an organization as it should be, not as it is. In this way, strategic thinking can be considered as a prelude to the future design of an organization. The ability of strategic thinking to remain competitive in a turbulent and global environment is vital (Mashbaki and Khazaee, 2002).

Therefore, recognizing the challenges ahead of this important issue and planning to address these challenges are of paramount importance. As a general impression, we can say that strategic thinking is a divergent and pragmatic thinking, and like thinking it is a dynamic process that develops continuously through the interaction with the environment; it is in fact a continuous process aimed at eliminating ambiguity and giving meaning to a complex environment. If a manager or leader wants to play an effective role in an organization, he must improve his strategic thinking skills (Tan, 2017).

Indeed, strategic thinking can be considered as a method of solving strategic problems of an organization that combines the logical and convergent approach with the process of creative and divergent thinking. In strategic thinking, complicated issues are simplified without trying to simplify them, and the key to success is being hopeful to the future, positive thinking, optimism away from implicit and tireless efforts. For more detail, the model of strategic thinking is presented below.

2.1.1 Model of strategic thinking components. Based on previous research by researchers in this field and with the compilation of opinion by scholars such as Ledetka, Mintenzberg and some other thinkers in the field of strategic thinking, in this study, we have developed a model that consists of three elements of systemic thinking, creativity and vision (Theodosiou *et al.*, 2015).

2.1.1.1 Systemic thinking. According to Kauffman (1991), systemic thinking represents a change in the way we look at an organization, a change in the organization's perception as the combination of distinct and unrelated components that are competing for the resources to considering an organization as a general system (Oschman, 2017).

This issue, in Grets's view, requires the ability of people to distance from paying attention to daily operational issues. Furthermore, this factor is considering how different problems and issues interlink with each other and they affect each other.

In such a situation, the prevailing viewpoint is transpersonal and futuristic. Instead of concentrating on a particular action or reaction by individuals, the structures that shape individual behaviors and the conditions that make up the desired events are

emphasized that require a complete understanding of the internal and external implicit dynamics of an organization.

2.1.1.2 Creativity. Strategic thinkers should look for new approaches and also seek out the best ways to do things. In other words, they should have a creative mind. Strategists must enjoy the unconventional thinking and the use of imagination and creativity to explore alternative ways of doing things (Oschman, 2017). According to most studies of creative thinking, the ability to produce novel solutions for an issue and the development or recognition of unusual communications is the creativity. Senior management should provide the resources needed to implement the idea. The decision to allocate money and time to a team or project is a complex judgment that can support or eliminate creativity (Harris and Sherblom, 2018).

2.1.1.3 Vision. One of the other main elements of strategic thinking is having a vision and goal. Visions are attitudes or imaginations that people have in their hearts and minds. Having a goal in an organization leads the activities and tasks and prevents people from doing futile activities that do not meet the goals of an organization (Oschman, 2017).

The researchers define the vision as valuable goal determination from employees' perspective and explanation of the future status of the organization's core processes. The vision can be defined as goal imagination, desired organizational future and discovery of new competitive realms. However, vision increases commitment in an organization and creates a general perception that spreads in entire organization and inspires individuals to take advantage of their experience and talent in an organization (Harris and Sherblom, 2018). At the senior management level, a shared vision helps concept and understanding creation, from the direction in which the decision-making process takes place (Dominique-Ferreira, 2017). The organizational forgetting as a new approach on organizational learning is introduced in the next subsection.

2.2 Organizational forgetting

The concept of organizational forgetting, although is easy to understand, is not well understood how it works in an organization. Because organizational forgetting can affect the competitiveness of a company or organization, an organization needs processes to ensure that knowledge that needs to be discarded is forgotten and knowledge that is useful is not forgotten (Mariano *et al.*, 2018). Organizational forgetting is not an organization's inability to learn; sometimes it is necessary that an organization knowingly abandon its existing knowledge, and sometimes knowledge is lost unknowingly over time. Holan and Phillips (2003) refered to a number of studies that show that organizations are quite capable of forgetting because they are negligent to forgetting. In tasks that are carried out on an occasional basis, knowledge can be forgotten after a while; the amount of this forgetfulness depends on the effectiveness of the knowledge transfer tool and the time of task stop (Tukel *et al.*, 2008).

Organizational forgetting is the failure of an organization to exploit the learning that has taken place in the past. It should be noted that organizational forgetting is not an inability to learn organizational issues, but forgetting is a process that occurs after learning (Tukel *et al.*, 2008).

This means that an organization first learns knowledge and then forgets it consciously or unconsciously (Tukel *et al.*, 2008).

Organizational forgetting is the result of an in-organization and out-organization efforts in which an organization deliberately or unknowingly loses some of the organization's existing knowledge. This knowledge includes things like skills, methods, processes, experiences, documentation and techniques used by an organization (Mariano *et al.*, 2018). Organizational forgetting is the result of a series of actions that can be rooted in in-organization or out-organization actions and decisions. Organizations must systematically and consciously look at organizational forgetting, in order to finally achieve positive outcomes (Mariano *et al.*, 2018).

Organizational forgetting often places a lot of costs on an organization, and many countries in the world spend a lot of resources to acquire knowledge and information every year. The most important thing that drives an organization into forgetting is the inability to acquire and disseminate learning in an organization (Tukel *et al.*, 2008).

Failure to use knowledge from learning, the inability of a company in coding and documenting knowledge and lack of incentives to share it are the most important factors contributing to the forgetting of knowledge in companies (Tukel *et al.*, 2008).

2.2.1 Classification of organizational forgetting. In the classification of organizational forgetting, few studies have been carried out (Mariano *et al.*, 2018). By reviewing the theoretical literature, thinkers have drawn attention to organizational forgetting from two following bases:

(1) relationship between the type of forgotten knowledge (modern knowledge vs available and old knowledge) and the consequence of forgetting (positive and negative outcome) (Martin de Holan and Phillips, 2004); and

(2) relationship between the method of forgetting (consciousness forgetting vs unconsciousness forgetting) and the consequence of forgetting (positive consequences of forgetting vs its negative consequences) (Azmi, 2005).

On one hand, knowledge that is forgotten in an organization can be new, available or old.

Consider an organization that initially agrees with the introduction of a specific technology, and after a while, due to the failure of this technology, this organization will abandon it and forget about the lessons learned. In this case, an organization is faced with the forgetting of a new knowledge. In another case, you can note an organization that has discarded its knowledge for several years in the production of a specific product and launches another product production. In this case, an organization asks for the forgetting of its old and available knowledge. These two types of forgetting can have positive or negative consequences (Ghaffarian and Ali Ahmadi, 2000).

Some other research studies on organizational forgetting, regardless of the type of knowledge, have paid attention to the way in which forgetting occurs (Mariano *et al.*, 2018). In this context, the question is whether an organization deliberately forgets or does it without planning. Organizational forgetting can sometimes create benefits for an organization and sometimes bring losses for an organization (Beech *et al.*, 2017).

Consider an organization that loses a significant part of its knowledge due to a natural occurrence (fire). It is natural that the consequence of this forgetting for an organization would be harmful (Smith, 2018). In contrast, an organization has discarded a part of its knowledge and has equipped with a new knowledge and this separation has created a competitive advantage for an organization. In another approach, forgetting is divided into two forms, planned and unplanned ones.

Planned forgetting is an active and conscious act in which information and knowledge existing in an organization are discarded. On the contrary, unplanned forgetting is a passive, often involuntary activity, in which the vital information and knowledge of an organization are forgotten (Tuck and Del vecchio, 2018).

By combining the two factors (forgetting method and the consequences of forgetting), organizational forgetting is described in four modes. These four modes are as follows: neglect, sabotage, disappearance and learning elimination (Azmi, 2005).

Holan and Phillips (2003) divided organizational forgetting in the following ways. Accidental forgetting (unintentional) that includes two types of organizational forgetting. The first is memory loss, which occurs when good knowledge is fixed and inadvertently lost. The second is the inability to receive, which occurs when the new knowledge is inadvertently lost before it can be fixed in the organization's memory.

Purposeful forgetting is the second group. Whereas accidental forgetting can reduce the competitiveness of an organization, purposeful forgetting can increase it (Mariano *et al.*, 2018). This kind of forgetting occurs in two modes. In the first mode, managers deliberately eliminate knowledge that prevents changes in an organization. In the second mode, managers identify knowledge that can be potentially harmful and prevent it from adding to the existing knowledge in an organization. In both cases, forgetting is an active process that companies deliberately manage.

Before investigating the effect of organizational forgetting on implementing excellence model, a brief description of these models is given in the next section.

2.3 Organizational excellence model

Organizational excellence is an ideal model for the growth and improvement of organizations by identifying strengths and defining improvable opportunities. Excellent organizations refer to organizations that seek to adapt themselves more and more to the model of excellence and step toward organizational excellence (Ringrose, 2013). The criteria of excellence models are explained below.

2.3.1 Organizational excellence model criteria. 2.3.1.1 Criterion 1: leadership. Leadership criterion shows that leaders, especially senior leaders, determine the organization's overall direction through management systems and guide an organization in pursuit of its goals and sustainability. This criterion also addresses the behavior of leaders in doing their tasks as the organization's ethical and value models, inspiration, the development of atmosphere of trust, flexibility, observance of laws and regulations, social responsibility and active engagement with key stakeholders (Iqbal and Asrar-ul-Haq, 2017).

2.3.1.2 Criterion 2: strategy. The strategy criterion shows how excellent organizations develop and update their supportive strategies and policies in order to meet stakeholders' needs and expectations. These organizations share them with stakeholders for the realization of the strategies and, in order to achieve a sustainable breakthrough, design the organizational structure and process framework, develop and implement related programs and goals (Iqbal and Asrar-ul-Haq, 2017).

2.3.1.3 Criterion 3: employees. The employee's criterion shows how excellent organizations value their employees as human capital and create a culture that achieves the interests of the both parties through the alignment of individual and organizational goals. This criterion also describes how to develop capabilities, promote equity, communicate, encourage, appreciate and care for employees in order to motivate and commit employees to enable them to use their knowledge skills in the interests of an organization (Ringrose, 2013).

2.3.1.4 Criterion 4: partnerships and resources. The criterion for partnerships and resources shows that excellent organizations plan and manage external partnerships, suppliers and internal resources to support strategies and policies and effectively implement processes. These organizations ensure the effective management of the environmental and social consequences of external partnerships, suppliers and internal sources (Iqbal and Asrar-ul-Haq, 2017).

2.3.1.5 Criterion 5: processes, products and services. Excellent organizations design, manage and improve processes, products and services in order to create a growing value for their customers and other stakeholders (Iqbal and Asrar-ul-Haq, 2017).

2.3.1.6 Criterion 6: customer results. The customer results criterion shows that excellent organizations have come up with results about successful streamlining of customer supportive strategies and policies based on customer needs and expectations. They measure customer perceptions, performance indexes and outcomes related to approaches in relation to the customer (Iqbal and Asrar-ul-Haq, 2017).

2.3.1.7 *Criterion 7: employee results.* The criterion of the employee results shows that excellent organizations have come up with results about successful streamlining of supportive strategies and policies based on employee needs and expectations, and implementation of approaches related to employee management. They measure and analyze employee perceptions, performance indexes and outcomes related to approaches at appropriate time periods (Ringrose, 2013).

2.3.1.8 *Criterion 8: community results.* The criterion of community results shows that excellent organizations have come up with results about successful streamlining of supportive strategies and policies and implementation of approaches to realize social responsibilities. They measure and analyze stakeholders' perceptions, performance indexes and outcomes related to approaches at appropriate time periods (Ringrose, 2013).

2.3.1.9 *Criterion 9: key results.* The key results criterion shows that excellent organizations have achieved both financial and non-financial results in relation to successful streamlining of supportive strategies and policies, as well as in the implementation of systems and processes to respond to the key stakeholders' needs and expectations. In order to achieve the goals and improve key strategic achievements, key performance indexes (financial and non-financial) related to approaches and processes also measure and analyze key strategic achievements at appropriate time periods (Ringrose, 2013).

The method used in this research regarding the conceptual structure of the research is structural equation modeling in which LISREL software is employed. Finally, we found that there is a significant and positive relationship between in-organizational factors and strategic thinking.

The proposed model provides a basis for assessing the capacity of strategic thinking in Iranian organizations, regarding the prioritization of improvement measures and organizational training.

This research focuses on examining the existing relationships between the success and failure of business excellence model and organizational forgetting, while considering the impact of strategic thinking as an independent factor. It also examines the effect of strategic thinking and organizational forgetting separately (various aspects of systemic attitude, intelligent opportunism, time thinking and focus on purpose) and their relationships with the success of this model.

Therefore, the present study was conducted to examine the effect of strategic thinking on establishing an organizational excellence model by identifying the mediating role of organizational forgetting. The conceptual model for this study is presented in the next section.

3. Conceptual model
Based on literature review that is explained in Section 2, the objectives of this research are divided into two main categories.

3.1 The main objective

H_0. Determining the effect of strategic thinking on the success of organizational excellence model through mediating role of organizational forgetting.

3.2 Sub-objectives

H1. Determining the effect of vision on the success of organizational excellence model.

H2. Determining the effect of creativity on the success of organizational excellence model.

H3. Determining the effect of systematic thinking on the success of organizational excellence model.

H4. Determining the impact of purposefulness on the success of organizational excellence model.

H5. Determining the effect of randomness on the success of organizational excellence model.

The previously described objectives (*H1–H5*) are discussed in different studies. Table I shows a brief description on the papers that discussed on these subjects.

The conceptual model of the research consists of three independent, dependent and moderating variables. The independent variable is strategic thinking, the dependent variable is organizational excellence model, and the moderating variable is organizational forgetting that are shown in Figure 1.

In the next section, the methodology that is used is explained.

4. Methodology

As is explained in the previous section, the main objective of this paper is to investigate the effect of organizational forgetting on implementing business excellence models. For this reason, a conceptual model is constructed and expanded. For analyzing hypotheses of the research, a structural equation is constructed as is shown in Figure 2. A questionnaire comprising of 37 questions was designed to evaluate the hypothesis of this research. The number of organizations that have implemented business excellence models was 297. A questionnaire was designed and distributed among the experts, middle managers and top managers of these companies. Based on Cochran's formula, the sample size was 168. The response rate was 100 percent. SEM was employed for analyzing relationship among different dependent and independent variables of the conceptual model (Murali *et al.*, 2017). This approach is used for assessing unobservable "latent" constructs. They often call out a measurement model that defines latent variables using one or more observed variables. Furthermore, a structural model imputes relationships between latent variables. The preference of this approach is because it considers the interrelationship among variables. The main statistical measures are evaluated in this regard. These measures are χ^2 ratio to degree of freedom, non-soft fitness index (RMSEA), fitness index (GFI) and modified fitness index (AGFI) as shown in Table II.

In Table II, the latent constructs and their related measured (or observed) variables are shown. Furthermore, the literature references per latent construct are shown in last column.

To evaluate the fitness of the model, some statistical parameters are evaluated the results of which can be seen in the following table.

Main related references	Description	Hypothesis code	Row
Dominique-Ferreira (2017), Weisstein *et al.* (2014), Parnell and Crandall (2016) and Mashbaki *et al.* (2012)	Determining the effect of strategic thinking on the success of organizational excellence model through mediating role of organizational forgetting	H_0	1
Bergeron *et al.* (2010), Eryılmaz *et al.* (2016), Need (2006) and Tan (2017)	Determining the effect of vision on the success of organizational excellence model	*H1*	2
Dominique-Ferreira (2017), Weisstein *et al.* (2014), Grant (2016), Cunningham (2017) and Tan (2017)	Determining the effect of creativity on the success of organizational excellence model	*H2*	3
Bergeron *et al.* (2010), Habibi (2013), Proctor (2014), Thompson (2017), Tan (2017) and Oschman (2017)	Determining the effect of systematic thinking on the success of organizational excellence model	*H3*	4
Theodosiou *et al.* (2015), Harris and Sherblom (2018) and Need (2006)	Determining the impact of purposefulness on the success of organizational excellence model	*H4*	5
Vakili *et al.* (2015), Grinstein (2016), Beech *et al.* (2017) and Need (2006)	Determining the effect of randomness on the success of organizational excellence model	*H5*	6

Table I.
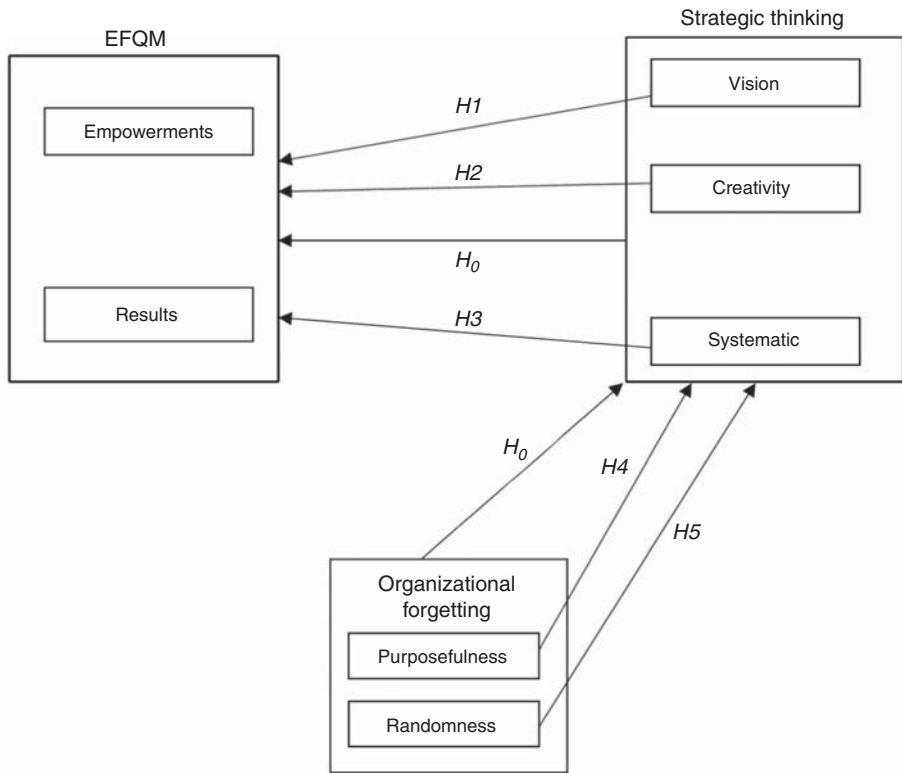A brief description on the papers related to hypothesis

Figure 1.
Conceptual model of
the research

The results in Table III show that χ^2 criterion (XiDo) is 1,283 and given that the allowed limit satisfies less than 3, which indicates the fitting of the model is appropriate in this criterion. The RMSEA index in this study is 0.0092, indicating a good fit in this section.

The GFI and AGFI index are 0.86 and 0.811, respectively. These results indicate appropriate fitness in these two criteria and in the research structure.

For investigating on the reliability and validity of the latent constructs, the following actions are done. Cronbach's α reliability coefficient was 0.82 for the overall scale and 0.86 for "strategic thinking," 0.85 for "business excellence model" and 0.80 for "organizational forgetting" subscales. Table IV shows the results of reliability calculation. For validity of the questions, the questionnaire was distributed among five experts of organizational forgetting field that were completely familiar with business excellence models. After gathering their results and making the suggested amendments, the questionnaire was validated. Next, convergent and discriminant validity were assessed. Convergent validity implies that evidence from different sources gathered in different ways all indicated the same meaning of a construct (Baumgartner and Weijters, 2017). To test the convergent validity, average variance extracted for each construct was calculated. As revealed by the results represented in Table IV all of the constructs met the recommended minimum level of 0.67 (Putri *et al.*, 2017). These results indicate convergent validity of the model. Discriminant validity implies that one can empirically differentiate a construct from other constructs that may be similar. To test discriminant validity, a nested model confirmatory analysis approach was employed. For each pair of questions, a constrained model is constructed. In this model, the covariance between each pair of constructs was fixed to unity. This assumed that there was
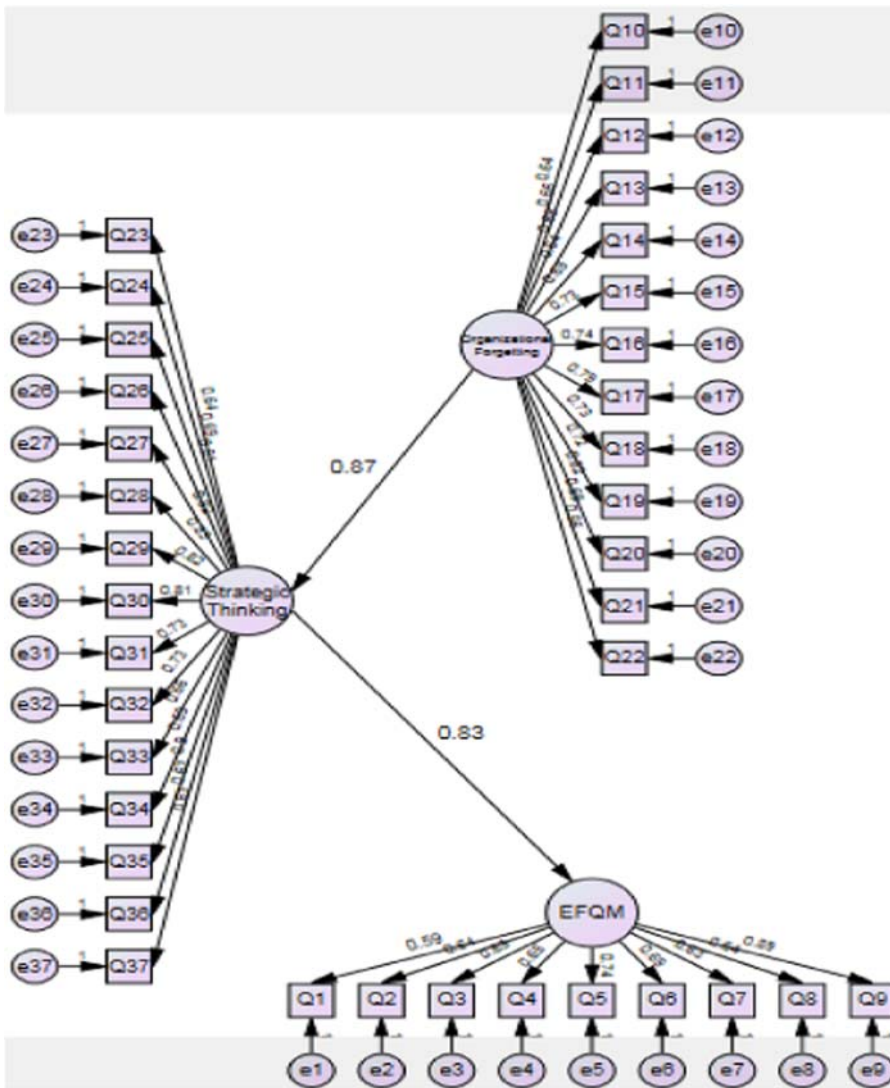
Figure 2.
Structural equation
model (in standard
mode)

no discriminant validity between the questions. Then, an unconstrained model is constructed by freeing the covariance between the questions. For each pair of questions, there existed significant difference in the χ^2 between the constrained and unconstrained models with one degree of freedom. The results indicated the discriminant validity among the questions. In addition, model-fit indices of the measurement model are presented in Table V. As are shown in this table all indices exceed the recommended threshold.

Other applied statistical methods are explained in the next section.

Companies in Khuzestan state of Iran that had implemented the organizational excellence model in them were selected for investigating the role of strategic thinking and organizational forgetting in implementing business excellence models. The number of

Latent construct	Measured variable	Symbol	References
EFQM (enablers)	Leadership (knowing how to motivate the organizational members)	Q1	Weisstein et al. (2014)
	Policy and strategy (performing the mission and prospecting by strategy of focusing on beneficiaries)	Q2	Yazdani et al. (2016)
	Engagement of employees (improving all potential staff in the level of individual, teams and organizational)	Q3	Grant (2016)
	Stakeholders (planning and managing all resources and suppliers)	Q4	Theodosiou et al. (2015)
	Processes (emphasizing of processes on internal and external customers)	Q5	Harris and Sherblom (2018)
EFQM (results)	Customers (achieving results of customers)	Q6	Harris and Sherblom (2018)
	Employees (staff information about organization)	Q7	Bergeron et al. (2010)
	Society (interaction of organization with society)	Q8	Bergeron et al. (2010)
	Performance appraisal (key performance results of organization)	Q9	Harris and Sherblom (2018)
Organizational forgetting (purposefulness)	Using different approaches for doing jobs	Q10	Theodosiou et al. (2015)
	Documentation of new experiences	Q11	Imami and Izadi (2008)
	Unlearning bad experiences	Q12	Need (2006)
	Updating lessons learned	Q13	Need (2006)
	Forgetting part of bad experiences	Q14	Harris and Sherblom (2018)
	Forgetting ineffective previous experiences	Q15	Beech et al. (2017)
	Being proactive for new knowledge	Q16	Beech et al. (2017)
Organizational forgetting (randomness)	Forgetting previous experiences due to no documentation	Q17	Need (2006)
	Corrective actions based on previous experiences	Q18	Grinstein (2016)
	Inapplicable information	Q19	Grinstein (2016)
	Planning new strategies based on experiences	Q20	Imami and Izadi (2008)
	Continual evaluating of experiences	Q21	Theodosiou et al. (2015)
	Preventive actions based on previous experiences	Q22	Imami and Izadi (2008)
Strategic thinking (vision)	Using standard procedures	Q23	Parnell and Crandall (2016)
	Added values as a consequence of applying experiences	Q24	Parnell and Crandall (2016)
	Organizational objectives	Q25	Bergeron et al. (2010)
	Considering values, honesty and conscience	Q26	Mashbaki et al. (2012)
Strategic thinking (creativity)	Teamwork and meetings	Q27	Oschman (2017)
	Strategic innovation	Q28	Grinstein (2016)
	Group decision making	Q29	Habibi (2013)
	Strategic conversations	Q30	Grinstein (2016)
	Thinking to changes	Q31	Habibi (2013)
	Collaborations	Q32	Thompson (2017)
Strategic thinking (systematic thinking)	Considering outcomes in decision making	Q33	Mashbaki et al. (2012)
	Cooperation in systematic thinking	Q34	Dominique-Ferreira (2017)
	Root cause analysis	Q35	Ershadi et al. (2018)
	Designing process for strategic planning	Q36	Dominique-Ferreira (2017)
	Systems thinking for global problems	Q37	Parnell and Crandall (2016)

Table II.
The latent constructs and their related measured

organization in which the business excellence model was implemented was 297. Based on Cochran's formula, the sample size was calculated 168. The response rate was 100 percent. The main statistical measures such as χ^2 ratio to degree of freedom, non-soft fitness index (RMSEA), fitness index (GFI) and modified fitness index (AGFI) were employed for analyzing the model.

Parameter name	Allowed limit	Value
χ^2 ratio to degree of freedom	Smaller than 3	1.283
Non-soft fitness index (RMSEA)	Smaller than 0.05	0.0092
Fitness index (GFI)	Larger than 0.8	0.86
Modified fitness index (AGFI)	Larger than 0.8	0.811

Table III.
Review of the general
fitting of structural
equations

Construct	Symbol	Standardized loadings	AVE	Cronbach's α
Business excellence model	Q1	0.71	0.61	0.85
	Q2	0.82		
	Q3	0.83		
	Q4	0.74		
	Q5	0.79		
	Q6	0.76		
	Q7	0.74		
	Q8	0.72		
	Q9	0.91		
Organizational forgetting	Q10	0.88	0.71	0.8
	Q11	0.89		
	Q12	0.95		
	Q13	0.74		
	Q14	0.73		
	Q15	0.89		
	Q16	0.95		
	Q17	0.93		
	Q18	0.74		
	Q19	0.71		
	Q20	0.73		
	Q21	0.87		
	Q22	0.89		
Strategic thinking	Q23	0.84	0.72	0.86
	Q24	0.83		
	Q25	0.96		
	Q26	0.91		
	Q27	0.93		
	Q28	0.81		
	Q29	0.82		
	Q30	0.84		
	Q31	0.83		
	Q32	0.81		
	Q33	0.84		
	Q34	0.81		
	Q35	0.87		
	Q36	0.91		
	Q37	0.69		
Overall				0.82

Table IV.
Instrument reliability
and convergent
validity

5. Research hypotheses and results

The main hypothesis of this paper (H_0) is that the organizational forgetting factor affects the impact of strategic thinking on the success of establishing an organizational excellence model in companies with organizational excellence. This hypothesis is confirmed at the significance level of 0.975 based on the *t*-statistic obtained as 2.366.

In addition, for *H1* according to *t*-statistic of 3.690 and, hence, the significant level of 0.975, it is also confirmed that the vision on the success of establishing an organizational excellence model is significant. The impact coefficient is 0.8.

For *H2*, the effect of creativity on the success of establishing an organizational excellence model in companies with organizational excellence is significant. In this case, the impact coefficient is 0.77 and the *t*-statistic and the significance level are 2.156 and 0.975, respectively.

In *H3*, where the impact coefficient is 0.81 and the significance level is 0.01, the results indicate confirmation of the effect of systematic thinking on the success of establishing an organizational excellence model in companies with organizational excellence.

In *H4*, the results show the significant impact of purposefulness on the success of establishing the organizational excellence model in companies with organizational excellence. Whereas the impact coefficient is 0.83, the *t*-statistic and the significance level are 2.633 and 0.01, respectively.

In *H5*, the effect of randomness on the success of establishing organizational excellence model in companies with organizational excellence is significant. The coefficient of impact is 0.83, and the *t*-statistic and the significance level are 3.416 and 0.001, respectively.

According to the mentioned results, the results are presented in Table VI.

Model-fit index	Recommended value	Measurement model	Structured model
GFI	$\geqslant 0.8$	0.87	0.86
CFI	$\geqslant 0.9$	0.96	0.95
RMSEA	$\leqslant 0.1$	0.09	0.07
χ^2 ratio to degree of freedom	$\leqslant 3$	2.35	2.03

Table V.
Model-fit indices

Hypotheses	Test result	Significance level	Student *t*-statistics	Coefficient of impact
Organizational forgetting factor affects the strategic thinking on the success of establishing organizational excellence model in companies with organizational excellence	Confirmed	0.025	2.366	0.89
The vision affects the success of establishing the model of organizational excellence in companies with organizational excellence	Confirmed	0.0025	3.690	0.80
Creativity affects the success of establishing an organizational excellence model in companies with organizational excellence	Confirmed	0.025	2.156	0.77
Systematic thinking affects the success of establishing an organizational excellence model in companies with organizational excellence	Confirmed	0.01	2.659	0.81
The purposefulness affects the success of establishing an organizational excellence model in companies with organizational excellence	Confirmed	0.01	2.633	0.83
Randomness affects the success of establishing an organizational excellence model in companies with organizational excellence	Confirmed	0.001	3.416	0.83

Table VI.
Study of the
research hypothesis

In the next section, some main conclusions and recommendations for future research studies are provided.

6. Discussion

According to theoretical literature, organizational forgetting can be consciously tracked in an organization. On the contrary, this approach can be occurred unplanned and unmanaged. In both cases, organizational forgetting can lead to competitive advantage or its loss in an organization. The research model was conducted based on reviewing the literature in the form of six hypotheses to evaluate the factors that affect the success of business excellence through organizational forgetting. In the main hypothesis of the research (H_0), it is confirmed that the effect of organizational forgetting on the success of organizational excellence is significant. The coefficient of impact was 0.89, which showed a strong impact coefficient in this section. Although several research studies have shown that organizational forgetting affects productivity improvement or cost reduction, this paper extended this effect on business excellence. In other words, the main factors of business excellence such as results and enablers are so affected by autonomous learning. The results confirm the conjectures of the research studies that organizational forgetting may affect business excellence. This is an area of theory that has not been fully explored, and the results suggest that theoretical models that link learning and business excellence could be enriched by incorporating organizational forgetting. The results are in line with research studies of Dominique-Ferreira (2017) and Weisstein *et al.* (2014). In these research studies, the authors mainly concentrated on the role of organizational forgetting in reducing the failure costs of organization.

In *H1*, according to the *t*-statistic, the strong influence of the vision on the success of the organizational excellence model was confirmed. Providing appropriate opportunities for professional development, increasing the general information for staff, and organizing periodic meetings of managers are the most important actions for improving the organizational vision among personnel. The results in this section were aligned with the research by Bergeron *et al.* (2010). In this study, the main focus of researcher is using information technology for increasing the performance and its effect on autonomous learning.

In *H2*, the results show confirmation of the effect of creativity on the success of the organizational excellence model. Allowing flexible work schedules, listening to new ideas and facilitating a team mentality are suggested through investigating this hypothesis. The results in this section are in line with the research studies by Dominique-Ferreira (2017) and Weisstein *et al.* (2014). In these research studies, the authors mainly concentrated on the role of focus group in the success of the organizational strategic objectives.

In *H3*, the results indicate the confirmation of the effect of systematic thinking on the success of establishing organizational excellence model. Documenting and recording of thoughts and identifying and analyzing the problem before jumping into action are the most important measures that are commented in this hypothesis. The results in this section are in line with research studies by Bergeron *et al.* (2010) and Habibi (2013). In these studies, a problem-solving approach is considered as a main systematic thinking factor.

In *H4*, the results show the impact of purposefulness on the success of establishing the organizational excellence model. Documentation and dissemination of experiences in all layers of organization should be considered based on this hypothesis. Furthermore, organizations must purposefully forget other types of knowledge, such as bad habits learned from a partner. Dealing effectively with such situations requires the careful management of organizations. The results of this section are in line with Argote and Guo (2016) and Theodosiou *et al.* (2015). These research studies prescribed similar items for incorporating purposefulness in organizational knowledge.

In *H5*, the results show the effect of randomness on the success of establishing organizational excellence model. The results of this study were aligned with the research

studies by Vakili *et al.* (2015) and Grinstein (2016). In these studies, constituted networks and their processes for organizational learning was considered.

Finally, based on finding of this research, authors suggest to managers that in the process of strategic planning, organizational forgetting should be considered as a main factor. The effectiveness and efficiency of organizations could be improved through this work.

7. Practical implications

Based on the confirmation of the main hypothesis, an important practical implication is consideration of the impact of organizational forgetting in the implementation of organizational excellence model. Employee involvement in organizational decisions; increasing the competency of employees and managers experience through organizational learning; employee and managerial assessment and organizational strategy assessment are the main items in this regard. Strengthening organizational support, providing appropriate opportunities for professional development and increasing the general information of staff about an organization are the main factors of organizational learning in terms of vision. Moreover, promoting team works joint with appropriate documentation should also be considered. Managers should increase their informal communications with employees and support them. This can be done through the support of managers from the ideas and suggestions of the staff. For improving the purposefulness, managers need to connect more with employees and pay more attention to their needs. Furthermore, specific requirements must be provided to submit an offer for an overall improvement by all employees of an organization.

8. Conclusions

One of the important aspects of today's organizations is the degree of utilization of strategic thinking and its transfer for competitive advantage. Contrary to the traditional approaches in which competitive advantages such as customers, raw materials and distribution channels are important, in the current context, competitive advantages include intangible resources. Organizational forgetting management is one of the dimensions that have been considered in this research as an intangible resource for organizations to examine the impact on the implementation of their organizational excellence model.

The main hypothesis of the research (H_0) suggests the use of new experiences and increasing the levels of employees and managers experience through organizational learning in order to better assess an organizational strategy.

Moreover, *H1* shows the strong impact of the vision on the success of establishing an organizational excellence model in companies with organizational excellence. Suggestions such as using standard organizational procedures, applying the value added knowledge of an organization, and the team spirit in the work are proposed.

The impact of creativity on establishing an organizational excellence model is significant in companies with an organizational excellence model based on *H2*. In this case, suggestions such as formation of meetings of the employees on the strategic issues of an organization (macro-planning), the use of new ideas in strategic affairs (such as changes in current services, the provision of new services, entry into new domains, etc.) should be considered by employees.

Based on *H3* in which the results confirm the significant impact of systematic thinking on the establishment success of an organizational excellence model in companies with organizational excellence, suggestions such as decision making on strategic issues to outcomes, strategic decision making of people with common perspectives, formal process for exchanging views on different parts of an organization have to be considered.

The significant impact of purposefulness on the establishment success of an organizational excellence model in companies with an organizational excellence plan in

H4 implies some suggestions such as using past experiences, using experienced managers, evaluating organization strategies periodically.

Based on *H5*, in which the results confirm the significant impact of the randomness on the establishment success of an organizational excellence model in companies with organizational excellence, suggestions such as documenting experiences and evaluating organizational strategies periodically can be considered.

9. Limitations of the present study and recommendations for future research studies

In this research, the implementation of business excellence models is considered. Furthermore, the effect of strategic thinking and organizational forgetting is studied. A most important limitation of this research is the access to the managers or organizations that have implemented business excellence models. Therefore, the interview was not done through this research. Then, the hypotheses are investigated by questionnaire. Extending the results obtained in the current research to be applicable to other quality management systems such as ISO 9001, ISO 14001, etc. needs another future investigation. Using other qualitative research methods such as grounded theory could also be employed in another independent work.

In future research studies, the following suggestions could be considered:

- use of methodologies of knowledge management such as group facilitation, project management and software development and investigating their impact on establishing an organizational excellence model;

- use of other variables regarding organizational excellence such as Six Sigma, ISO 9001 standard;

- investigating the relationship between organizational forgetting and industry dynamics;

- root cause analysis of organizational forgetting;

- comparison of research results with other companies at the national and international level; and

- use of multi-criteria decision-making techniques to rank indexes.

References

Anjomshoae, A., Hassan, A., Kunz, N., Wong, K.Y. and de Leeuw, S. (2017), "Toward a dynamic balanced scorecard model for humanitarian relief organizations' performance management", *Journal of Humanitarian Logistics and Supply Chain Management*, Vol. 7 No. 2, pp. 194-218.

Argote, L. and Guo, J.M. (2016), "Routines and transitive memory systems: creating, coordinating, retaining, and transferring knowledge in organizations", *Research in Organizational Behavior*, Vol. 36, pp. 65-84.

Azmi, F.T. (2005), "Mapping the learn-unlearn-relearn model imperatives for strategic management", *Indian Journal of Training & Development*, pp. 4-14.

Baumgartner, H. and Weijters, B. (2017), "Structural equation modeling", *Advanced Methods for Modeling Markets*, Springer, Cham, pp. 335-360.

Beech, N., McGill, I. and Brockbank, A. (2017), "Reflective learning in practice", *Reflective Learning in Practice*, Routledge, pp. 30-40.

Bergeron, F., Raymond, L. and Rivard, S. (2010), "Ideal patterns of strategic alignment and business performance", *Information & Management*, Vol. 41 No. 8, pp. 1003-1020.

Bisbe, J. and Malagueño, R. (2012), "Using strategic performance measurement systems for strategy formulation: does it work in dynamic environments?", *Management Accounting Research*, Vol. 23 No. 4, pp. 296-311.

Bryson, J.M. (2018), *Strategic Planning for Public and Nonprofit Organizations: A Guide to Strengthening and Sustaining Organizational Achievement*, John Wiley & Sons.

Chen, G., Zhou, Q. and Liu, W. (2017), "Organizational learning from experience: Current status in multilevel perspective, integration model and future direction", *Nankai Business Review International*, Vol. 8 No. 2, pp. 122-157.

Cunningham, I. (2017), *The Wisdom of Strategic Learning: The Self-Managed Learning Solution*, Routledge.

Dominique-Ferreira, S. (2017), "How important is the strategic order of product attribute presentation in the non-life insurance market?", *Journal of Retailing and Consumer Services*, Vol. 34, pp. 138-144.

Ershadi, M.J., Aiasi, R. and Kazemi, S. (2018), "Root cause analysis in quality problem solving of research information systems: a case study", *International Journal of Productivity and Quality Management*, Vol. 24 No. 2, pp. 284-299.

Eryılmaz, M.E., Erdur, D.A., Bektaş, O., Kara, E. and Aydoğan, E. (2016), "The case of ISO 9000 quality management system certification in a faculty of a Turkish public university: triggers, processes, and consequences", *Handbook of Research on Quality Assurance and Value Management in Higher Education*, IGI Global, pp. 257-278.

Ghaffarian, W. and Ali Ahmadi, A. (2000), "Strategic thinking", *Tadbir Monthly*.

Grant, R.M. (2016), *Contemporary Strategy Analysis: Text and Cases Edition*, John Wiley & Sons.

Grinstein, A. (2016), "The relationships between market orientation and alternative strategic orientations a meta-analysis", *European Journal of Marketing*, Vol. 42.

Habibi, M. (2013), "Instruments and mechanisms of international competition in the marine oil and gas industries", *5th National Conference on Marine Industries of Iran, Marine Engineering Society of Iran, Kish Island*.

Hamidizadeh, M.R., Dost, H.D. and Heidarnejad, A. (2016), "Assessment of the governance of strategic thinking and its relationship with organizational performance of holding Takiko", *Second National Conference on Accounting, Financial Management and Investment, Scientific and Professional Association Golestan Directors and Accountants*, Gorgan.

Harris, T.E. and Sherblom, J.C. (2018), *Small Group and Team Communication*, Waveland Press.

Heath, M. (2012), *Ultrastructure of Rust Fungi*, Elsevier.

Holan, P.M.D. and Phillips, N. (2003), "Organizational forgetting", *Handbook of Organizational Learning and Knowledge Management*, pp. 433-451.

Hoyle, D. (2017), *ISO 9000 Quality Systems Handbook-updated for the ISO 9001: 2015 standard: Increasing the Quality of an Organization's Outputs*, Routledge.

Huang, D., Chen, S., Zhang, G. and Ye, J. (2018), "Organizational forgetting, absorptive capacity, and innovation performance: a moderated mediation analysis", *Management Decision*, Vol. 56 No. 1, pp. 87-104.

Iqbal, A. and Asrar-ul-Haq, M. (2017), "An empirical investigation on TQM practices and knowledge sharing mediation in software industry", *The TQM Journal*, Vol. 29 No. 5, pp. 725-743.

Jiménez-Jiménez, D., Martinez-Costa, M., Martínez-Lorente, A.R. and Rabeh, H.A.D. (2015), "Total quality management performance in multinational companies: a learning perspective", *The TQM Journal*, Vol. 27 No. 3, pp. 328-340.

Kauffman, S.A. (1991), "Antichaos and adaptation", *Scientific American*, Vol. 265 No. 2, pp. 78-85.

Liedtka, J.M. (1998), "Strategic thinking: can it be taught?", *Long Range Planning*, Vol. 31 No. 1, pp. 120-129.

Mariano, S. and Casey, A. (2015), "Is organizational innovation always a good thing?", *Management Learning*, Vol. 46 No. 5, pp. 1-16.

Mariano, S., Casey, A. and Olivera, F. (2018), "Managers and organizational forgetting: a synthesis", *The Learning Organization*, Vol. 25 No. 3, pp. 169-179.

Martin de Holan, P. and Phillips, N. (2004), "Organizational forgetting as strategy", *Strategic Organization*, Vol. 2, pp. 37-48.

Mashbaki, A. and Khazaee, A. (2002), "Designing model elements thinking strategic at organization by Iranian", *Journal Management Commerce the Period*, Vol. 1 No. 1, pp. 105-118.

Mazidi, A. and Naseri, S. (2015), "Do internal factors influence the formation of strategic thinking?", *The First National Conference on Modern Management Sciences and Social Cultural Planning in Iran*.

Mintzberg, H. (1994), "The fall and rise of strategic planning", *Harvard Business Review*, Vol. 72 No. 1, pp. 107-114.

Murali, S., Deepak, T.J., Salim, A.N. and Ponniah, V. (2017), "Analysis of delays in Tanzanian construction industry: transaction cost economics (TCE) and structural equation modeling (SEM) approach", *Engineering, Construction and Architectural Management*, Vol. 24 No. 2, pp. 308-325.

Need, W.C.D.H.P. (2006), "Human resource management: gaining a competitive advantage".

Oschman, J.J. (2017), "The role of strategic planning in implementing a total quality management framework", *The Journal for Quality and Participation*, Vol. 40 No. 3, pp. 29-33.

Parnell, J.A. and Crandall, R.E. (2016), "In pursuit of Crisis readiness: an examination of managerial characteristics, firm size, industry domain and strategic type within the miles and snow framework", *Journal of the North American Management Society*, No. 22.

Proctor, T. (2014), *Strategic Marketing: An Introduction*, Routledge.

Putri, N.T., Yusof, S.M., Hasan, A. and Darma, H.S. (2017), "A structural equation model for evaluating the relationship between total quality management and employees' productivity", *International Journal of Quality & Reliability Management*, Vol. 34 No. 8, pp. 1138-1151.

Quinn, R.E. (2018), "Productivity and the process of organizational improvement: why we cannot talk to each other", *Public Sector Performance*, Routledge, pp. 9-19.

Ringrose, D. (2013), "Development of an organizational excellence framework", *The TQM Journal*, Vol. 25 No. 4, pp. 441-452.

Saleh, A. and Watson, R. (2017), "Business excellence in a volatile, uncertain, complex and ambiguous environment (BEVUCA)", *The TQM Journal*, Vol. 29 No. 5, pp. 705-724.

Smith, M. (2018), "The cost of treating knowledge as a mental state".

Stoyanova, V. (2018), "David J. Teece's dynamic capabilities and strategic management: organizing for innovation and growth".

Tan, C. (2017), "Teaching critical thinking: cultural challenges and strategies in Singapore", *British Educational Research Journal*, Vol. 43 No. 5, pp. 988-1002.

Theodosiou, M., Kehgias, J. and Katsikea, E. (2015), "Strategic orientations, marketing capabilities and firm performance: an empirical investigation in the context of frontline managers in service organizations", *Industrial Marketing Management*, Vol. 41 No. 7, pp. 1058-1070.

Thompson, J.D. (2017), *Organizations in Action: Social Science Bases of Administrative Theory*, Routledge.

Tuck, E. and Del Vecchio, D. (2018), "Representing refusals: dilemmas in making photo-based research with migrant youth", *The Methodological Dilemma Revisited*, Routledge, pp. 92-106.

Tukel, O.I., Rom, W.O. and Kremic, T. (2008), "Knowledge transfer among projects using a learn-forget model", *The Learning Organization*, Vol. 15 No. 2, pp. 179-194.

Vakili, A., Mahdiin, N. and Mohammadkhani Tabasi, M. (2015), "Strategic thinking assessment of researchers managers", *10th International Conference on Strategic Management, Iran Strategic Management Association*, Tehran.

Weisstein, L., Asgari, M. and Siew, S.-W. (2014), "Price presentation effects on green purchase intentions", *Journal of Product & Brand Management*, Vol. 23 No. 3, pp. 230-239.

Further reading

Garza-Reyes, J.A., Yu, M., Kumar, V. and Upadhyay, A. (2018), "Total quality environmental management: adoption status in the Chinese manufacturing sector", *The TQM Journal*, Vol. 30 No. 1, pp. 2-19.

Leslie, R. (1989), *Strategic Management*, McGraw-Hill, pp. 215-236.

Moon, B.-J. (2013), "Antecedents and outcomes of strategic thinking", *Journal of Business Research*, pp. 1698-1708.

Sadeghian, R. *et al.* (2012), "Research management general year.

Corresponding author

Mohammad Javad Ershadi can be contacted at: mjershadi@gmail.com

www.

www.