

KADİR HAS UNIVERSITY GRADUATE SCHOOL OF SOCIAL SCIENCES BUSINESS ADMINISTRATION DISCIPLINE AREA

THE IMPACT OF ORGANIZATIONAL CULTURE AND STRUCTURE ON ENTERPRISE RESOURCE PLANNING SUCCESS

EMRE ALATAŞ

SUPERVISOR: ASSOC. PROF. DR. CEYDA MADEN EYİUSTA

MASTER'S THESIS

ISTANBUL, JANUARY, 2018

THE IMPACT OF ORGANIZATIONAL CULTURE AND STRUCTURE ON ENTERPRISE RESOURCE PLANNING SUCCESS

EMRE ALATAŞ

SUPERVISOR: ASSOC. PROF. DR. CEYDA MADEN EYİUSTA

MASTER'S THESIS

Submitted to the Graduate School of Social Sciences of Kadir Has University in partial fulfillment of the requirements for the degree of Master's in the Discipline Area of Business Administration under the Program of Business Administration

ISTANBUL, JANUARY, 2018

I, EMRE ALATAŞ;

Hereby declare that this Master's Thesis is my own original work and that due references have been appropriately provided on all supporting literature and resources.

EMRE ALATAS

NAME AND SURNAME OF THE STUDENT

DATE AND SIGNATURE

04.01.2018

ACCEPTANCE AND APPROVAL

This work entitled THE IMPACT OF ORGANIZATIONAL CULTURE AND STRUCTURE ON ENTERPRISE RESOURCE PLANNING SUCCESS prepared by EMRE ALATAŞ has been judged to be successful at the defense exam held on 11/01/2018 and accepted by our jury as MASTER'S THESIS.

(Assoc. Prof. Dr. Ceyda Maden Eyiusta) (Advisor)

(Assist. Prof. Dr. Saadet Çetinkaya)

(Assist. Prof. Dr. Ayla Esen)

(Kadir Has University) Challes.
(Kadir Has University) Selation

(Altinbaş University)

I certify that the above signatures belong to the faculty members named above.

Prof. Dr. Sinem AKGÜL AÇIKMEŞE

DATE OF APPROVAL:

TABLE OF CONTENTS

FIGURES LIST	iv
TABLES LIST	V
ABSTRACT	vi
ÖZET	vii
INTRODUCTION	1
1. LITERATURE REVIEW	4
1.1. Enterprise Resource Planning	4
1.2. Factors Affecting Enterprise Resource Planning	6
1.3. Organizational Structure	8
1.4. Organizational Culture	11
1.4.1. Schein's culture model	
1.4.2. Harrison's culture model	
1.4.3. Kilmann's culture model	14
1.4.4. Quinn and Cameron's culture model	15
1.4.5. Denison's culture model	
1.5. Effect of Organizational Structure on ERP Success	
1.6. Effect of Organizational Culture on ERP Success	20
2. METHODOLOGY	24
2.1. Sample and Data Collection	24
2.2. Measurement Instruments	25
3. RESULTS	29
3.1. Pilot Study	29
3.1.1. Reliability analysis	29
3.1.2. Exploratory factor analysis	30
3.2. Main Study	32
3.2.1. Reliability analysis	35
3.2.2. Exploratory factor analysis	36
3.2.3. Correlation analysis	40
3.2.4. Regression analysis	41
CONCLUSION	46
SOURCES	50
APPENDICES	55

FIGURES LIST

Figure 1.	Research Model	3
Figure 1.1.	Evolution of ERP	5
Figure 1.2.	Schein's Culture Model	13
Figure 1.3.	Harrison's Model	14
Figure 1.4.	Quinn and Cameron's Model	15
Figure 1.5.	Denison's Model	16

TABLES LIST

Table 1.1.	Critical Success Factors	7
Table 1.2.	Significant Variables in Previous Studies	18
Table 2.1.	ERP Success Scale	25
Table 2.2.	Organizational Structure Scale	26
Table 2.3.	Organizational Culture Scale	27
Table 3.1.	Reliability Analysis for ERP Success Scale	29
Table 3.2.	Reliability Analysis for Organizational Structure	30
	Dimension	
Table 3.3.	Reliability Analysis for Organizational Culture Dimensions	30
Table 3.4.	Total Variance Explained Table for Organizational Structure	31
	Dimensions	
Table 3.5.	Rotated Component Matrix for Organizational Structure	32
	Dimensions	
Table 3.6.	Mean and Standard Deviation Values for Variables	33
Table 3.7.	Characteristics of Respondents	33
Table 3.8.	Characteristics of Organizations	34
Table 3.9.	Reliability Analysis for ERP Success Scale	35
Table 3.10.	Reliability Analysis for Organizational Structure Dimensions	36
Table 3.11.	Reliability Analysis for Organizational Culture Dimensions	36
Table 3.12.	Rotated Component Matrix for ERP Success Scale	37
Table 3.13.	Component Matrix for Organizational Culture Dimensions	38
Table 3.14.	Total Variance Explained Table for Organizational Structure	39
	Dimensions	
Table 3.15.	Rotated Component Matrix for Organizational Structure	40
	Dimensions	
Table 3.16.	Correlation Analysis	41
Table 3.17.	Multiple Regression Analysis for Control Variables	42
Table 3.18.	Multiple Regression Analysis for Organizational Structure	43
Table 3.19.	Multiple Regression Analysis for Organizational Culture	44
Table 3.20.	Hypotheses Summary	44
Table A.1.	Reliability Analysis of Organizational Culture Scale	56
Table A.2.	Factor Analysis of Organizational Culture Scale	57

ABSTRACT

ALATAŞ, EMRE. THE IMPACT OF ORGANIZATIONAL CULTURE AND

STRUCTURE ON ENTERPRISE RESOURCE PLANNING SUCCESS, MASTER'S

THESIS, Istanbul, 2018.

This study investigates the impact of two important, internal organizational factors,

namely organizational structure and culture, on enterprise resource planning (ERP)

success in Turkish companies. Organizational structure is represented by three

dimensions, namely specialization, formalization, and centralization while the

organizational culture is represented by four dimensions (i.e., adaptability, consistency,

involvement, and mission). Given the nature of the research objectives, a cross-sectional

descriptive survey was considered the most appropriate option for this study. Data were

collected from 71 individuals from 33 different organizations which have implemented

or are implementing ERP in their operations. Multiple regression analysis was performed

to test the hypothesized relationships. The findings indicated that specialization

dimension of organizational structure as well as adaptability and consistency dimensions

of organizational culture have positive impact on ERP success.

Keywords: Organizational Structure, Organizational Culture, Enterprise Resource

Planning

vi

ÖZET

ALATAŞ, EMRE. ÖRGÜTSEL KÜLTÜR VE ÖRGÜTSEL YAPININ KURUMSAL

KAYNAK PLANLAMASI BAŞARISINA ETKİSİ, YÜKSEK LİSANS TEZİ, İstanbul,

2018.

Bu çalışma iki önemli örgütsel faktör olan örgüt yapısı ve örgüt kültürünün Türkiye'deki

kurumların kurumsal kaynak planlaması (KKP) başarısı üzerindeki etkisini

incelemektedir. Çalışma kapsamında örgüt yapısı, uzmanlaşma, biçimselleştirme ve

merkezileşme boyutlarıyla temsil edilirken; örgüt kültürünün boyutları uyum yeteneği

(uyarlama), tutarlılık, katılım ve misyon/vizyon boyutlarıyla temsil edilmiştir. Araştırma

hedefleri doğrultusunda, verinin kesitsel bir anket çalışmasıyla toplanması uygun

bulunmuştur. Veri, operasyonlarında KKP uygulamış ya da uygulamakta olan 33 farklı

şirkette çalışan 71 kişiden toplanmıştır. Öne sürülen hipotezlerin testinde çoklu regresyon

analizleri kullanılmıştır. Sonuçlar örgütsel yapının uzmanlaşma boyutu ile örgütsel

kültürün uyum ve tutarlılık boyutlarının KKP başarısı üzerinde pozitif bir etkiye sahip

olduğunu göstermiştir.

Anahtar Sözcükler: Örgütsel Yapı, Örgüt Kültürü, Kurumsal Kaynak Planlaması

vii

INTRODUCTION

In today's competitive business environment triggered by globalization, it is essential for companies to manage business operations more efficiently and effectively. As a result of these changes, business enterprises have to develop new ways to improve their business processes and overcome certain problems such as increasing competition, expanding markets, heightened customer expectations. These conditions push companies to reduce the total cost of their business processes, shorten their delivery times, expand their product options, provide better customer service, and increase their product/service quality and productivity (Umble et al., 2003). In order to meet these requirements, organizations utilize enterprise resource planning (ERP) systems as one of the most preferred systems for business operations. These systems allow the various units of a to communicate by using a single system. In recent years, ERP has extended its scope from production or manufacturing to other functions such as customer relationship management, finance, and human resources. In line with the popularity of ERP systems among large companies, business enterprises from different sectors, small and midsize organizations have started to implement ERP (Seo, 2013).

Although ERP provides many advantages for improving business processes, most of the organizations which implement ERP are not able to fully benefit from these systems, since carrying out an ERP project is a complicated process (Davenport, 1998). Integration of the ERP to the overall system, does not comprise only the implementation of the system, but also continues after the implementation stage. As such, following the implementation stage, organizations need to show ongoing efforts to maximize the benefits they derive from the system.

Previous research has highlighted the importance of different factors to increase the success of ERP systems. Researchers have emphasized particularly the role of the organizational factors as well as the technical factors in boosting the ERP success. As the nature of ERP requires integration of different units within the organization, organizational structure and culture of the organization are likely to play a prominent role in attaining ERP success (Holland and Light, 1999). However, few studies have so far analyzed empirically the effects of internal organizational factors, such as structure and

culture on ERP success (Ifinedo, 2007) and structural and cultural factors have been discussed only at the conceptual level (Ke and Wei, 2008; Morton and Hu, 2004). Additionally, most of the previous studies have focused on the implementation success of ERP overlooking the factors that influence the overall success of the continuous integration process.

In light of the above information, this dissertation aims to investigate the impact of two important, internal organizational factors, namely organizational structure and culture, on ERP system success in Turkish companies. The research questions of the dissertation are:

- 1. What is the relationship between organizational structure dimensions (i.e., centralization, formalization and specialization) and ERP success?
- 2. What is the relationship between Denison's organizational culture dimensions and ERP success?

As demonstrated in Figure 1, the research model of this dissertation reflects the relationships between (a) three major organizational structure dimensions (i.e., formalization, specialization, and centralization), (b) Denison's organizational culture dimensions, and ERP success, which consists of five success elements.

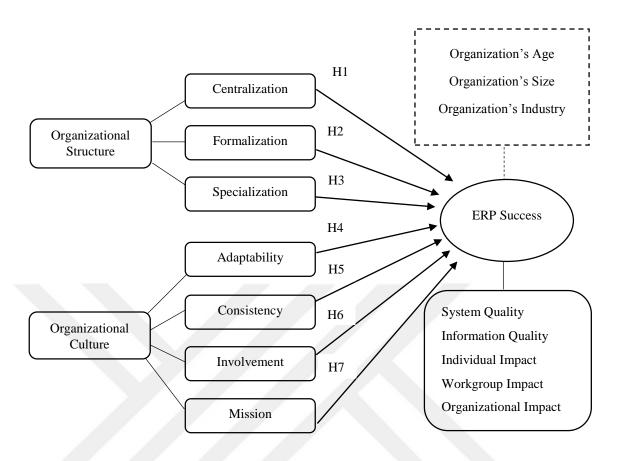


Figure 1. Research Model

In the first section of this dissertation, following this introduction part, the literature on enterprise resource planning, organizational structure, and organizational culture concepts is reviewed. The first part of the literature review involves the definition, evolution, benefits of ERP and major success factors for ERP systems. In the second part, important dimensions of organizational structure are analyzed followed by the description of organizational culture with a specific focus on Denison's organizational culture model. The final part of the literature review involves the description of studies that investigate the impacts of organizational structure and culture on ERP success as well as the hypotheses of this dissertation. The second section comprises the research methodology and results of the study. Finally, the dissertation ends with the discussion of findings and conclusion.

CHAPTER 1

LITERATURE REVIEW

1.1 ENTERPRISE RESOURCE PLANNING

In the previous years, being able to use information has become a priority for organizations. Compared to the past, today's organizations need more information storage capacity to manage their operations and to make their processes faster. Therefore, companies from different levels are trying to adapt this change by starting to use information management tools for managing their functions effectively. Especially since the 1990s, the enterprise resource planning (ERP) has emerged as a frequently used concept in the business and academic world.

In the literature, ERP systems have various definitions. Klaus, Rosemann, and Gable (2000) define enterprise resource planning systems as software programs which try to merge entire chain of an organization's operations and processes to demonstrate an integral aspect of the organization from a single knowledge and information technology structure. Watson and Schneider (1999) describe ERP as a packaged software system which makes easy and faster transition of information between departments and its processes. Keçek and Yıldırım (2009) state that ERP encompasses commercial software that provides integration of the continuous information flow within the companies, covering all units of activity (support service, purchasing, human resources, finance, etc.) in different sectors (health, government, etc.).

ERP system is also described as a revised Manufacturing Resource Planning System (MRP II) with relational database management, graphical user interface, and client/server architecture (Russell and Taylor, 1995). As shown in Figure 1.1 adapted from Russell and Taylor (1995), it can be argued that the perceptions and framework of ERP has changed over the past years.

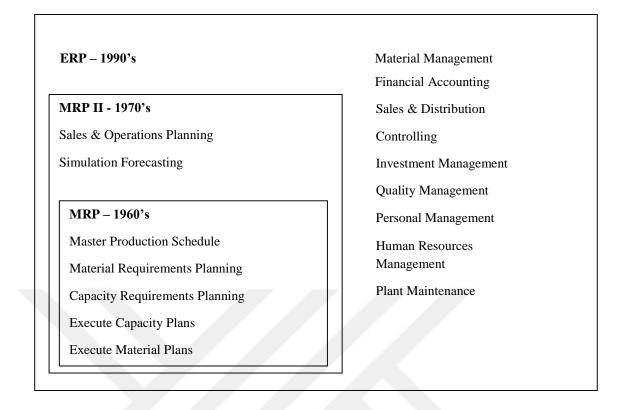


Figure 1.1. Evolution of ERP

In 1960s, inventory control systems, which combines the manufacturing and purchasing processes were implemented. Improvements in 1970s, 1980s proceeded with the idea of MRP II. In 1990s, the need of a combined organization increased, and ERP systems started to arise. ERP is an idea still in continuing improvement process. With the progresses in the technology; as a subsequent stage of ERP, ERP II is getting a place.

One of the important aspect of ERP is that it is the first concept that covers and combines business management and information technology (IT) (Slooten and Yap, 1999). There is one database and interface for whole enterprise in the ERP framework. A whole organization will be capable to work under one place in which human resources, accounting, sales, manufacturing, distribution, supply-chain management perspectives are coordinated. An ERP framework is advantageous in that it can fasten and facilitate the decision-making process, decrease expenses, and provide directors control on all the processes and business operations (Al-Mashari et al., 2003). In order to work under an ERP framework, organizations establish ERP systems, namely, package programs to integrate different processes in a single information base. ERP systems are particularly

important for organizations to become more receptive to customer needs and competitive acts.

Advantages and benefits of ERP systems can be listed as follows (Orhan, 2006):

- The data are arranged in a more efficient form, so management can access the relevant data for administrative decisions or control.
- Accurate and integrated information helps solving the problems about stock, material and cash management.
- Daily transactions can be made easily by arranging business processes more effectively with ERP.
- ERP facilitates supply chain operations for generating plans and predictions with optimization instruments.
- ERP systems are flexible to react to an uncertain business environment. Operations are steady and in the light of an information model.
- International processes are supported with developments on invoicing plans, multiple currencies and so on.

All in all, ERP is an important tool for organizations to achieve effective planning and control that bring external advantages to businesses. It is primarily used to define business processes using internal knowledge and to organize and standardize operations in a short period of time (Jacobs and Robert, 2007). In today's business world, integrating work flows of all organizational units at a lower cost can be achieved thanks to ERP.

1.2 FACTORS AFFECTING ENTERPRISE RESOURCE PLANNING

ERP systems can bring great advantages to organizations if the implementation process is completed successfully. However, most of the organizations that decide to install an ERP package and carry out an implementation process struggle with the certain costs and complexity.

Although ERP systems create many advantages for organizations, effective utilization of these systems depends on several factors. There are several studies in the literature that focus on the critical success factors of ERP. These factors are shown in Table 1.1 which is adapted from Saravanan (2014).

Table 1.1. Critical Success Factors for ERP

		Research Authors & Years Critical Success Factors	Christopher P. Holland et al., (1999)	Liang Zhang, Matthew K.O. Lee, ZheZhang, Probir Banerjee, (2002)	Meg Fryling, (2004)	T.R. Bhatti, (2005)	Princely Emili Ifinedo, (2006)	Houman Kalbasi, (2007)	E.W.T. Ngai, C.C.H. Law, F.K.T. Wat, (2007)	Khaled Al-Fawaz, Zahran Al-Salti, Tillal Eldabi, (2008)	Miguel Maldonado, (2009)	Majid Aarabi 1, 2, Muhamad Zameri Mat Saman, (2011)	Otto Korhonen, (2013)	Goeun Seo, (2013)
	1	Top Management Support	+	+		+	+		+	+	+	+	+	+
	2	The Implementation Team			+	+		+		+	+		+	+
\mathcal{A}	3	Project Management	+	+		+		+	+	+	+		+	+
	4	Business Plan/Vision/Goals	+			+	+		+	+	+	+	+	+
	5	Architecture Choices		+	+	+	+			+			+	+
	6	Training		+		+		+		+	+	+	+	+
	7	Legacy Systems Knowledge	+	+			+		+				+	
	8	Re-engineering Business Process		+		+			+	+			+	
	9	Organizational Culture		+		+	+		+				+	
	10	Change Management	+								+	+	+	+
	11	Communication	+			+			+			+	+	
	12	Partnership/Vendor Support		+									+	
	13	Testing Effectiveness						+						
	14	Employees' IT Skills					+	+						
	15	Company-Wide Commitment		+										
	16	Management of Risk												
	17	Organization's or Firm's Size					+							
	18	Organizational Structure					+							
	19	Data Management							+					

Among these factors, top management support, the implementation team, project management, business plan and goals, architecture choices and technological infrastructure, training, legacy systems knowledge, re-engineering business processes, change management and communication are most frequently studied critical success

factors for ERP. On the other hand, organizational structure and culture, two critical antecedents of the overall performance in organizations, received limited or no attention in previous studies. This particular gap paves the way for current research which aims to examine the impact of different structural elements and culture types on ERP success.

1.3 ORGANIZATIONAL STRUCTURE

Despite the fact that the practices related to organizations are very old, development of theories in this respect is quite new for the history of humanity. In the late 18th century, with the industrial revolution, machines and factories have taken the place of the work carried out in the workshops with simple hand tools. As a result, enterprises became more complicated and for the first time in management, importance of organizational structure has emerged (Mescon et al., 1985). Growth of organizations and complexity of relations among employees have created the need to divide tasks, split these tasks into sub-tasks, and the need to coordinate product flow activities. The rules and principles that are created to govern these activities refer to the organizational structure.

According to Mintzberg (1993), organizational structure is the combination of labor force dedicated to specific tasks and the coordination required to perform these tasks. Organizational structure is the framework on which the forces such as communication, information, rules, relations and practices are based. It should be implemented by establishing a structure in which the human element is placed in place, used, and progressed within a certain hierarchical order and a functional system of thought, which enables these forces to be used effectively (Ülgen, 1997).

Organizational structure is a configuration in which (Daft, 2000);

- formal tasks are assigned to persons and departments,
- decision making responsibility and formal reporting interactions are determined,
- the number of hierarchy levels and the manager's control area are defined,
- necessary systems to provide effective coordination between departments and employees are designed.

Previous studies in literature have described different types of organizational structures. In one of these studies, organizations are considered as horizontal and vertical structures. Vertical structures reflect a sharp hierarchy in which works flow from up to down while horizontal structures refer to a process-based, non-hierarchical structure (Polat, 2006).

Following a similar logic, another classification involves two main classes of organizational structure: organic or mechanistic. Mechanistic structures have a hierarchical structure, which is common in traditional, tightly controlled, standardized businesses. On the other hand, organic structures adapt the environment easily with their flexible communication and high interaction system (Slevin and Jovin, 1990).

Daft (1998) distinguished two dimensions the organizational structure: contextual and structural. Under the structural dimension, there are internal features such as specialization, formalization, complexity, centralization, and standardization. Contextual dimension, on the other hand, involves the factors such as environment, strategies, size and etc.

Mintzberg (1980) classified organizations into five main categories based on their structures: simple form, machine bureaucracy, professional bureaucracy, divisionalized form, and adhocracy. Simple form is the type of organization that has few employees. There is low level of division of labor and specialization. The number of management levels is minimum. Machine bureaucracy is usually seen in older and larger structures where the structure is simple and stagnant. In machine bureaucracy, decision making is performed at the top level. Professional bureaucracy is a structure in which standard goods and services are produced with the activities carried out based on professional knowledge and skills. It is generally seen in hospitals and universities. In the divisionalized form, one unit determines the guidelines for other units which are similar to machine bureaucracy type. Adhocracy is seen at project-based organizations which need to react rapidly to evolving demands. The level of formality is low in this specific structure (Mintzberg, 1980).

In light of Daft's (1998) internal structural dimensions, in this study, centralization, specialization, and formalization dimensions are selected as three representative features of organizational structure which may associate with an organization's ERP success.

Centralization

Centralization indicates the level of hierarchy in the organizational structure which has the authority to make decisions such as establishing goals, selecting suppliers, setting prices and deciding marketing territories (Daft, 1998). In highly centralized organizations, higher levels have the authority to make decisions. On the other hand, in decentralized organizations, employees from all levels are involved in decision making and communication is quick and flexible. Organizations with decentralized structures benefit from sub-level managers' skills and adapt to external environment rapidly. However, decentralization may cause incoordination among departments therefore it can lead to inefficient decisions. In centralized organizations, communication is effective and thus, it provides efficiency in executing, controlling and coordination of the processes. However, in centralized organizations, sub-level employees cannot improve their decision-making skills, since the authority cannot be transferred (Aydoğdu, 2013).

Specialization

Specialization refers to the degree to which assignments and tasks are allocated to various employees in line with their purpose (Cunningham and Rivera, 2001). Besides, it can be defined as the level of highly specialized requirements which are explained in detail in the formal job descriptions of individuals. The major outcome of specialization is the existence of specialized knowledge obtained by a group or individual. Specialization refers various fields of concentration found in an organization and is also called as division of labor (Daft, 1998). If the level of specialization is high, each employee fulfills a limited part of the tasks. In case of low specialization, on the other hand, employees will perform an extensive range of tasks in their jobs. Specialization is generally delineated on the basis of different sub-dimensions such as functional specialization, job specialization, role specialization, and individual specialization.

Formalization

Formalization can be defined as the level of job descriptions, instructions, and procedures within an organization (Pertusa-Ortega et al., 2010). Formalized organizations have

structures in which the roles and tasks of employees are clear and well-documented in the form of instructions, procedures, and organization policies (Willem and Buelens, 2009). Schminke et al. (2000) describe formalization as a structural dimension in which employee performance, job assignments, orientation programs for new employees are clearly documented in the organization. Shortly, formalization is the way in which an organization specifies employee behaviors and activities is written and official documents, including regulations and policies. For example, large universities tend to be highly formalized as there are many written rules for registration, course selection and dropout, student unions, dormitory management, and financial management. In small family companies, the situation is exactly the opposite; written rules and documents are either few or not being used (Çalışan, 2010).

1.4 ORGANIZATIONAL CULTURE

Organizations have to live and survive like every living organism and are made up of individuals with different cultures. Culture plays an active role in the fulfillment of the goals of the organization and has an important place in the formation of decisions, strategies, plans, policies as well as in their successful implementation (Akıncı et al., 2007). Organizational culture is a concept which has gained importance in last 25 years with the changing and growing competitive environment. Although there are many studies on organizational culture and related topics, the concept has not yet been defined exactly and there is no clarity about the conceptual dimensions (Yahyagil, 2004). Culture concept is described from organizational perspective as:

Culture is a pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems. (Schein, 2006, p. 17)

Organizational culture is also defined as "the pattern of shared values and beliefs that help members of an organization understand why things happen and thus teach them the behavioral norms in the organization" (Deshpande and Webster, 1989, p. 4).

Although organizational culture does not have very long history in the management literature, researchers have developed several models of organizational culture. Some major models of organizational culture can be listed as follows:

- Schein's Organizational Culture Model
- Harrison's Organizational Culture Model
- Kilmann's Organizational Culture Model
- Quinn and Cameron's Organizational Culture Model
- Denison's Organizational Culture Model

1.4.1 Schein's Culture Model

Schein (2006) analyzed organizational culture in three separate levels (Figure 1.2), the upper level is *artifacts* which include all observable things such as attitudes, technology and language. The second level, *espoused beliefs and values*, consists of shared ideas and beliefs which are not visible. The last level is called *basic underlying assumptions* which reflect the values of employees which cannot be measured but shape an organization's culture. Organizations maintain certain rules and values which are not discussed or questioned frequently but can be understood on their own. Such invisible rules and practices are examples of basic underlying assumptions (Schein, 2006).

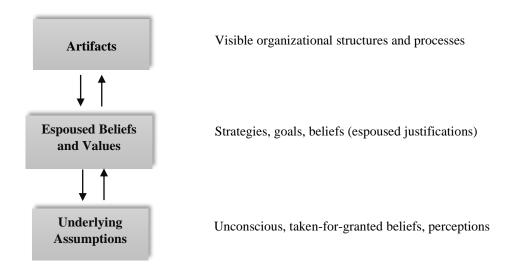


Figure 1.2. Schein's Culture Model

1.4.2 Harrison's Culture Model

Another model of organizational culture is Harrison's (1972) culture model. Harrison classified organizational culture into four dimensions based on the formalization and centralization levels of organizations: person orientation, role orientation, power orientation, and task orientation (Figure 1.3).

Power-oriented organizations have hierarchical structures. Generally, small and medium sized organizations tend to have this type of cultures. Task-oriented cultures are usually seen in project-based organizations. In this culture type, primary emphasis is jobs and individuals are directed to tasks based on their capabilities. Advertising companies, software companies can be given as examples for this culture type. In role-oriented organizations, roles are more important than people in those roles. Compared to other organizational culture types, role oriented cultures are more solid and formal. Roles, job descriptions, and rules are planned in detail. Public institutions are good examples for role oriented cultures. Person-oriented organizations emphasize individual work and success. In this type of culture, it is important to get results with knowledge, experience and competencies of individuals. Law firms and universities are good examples of person-oriented cultures (Aydoğdu, 2010).

High Formalization Role Task Orientation Orientation Power Person Orientation Orientation

Figure 1.3. Harrison's Model

Low Formalization

1.4.3 Kilmann's Culture Model

Kilmann (1986) defines the organization culture as a social energy that moves everything into action. Organizational culture fills the gap between what is formally described and what is actually done. According to Kilmann (1986), culture also helps the interpretation of organizational bureaucracy. Thus, organizational culture affects all decision-making systems and mechanisms as well as employees' desire for work and work efficiency (as cited in Eren, 2004).

Kilmann (1986) specifies two major types of organizational culture: bureaucratic cultures and innovative cultures. Bureaucratic cultures create hierarchic structures that shape the authorities and responsibilities of individuals. Generally, this culture is observed in large organizations which are mature and thus, changing this culture is very difficult. Innovative culture is adopted by many organizations recently. This culture type helps to adapt to environment conditions as the leaders in this culture are entrepreneurial and innovative individuals. People working in innovative cultures do not want to face bureaucratic obstacles while performing their jobs (as cited in Keskin, 2014).

1.4.4 Quinn and Cameron's Culture Model

Quinn and Cameron (1999) are two important authors in organizational culture research who have investigated the influence of organizational culture on organizational success or effectiveness through the model they have developed. They pictured four types of culture in their organizational culture model: clan, adhocracy, hierarchy, and market (Figure 1.4). This model specifies two independent dimensions and four quadrants to describe previously mentioned culture types. The vertical axis represents a transition from organic processes to mechanistic processes, while the horizontal axis involves internal focus to the external focus. Organic processes emphasize flexibility while mechanistic processes emphasize control and balance in the organization.

In the (1) *market* type of culture, organizations are result-oriented, therefore they focus competition and reaching goals. This culture type emphasizes the importance of competitive actions and achieving the targets. (2) *Adhocracy* type of culture aims to encourage creativity, entrepreneurship, and adaptability in the organization. Adhocracy cultures are seen in flexible, innovative and dynamic workplaces. (3) *Clan* type of culture embraces team-oriented approach. It is primarily characterized by participation, teamwork values, commitment, and employee development. It can be described like an extended family. In the (4) *hierarchy* type of culture, rules and regulations are superior. All activities require control, evaluation and orientation. Formalized tasks, standardized procedures and control mechanisms are keys for the success (Keskin, 2014).



Figure 1.4. Quinn and Cameron's Model

1.4.5 Denison's Culture Model

Denison's model (1995) consists of four primary dimensions (i.e., adaptability, mission, involvement, and consistency) and twelve sub-dimensions which are considered to affect organizational performance indicators such as innovation, services and products' quality, market share, and sales growth. The conceptual model, which is shown in Figure 1.5, is adapted from Denison and Mishra (1995).

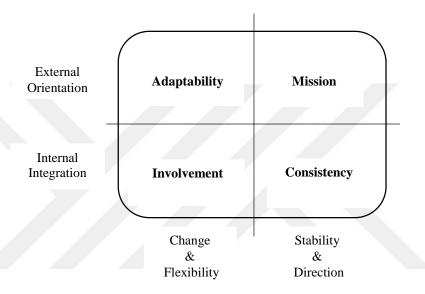


Figure 1.5. Denison's Model

In this study, we relied on the Denison's organizational culture view to investigate the impact of organizational culture on ERP success. Therefore, the types of organizational culture in Denison's model are explained in more detail below.

Adaptability

This culture type demonstrates an orientation in which requirements of the external environment and needs of customers are integrated with learning new capabilities from changing trends. There are three sub-dimensions of adaptability: (1) *creating change:* organizations which aim to create change are able to respond changing needs of their customers. They focus on external environment, meet its requirements, and react to current trends rapidly. (2) *Customer focus* refers to meet customer needs and expectations.

Understanding customers are critical for fulfilling their needs and expectations. (3) *Organizational learning*: Denison et al. (2014) state that organizations with adaptability culture gets the signals from the external environment and transform them into opportunities for acquiring knowledge, fostering innovation, and progressing capabilities.

Mission

Having a clear goal and direction creates the basis for this culture type. The first component of mission is (1) *strategic direction and intent*. Having a clear direction facilitates the understanding of the aim of the organization and describes how people can contribute on this. Second component comprises (2) *goals and objectives*. Having understandable objectives and targets connected with the strategy helps everybody to set clear direction in their work. The last component is (3) *vision*. Organizations with a strong vision has common view of the expected future which characterizes the core values and provides guidance for the people.

Involvement

This culture type involves the individual engagement of people within an organization. If people feel a powerful sense of ownership and have an impact on the decisions and operations in their organizations, involvement culture is strong. This culture rests on three pillars: (1) *empowerment* creates feeling of responsibility and ownership for individuals in the organization. (2) *Team orientation* encourages collaborative work for the shared goals for which people feel mutually accountable. (3) *Capability development* comprises the support mechanisms to develop employees' capabilities to remain competitive.

Consistency

Organizations which have a constant organizational and internal system tend to have consistency culture. There are three elements under this dimension. (1) *Core values* are the shared beliefs and values which form a feeling of identity and certain expectations. (2) *Agreement* is being able to come to a consensus on critical subjects and reaching an

agreement when differences occur. (3) *Coordination and integration* can be described as being able to work cooperatively as different departments or units to reach shared goals.

1.5 EFFECT OF ORGANIZATIONAL STRUCTURE ON ERP SUCCESS

Helo et al. (2008) point out that the primary difficulties in ERP implementation are not technological and technical issues like technological complication or compatibility but human related and organizational problems. Therefore, structure of an organization has important role in influencing ERP success as it can simplify or make it harder the coordination of entire components within an organization (Ravasan et al., 2015). Despite this significance, the number of studies which investigate the effect of structural elements on ERP success is very few. As indicated in the literature review section, structural dimensions are considered as internal features of an organization like standardization, centralization, complexity, specialization, formalization. Some of these structural dimensions has been used in the previous studies which investigate relationship between organizational structure and ERP success (Table 1.2). Based on the findings of these studies, we develop the following theoretical background and hypotheses regarding the relationship between certain dimensions of organizational structure and ERP success.

Table 1.2. Significant Variables in Previous Studies

Structural Variables	(Strong et al., 2001)	(Morton and Hu, 2004)	(Chien et al., 2007)	(Ifinedo, 2007)	(Hanafizadeh and Ravasan, 2011)	(Ravasan et al., 2015)
Centralization	+	+	+	+		+
Specialization	+	+		+		
Formalization	+	+		+	+	+
Complexity	+	+				+

Researchers have used so far various dimensions of organizational structure based on their research purposes. For instance, Mintzberg's structural dimensions were used by Morton and Hu (2004) for investigating the relationship between structure and technology. Ifinedo (2007) found that the structure and size of organization impact the success of ERP systems. Ravasan et al. (2015) found that centralization, complexity, formalization, and organizational size have positive impact of ERP success.

According to Strong et al. (2001), highly centralized organizations tend to be more successful in ERP projects compared to decentralized organizations. Davenport (1998) stated that command and control structure are supported by ERP systems. Chien et al. (2007) also stated that through strict control over project decisions, implementation of system becomes consistent with corporate's objectives and disagreements among organization's members can be eliminated rapidly. On the other hand, centralization can restrict the innovative abilities of the members and may reduce the participation of members in the project. Ifinedo (2007) found that ERP projects tend to be less successful in organizations where decentralization is high. Lastly, Ravasan et al. (2015) found a positive association between level of centralization within an organization and success of ERP. Considering these findings, we expect to find a positive relationship between centralization level and ERP success.

H1: High levels of centralization will have a positive impact on ERP success.

Formalization is another structural dimension which has been scrutinized in the previous studies. ERP helps the organizations integrate units and operations and pushes them to adopt the standardized processes (Morton and Hu, 2004). ERP systems need well-disciplined task behavior within an organization as standardized functions of ERP require formalized procedures and rules (Strong et al., 2001). Previous studies found a positive relationship between high level of formalization and ERP success. Organizations which explicitly formalized their working practices and organizational operations tend to have higher success in the implementation and long-term benefits of ERP (Ifinedo, 2007; Ravasan et al., 2015). Therefore, we expect to find a positive relationship between formalization level and ERP success.

H2: High levels of formalization will have a positive impact on ERP success.

It is believed that ERP systems might be more useful in organizations in which tasks and functions are specialized explicitly. The organization should have distinct roles and tasks for individuals to utilize from ERP (Davenport, 1998; Strong et al., 2001). The results of the study conducted by Ifinedo (2007) show that ERP success is higher in organizations in which distinct tasks are specified and organizational assignments are fairly delineated. It is found that specializing the roles in organizations influences the utilization of ERP systems positively (Morton and Hu, 2004). Considering these studies, we expect to find a positive relationship between high levels of specialization and ERP success.

H3: High levels of specialization have a positive relationship with ERP success.

1.6 EFFECT OF ORGANIZATIONAL CULTURE ON ERP SUCCESS

Ke and Wei (2008) stated that a vast majority of companies may not be able to take advantage of their ERP projects since they ignore the impact of their organizational culture during the implementation of these complex systems. Maintaining a coherence between the cultural assumptions embedded in ERP and organizational culture is critical for ERP success. Unfortunately, very few number of studies have so far examined how cultural orientations of organizations may impact ERP success and/or what kind of corporate cultures may foster the success of ERP systems (Ke and Wei, 2008).

Grabski et al. (2011) stated that it is the people and culture of an organization that influence ERP success. Kampmeier (1998) also pointed out that one reason for many ERP failures is paying inefficient attention to the organizational culture. Jones and Price (2001, p. 551) noted that "organizational members must collaborate and share their knowledge as a team to successfully bring about the changes in the business required to realize long-term ERP benefits". Researchers proposed that the core values in the organizational can lead to mismatch problems during process of ERP implementation and for benefit maximization in later stages (Davenport, 1998; Ifinedo, 2007; Jones and Price, 2001; Kappos, 2000).

As indicated above, previous studies have highlighted the importance of organizational culture in ERP success. Previous studies that focus on the relationship between some elements of organizational culture and ERP success have analyzed the impact of specific

factors such as leadership, support and collaboration, participative decision making, user involvement, top management support, power sharing, learning and development on ERP success (Bhatti, 2005; Ke and Wei, 2008; Zhang et al., 2002). Based on the findings of these studies and relying on the Denison's (1995) model, we develop the following theoretical background and hypotheses regarding the relationship between dimensions of organizational culture and ERP success.

Ke and Wei (2008, p. 211) proposed that ERP success has positive relationship with organizational learning and stated that "ERP systems require continuous learning to apply new features of ERP systems, because these systems are integrative enterprise-wide architecture applications and ERP is likely to produce widespread organizational changes". Therefore, it stands to reason that organizational learning and ability are two critical aspects that impact organizations' ERP success. According to Jones et al. (2006), ERP projects need to create change in organizations, therefore implementation teams should be change-oriented to share required knowledge. Bhatti (2005) stated that organizations should change the way which they do business and people in the organization should be able to change to carry out ERP projects successfully. In another study conducted by Jones and Price (2001), it is reported that companies should focus on associating new knowledge into their current knowledge capabilities to improve ERP success. Thus, we expect to find positive relationship between adoption of an adaptability culture in organizations and ERP success.

H4: Organizations which are strong in adaptability will have higher ERP success.

Holland and Light (1999) reported that consensus and agreement is necessary for enterprises to reengineer business processes and get benefit from ERP software. According to Seo (2013, p. 11), "the composition of team members plays a crucial role in ERP implementation. If a project team does not clearly understand the changes in its organizational structure, and processes, it will not be in a position to benefit from ERP". Parr et al. (1999) found that coordination among departments and individuals in the organization affects the ERP implementation processes. ERP systems are enterprise-wide information systems which merge functions from all related departments in the organization. Each unit of the organization is accountable for the overall system so individuals in the organization should coordinate and share the same aspects and purposes

to increase efficiency of ERP systems. Strong coordination is required to integrate different functions and to make connections between existing functions (Somers and Nelson, 2004). In light of the previous discussion that emphasize the importance of coordination, integration, and shared values and principles, we expect to find a positive relationship between adoption of a consistency culture and ERP success.

H5: Organizations which are strong in consistency will have higher ERP success

Sousa and Collado (2000) remarked that involvement and participation of the individuals is important for ERP projects. Organizations should provide an environment which all individuals are involved about the progress and process of implementation. Another study conducted in Turkey, stated that individuals in the ERP project should feel like a part of the implementation process (Orhan, 2006). Shatat and Udin (2013) found that the involvement of individuals is immensely significant in ERP projects for maximization of benefits and values from ERP implementation.

Collaboration is also one of the most studied factors in studies. It is found that interdepartmental collaboration is important factor to increase ERP success as a result of the surveys which they conducted (Somers and Nelson, 2004; Şaylan et al., 2013). Zhang et al. (2002) pointed out that participation of users in the project have a positive impact on ERP implementation success. Collaboration and team work are also important issues during the ERP processes. ERP system encompasses all functional units and collaboration of users from different departments. Besides, team members or individuals should be empowered to make decisions (Bhatti, 2005; Orhan, 2006). Empowering the organizational members contributes to their personal capability development (Ke and Wei, 2008). In the light of these studies, team work, empowerment and involvement factors have positive impact on the ERP projects' success. Hence, we expect to find positive relationship between adoption of an involvement culture and ERP success.

H6: Organizations which are strong in involvement will have higher ERP success

An open business plan and vision are essential to implement ERP projects effectively. Having a business plan that contains strategic and tangible benefits, costs, resources and risks will create an advantage in the implementation of ERP processes. Seo (2013) stated that organizational members need to understand major guidelines to carry out ERP

processes by checking the project targets and overall business plan. Previous studies have provided empirical evidence for the argument that clearly defined goals and targets have positive impacts on the implementation of ERP processes (Bhatti, 2005; Somers and Nelson, 2004; Şaylan et. al, 2013). For the effective implementation of ERP, organizations need to clarify their objectives and expectations, describe the reasons for implementing an ERP system, and define the critical needs for the system. Hence, successful ERP projects need a well-articulated vision which sheds light on these issues. Therefore, it is plausible to expect a positive relationship between adoption of a mission culture and ERP success.

H7: Organizations which are strong in mission will have higher ERP success

CHAPTER 2

METHODOLOGY

In this study, quantitative research method was used to investigate the relationship between different dimensions of organizational structure, organizational culture, and ERP success. The method used in this study is convenience sampling. Given the nature of the research objectives (i.e., to scrutinize the effects of the independent variables on firms' ERP success) and the adequate availability of previous evidence to formulate hypothesized relationships for examination, a cross-sectional descriptive survey was considered the most appropriate option for this study. The survey method enables researchers to examine and explain relationships between variables, in particular cause-and-effect relationships (Saunders, Lewis, and Thornhill, 2007).

2.1 SAMPLE AND DATA COLLECTION

Before distributing the survey forms to the actual participants of the study, a pilot study was conducted to check whether the statements are clear, understandable, and easy to evaluate. The results of the pilot study will be explained in the first part of the results section.

In the main study, the researcher aims to reach as many organizations as possible which have implemented or are implementing ERP in their operations. The researcher also aims to collect data from various sectors. The actual sample consist of organizations which use top-brand ERP software (i.e., Oracle, SAP, Microsoft Axapta) or mid-market ERP brands in Turkey (i.e., Logo, Mikro etc.).

For data collection purposes, a survey instrument is prepared with "google forms" which is an online research web platform. The survey is prepared in such a way that participants cannot pass any questions. This help the researcher prevent possible missing answers. On the other hand, it is not compulsory for the participants to fill some of the fields. For example, participants are not required to indicate their company names. Before the

respondents face with the questions related to the main concepts of the study, they were asked to answer a set of descriptive questions about their companies and positions.

The survey is distributed to participants via e-mail and by sharing the survey link on LinkedIn and other social media tools. A few number of survey forms were distributed by visiting the representatives of the firms in the sample.

2.2 MEASUREMENT INSTRUMENTS

The first part of the survey includes statements about ERP success. Ifinedo (2008) defines ERP success as the utilization of systems to reach organizational objectives and measured ERP success with a scale involving 5 dimensions (i.e., system quality, information quality, individual impact, workgroup impact and organizational impact). Each dimension includes five statements (Table 2.1) measured by a 5-point Likert type scale (1 = strongly disagree, 5 = strongly agree).

Table 2.1. ERP Success Scale

Item	Statement
SystQual1	Our ERP has accurate data.
SystQual2	Our ERP is easy to learn.
SystQual3	Our ERP has good features.
SystQual4	Our ERP allows data integration.
SystQual5	Our ERP is efficient.
IQual1	Our ERP has timely information.
IQual2	The information on our ERP is important.
IQual3	The information on our ERP is relevant.
IQual4	The information on our ERP is usable.
IQual5	The information on our ERP is available.
IndImp1	Our ERP enhances organizational learning and recall for individual worker.
IndImp2	Our ERP improves individual productivity.
IndImp3	Our ERP is beneficial for individual's tasks.
IndImp4	Our ERP enhances higher-quality of decision making.
IndImp5	Our ERP saves time for individual tasks and duties.
WGrImp1	Our ERP helps to improve workers' participation in the organization.
WGrImp2	Our ERP improves organizational-wide communication.

WGrImp3	Our ERP creates a sense of responsibility.
WGrImp4	Our ERP improves the efficiency of sub-units in the organization.
WGrImp5	Our ERP enhances solution effectiveness.
OrgImp1	Our ERP provides us with competitive advantage.
OrgImp2	Our ERP increases customer service/satisfaction.
OrgImp3	Our ERP facilitates business process change.
OrgImp4	Our ERP supports decision making.
OrgImp5	Our ERP allows for better use of organizational data resource.

Organizational structure dimensions are measured with a 13-item scale (Table 2.2) used in the study conducted by Cunningham and Rivera (2001). The scale consists of three dimensions; centralization, formalization and specialization. Each statement is measured again by a 5-point Likert type scale (1 = strongly disagree, 5 = strongly agree).

Table 2.2. Organizational Structure Scale

Item	Statement
Org_Cntrl1	I have to ask the boss before I can do almost anything.
Org_Cntrl2	Even small matters have to be referred to someone higher up for the final answer.
Org_Cntrl3	A person who wants to make a decision on his own would be quickly discouraged.
Org_Cntrl4	Any decision I make has to have my boss' approval.
Org_Cntrl5	There can be little action here until the supervisor makes a decision.
Org_Form1	A "rules and procedures" manual exists and is readily available within the department.
Org_Form2	The department has a large number of written rules and policies.
Org_Form3	There is a complete written job description for most jobs in this department.
Org_Form4	The organization keeps a written record of nearly everyone's job performance.
Org_Form5	There is a formal orientation program for most new members of the department.
Org_Spec1	Support staff (e.g., secretaries) are assigned roles and duties according to their specific capabilities and strengths.
Org_Spec2	Administrators and departmental staff (e.g., marketing directors) are assigned roles and duties based on their specific capabilities.
Org_Spec3	Departmental volunteers are assigned specific duties according to their capabilities.

To measure the dimensions of organizational culture, the Turkish version of Denison's organizational culture questionnaire, which was adapted by Yahyagil (2004), is used. The original version of the survey has four main dimensions and each dimension consists three sub-dimensions with five statements. The original questionnaire has 60 items but

Yahyagil (2004) developed a Turkish version of Denison's survey which includes 36 items and provided evidence for the reliability and validity of this version. Each statement in this specific scale is measured with a 5-point Likert type scale. The first nine items measure involvement, followed by the subsequent items measuring consistency, adaptability, and mission cultures (Table 2.3).

Table 2.3. Organizational Culture Scale

Item	Statement
	Most employees are highly involved in their work. (Empowerment)
	Information is widely shared so that everyone can get the information he or she needs when it's needed. (Empowerment)
	Business planning is ongoing and involves everyone in the process to some degree. (Empowerment)
Involvement	Cooperation across different parts of the organization is not actively encouraged. (Team Orientation)*
olve	Teams are our primary building blocks of this organization. (Team Orientation)
Inve	Work is organized so that each person can see the relationship between his or her job and the goals of the organization. (Team Orientation)
	Authority is delegated so that people can act on their own. (Capability Development)
	The "bench strength" (capability of people) is constantly improving. (Capability Development)
	There is continuous investment in the skills of employees. (Capability Development)
	The leaders and managers "practice what they preach". (Core Values)
	There is a clear and consistent set of values that governs the way we do business. (Core Values)
	There is no ethical code that guides our behavior and tells us right from wrong. (Core Values)*
Consistency	When disagreements occur, we work hard to achieve that benefit both parties in the disagreement. (Agreement)
ons	There is a "strong" culture in this organization. (Agreement)
0	It is easy to reach consensus, even on difficult issues. (Agreement)
	People from different parts of the organization share a common perspective.(Coordination)
	It is easy to coordinate projects across different parts of the organization. (Coordination)
	Working with someone from another part of this organization is like working with someone from a different organization. (Coordination)*
	The way things are done is very flexible and easy to change. (Creating Change)
Adaptability	We respond well to competitors and other changes in the business environment. (Creating Change)
ıtabi	New and improved ways to do work are continually adopted (Creating Change)
dap	Customer comments and recommendations often lead to changes. (Customer Focus)
₹	All members have a deep understanding of customer wants and needs. (Customer Focus)
	The interests of the customer seldom get ignored in our decisions. (Customer Focus)*

	We view failure as an opportunity for learning and improvement. (Organizational Learning)
	Innovation and risk taking are encouraged and rewarded. (Organizational Learning)
	Learning is an important objective in our day-to-day work. (Organizational Learning)
	There is a long-term purpose and direction. (Strategic Direction and Intent)
	There is a clear mission that gives meaning and direction to our work. (Strategic Direction and Intent)
	There is no clear strategy for the future. (Strategic Direction and Intent)*
	There is widespread agreement about goals. (Goals and Objectives)
Mission	The leadership has "gone on record" about the objectives we are trying to meet. (Goals and Objectives)
	People understand what needs to be done for us to succeed in the long run. (Goals and Objectives)
	We have no shared vision of what the organization will be like in the future. (Vision)*
	Leaders have a long-term viewpoint. (Vision)
	We are able to meet short-term demands without compromising our long-term vision. (Vision)

^{*}Reverse-coded statements

CHAPTER 3

RESULTS

3.1 PILOT STUDY

Before conducting the main study, a pilot study was carried out. As indicated above, the aim of the pilot study was to assess whether the statements are clear, understandable, and easy to evaluate. In the pilot study, data were collected from 25 respondents.

3.1.1 Reliability Analysis

Reliability analysis is used to test the consistency and stability of the scale. The value of Cronbach's Alpha (α) shows whether the scale is reliable or not (Özdamar, 2004).

- $0.00 \le \alpha < 0.40$, the scale is not reliable,
- $0.40 \le \alpha < 0.60$, the reliability of scale is low
- $0.60 \le \alpha < 0.80$, the scale is reliable
- $0.80 \le \alpha < 1.00$, the scale is reliable at high level.

The reliability analysis was conducted with SPSS 23 statistical software package. The results showed that reliability coefficient (Alpha) for ERP success scale (including 25 items) is 0.935 and alpha values for its dimensions were also high (Table 3.1).

Table 3.1. Reliability Analysis for ERP Success Scale

	Cronbach's Alpha	Number of Items
ERP Success	,935	25
System Quality	,891	5
Information Quality	,672	5
Individual Impact	,845	5
Workgroup Impact	,846	5
Organizational Impact	,880	5

The reliability coefficient for organizational structure scale (including 13 items) was 0.759 and only centralization dimension had a low alpha value (Table 3.2).

Table 3.2. Reliability Analysis for Organizational Structure Dimensions

	Cronbach's Alpha	Number of Items
Organizational Structure	,759	13
Centralization	,611	5
Formalization	,912	5
Specialization	,815	3

The reliability coefficient for overall organizational culture scale was .855. However, alpha values were lower for involvement (α =0.606) and adaptability dimensions (α =0.650) (Table 3.3). The values might be low because there were some negative statements in these scales. For example, the fourth statement in involvement dimension was negative and "alpha if item deleted" was 0.726 for this dimension (see Appendix A).

Table 3.3. Reliability Analysis for Organizational Culture Dimensions

	Cronbach's Alpha	Number of Items
Organizational Culture	,855	36
Mission	,785	9
Consistency	,752	9
Adaptability	,650	9
Involvement	,606	9

3.1.2 Exploratory Factor Analysis

Exploratory factor analysis with varimax rotation was conducted to discover the underlying factors for a set of measured variables in a dataset. However, KMO values, which measure the sampling adequacy and need to be greater than 0.50 (Burns and Burns,

2008), could not be calculated for the ERP success and organizational culture scales, probably due to the limited sample size. Therefore, in the main study, factor distributions in the literature were followed. Results of the exploratory factor analyses can be seen in Appendix A.

Factor analysis results for organizational structure dimensions, on the other hand, comply with the factor distribution in the literature (Table 3.5). The total variance explained table showed that first factor accounts for 33.10% of the variance, the second 20.05% and third factor 16.40% of the total variance (Table 3.4).

Table 3.4. Total Variance Explained Table for Organizational Structure

Dimensions

	I	Initial Eigenvalues		Extraction Sums of Squared Loadings		Rotat	ion Sums o Loading	of Squared gs	
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4,304	33,107	33,107	4,304	33,107	33,107	4,031	31,005	31,005
2	2,607	20,058	53,165	2,607	20,058	53,165	2,741	21,085	52,090
3	2,132	16,401	69,565	2,132	16,401	69,565	2,272	17,475	69,565
4	1,259	9,683	79,249						
5	,772	5,936	85,185						
6	,464	3,566	88,751						
7	,411	3,160	91,912						
8	,319	2,453	94,365						
9	,236	1,814	96,179						
10	,216	1,661	97,840						
11	,144	1,106	98,946						
12	,094	,721	99,667						
13	,043	,333	100,000						

Table 3.5. Rotated Component Matrix for Organizational Structure Dimensions

Component		
1	2	3
		,689
		,780
		,514
		,855
	,532	
,913		
,915		
,830		
,773		
,827		
	,679	
	,862	
	,903	
	,913 ,915 ,830 ,773	,532 ,913 ,915 ,830 ,773 ,827 ,679 ,862

3.2 MAIN STUDY

The main data were collected from 71 employees working in 33 different companies between October and December 2017. Respondents in the sample firms are employees who are actively using ERP tools and/or have knowledge about the ERP software of the organization. Although the original aim was to collect data from more than one individual in each organization, due to the difficulty to access knowledgeable individuals about ERP, surveys were received from only one person in some of the organizations. The mean and standard deviation values of the variables are shown in Table 3.6.

Table 3.6. Mean and Standard Deviation Values for Variables

	Mean	Standard Deviation
ERP Success	3,68	0,76
Centralization	3,29	0,80
Specialization	3,63	0,99
Formalization	2,98	1,03
Involvement	3,49	0,71
Consistency	3,45	0,72
Adaptation	3,40	0,66
Mission	3,50	0,75

Respondent characteristics can be seen in Table 3.7. In the total sample, the average age of the respondents was $28.6 \, (SD = 5.04)$, ranging from 21 to 46 years. Females constituted 33.8% of the participants and males constituted the remaining 66.2%. The most frequently reported education level was undergraduate degree (88.7%), followed by master's degrees (9.9%) and PhD degrees (1.4%). They are working in different departments in their respective organizations, and mostly in Finance (38%) and Information Technologies (29.6%).

Table 3.7. Characteristics of Respondents

Characteristics	Frequency	Percent
Gender		
Female	24	33.8
Male	47	66.2
Total	71	100
Age		
21-28	46	64.8
29-36	20	28.2
37-46	5	7.0
Total	71	100
Education		
Undergraduate	63	88.7
Master's Degree	7	9.9

PhD	1	1.4
Total	71	100
Department		
Finance	27	38.0
Information Technologies	21	29.6
Human Resources	6	8.5
Production	2	2.8
Research & Development	2	2.8
Sales	2	2.8
Other	11	15.5
Total	71	100

Descriptive statistics regarding the organizations represented in the sample can be seen in Table 3.8. The 27.3% of the organizations were operating in computer and technology sector. 18.8% of the organizations have more than 1000 employees, followed by the 40.6% of the organizations having 20 to 100 and 40.6% of the organizations have 100 to 1000 employees. 12.1% of the organizations have been operating in the sector for more than 50 years, followed by the 36.4% and 51.5% of organizations aged between 20 to 49 and 3 to 19 years respectively. The mostly preferred ERP software brands were Logo and Oracle.

Table 3.8. Characteristics of Organizations

Characteristics	Frequency	Percent			
Industry					
Telecommunication	4	12.1			
Education	2	6.1			
Health / Social Affairs	1	3.0			
Insurance	1	3.0			
Manufacturing / Production	5	15.2			
Tourism	4	12.1			
Banking / Finance	4	12.1			
Computer / Technology	9	27.3			
Other	3	9.1			
Total	33	100			
Size					
20-100	13	40.6			
100-1000	13	40.6			
1000+	6	18.8			

Total	32	100
Age		
3-19	17	51.5
20-49	12	36.4
50+	4	12.1
Total	33	100
Software		
Logo	9	27.3
SAP	4	12.1
Oracle	8	24.2
Microsoft Axapta	2	6.1
Mikro	3	9.1
Other	7	21.2
Total	33	100

3.2.1 Reliability Analysis

Similar to the pilot study, a reliability analysis on SPSS was conducted for the scales in the main survey forms. The results showed that alpha values for all scales are higher in the main study compared to ones in the pilot study (Table 3.9, 3.10, and 3.11).

Table 3.9. Reliability Analysis for ERP Success Scale

	Cronbach's Alpha	N of Items
ERP Success	,973	25
System Quality	,935	5
Information Quality	,900	5
Individual Impact	,931	5
Workgroup Impact	,930	5
Organizational Impact	,969	5

Table 3.10. Reliability Analysis for Organizational Structure Dimensions

	Cronbach's Alpha	N of Items
Organizational Structure	,879	13
Centralization	,833	5
Formalization	,916	5
Specialization	,936	3

Table 3.11. Reliability Analysis for Organizational Culture Dimensions

	Cronbach's Alpha	N of Items
Organizational Culture	,966	36
Mission	,926	9
Consistency	,905	9
Adaptability	,895	9
Involvement	,909	9

3.2.2 Exploratory Factor Analysis

For the ERP success scale, KMO value was 0.734 which exceeded 0.50. However, similar to the pilot study, factor analysis for this scale did not produce the expected factor distribution found in the literature (Table 3.12).

Table 3.12. Rotated Component Matrix for ERP Success Scale

		Component					
	1	2	3	4	5		
SystQual1		,841					
SystQual2		,633			,475		
SystQual3		,833					
SystQual4		,812					
SystQual5		,909					
IQual1		,880					
IQual2				,690			
IQual3				,745			
IQual4				,693			
IQual5		,589		,420			
IndImp1		,832					
IndImp2			,613				
IndImp3			,632				
IndImp4			,644				
IndImp5			,710				
WGrImp1	,834						
WGrImp2	,874						
WGrImp3	,911						
WGrImp4	,726				,534		
WGrImp5	,698						
OrgImp1	,879						
OrgImp2	,758						
OrgImp3	,874						
OrgImp4	,758						
OrgImp5	,698						
Bartlett's Test of	Sphericity:	1122,981	KMO: ,734				

The factor analysis for organizational culture scale did not produce the KMO value and rotated component matrix. This is probably due to limited number of respondents. The component matrix can be seen in Table 3.13.

Table 3.13: Component Matrix for Organizational Culture Dimensions

				Componer	nt		
	1	2	3	4	5	6	7
Inv_Emp1	,544						
Inv_Emp2	,633						
Inv_Emp3	,736						
Inv_Team2	,753						
Inv_Team3	,778						
Inv_Cap_Dev1	,703						
Inv_Cap_Dev2	,690						
Inv_Cap_Dev3	,638						
Con_Core_Val1	,667						
Con_Core_Val2	,886						
Con_Agr1	,707						
Con_Agr2	,559						
Con_Agr3	,661						
Con_Coord1	,850						
Con_Coord2	,664						
Adap_Change1	,703						
Adap_Change2	,604						
Adap_Change3	,790						
Adap_Cust1				,465			
Adap_Cust2	,762						
Adap_Org_Learn1		-,579					
Adap_Org_Learn2	,611						
Adap_Org_Learn3	,781						
Mis_Strat1	,825						
Mis_Strat2	,826						
Mis_Goal_Obj1	,828						
Mis_Goal_Obj2	,764						
Mis_Goal_Obj3	,751						
Mis_Vis2	,818						
Mis_Vis3	,796						
Inv_Team1R	,644						
Con_Core_Val3R	,655						
Con_Coord3R		,769					
Adap_Cust3R					,590		
Mis_Strat3R		,694					
Mis_Vis1R	,592						

Results of the factor analysis for organizational structure scale demonstrated that all items were found to be distributed in accordance with the literature (Table 3.15). KMO value was 0.682 which exceeded the lower limit of 0.50. The total variance explained table

showed that first factor accounts for 41.38% of the variance while the second and third factors accounts for 18.75% and 14.56% of the total variance, respectively (Table 3.14).

Table 3.14. Total Variance Explained Table for Organizational Structure

Dimensions

	Initial Eigen		l Eigenvalues		Extraction Sums of Squared Loadings		Rotat	ion Sums o Loading	of Squared gs
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,380	41,381	41,381	5,380	41,381	41,381	3,763	28,944	28,944
2	2,454	18,875	60,257	2,454	18,875	60,257	3,089	23,764	52,708
3	1,894	14,565	74,822	1,894	14,565	74,822	2,875	22,114	74,822
4	1,067	8,209	83,031						
5	,581	4,472	87,503						
6	,417	3,207	90,710						
7	,355	2,734	93,444						
8	,319	2,457	95,901						
9	,205	1,580	97,481						
10	,141	1,082	98,563						
11	,098	,754	99,318						
12	,057	,438	99,755						
13	,032	,245	100,000						

Table 3.15. Rotated Component Matrix for Organizational Structure Dimensions

		Component	
	1	2	3
Org_Cntrl1		,610	
Org_Cntrl2		,871	
Org_Cntrl3		,784	
Org_Cntrl4		,837	
Org_Cntrl5		,647	
Org_Form1	,922		
Org_Form2	,872		
Org_Form3	,850		
Org_Form4	,816		
Org_Form5	,711		
Org_Spec1			,852
Org_Spec2			,947
Org_Spec3			,926
Bartlett's Test of	Sphericity: 335	,153 KMO: ,6	582

3.2.3 Correlation Analysis

Correlation analysis is used to measure the level of association between variables. The coefficient value for the correlation varies in a range between -1 and +1. If the coefficient value is close to 0, the association between two variables tend to be weak. If the coefficient value is +1 or -1, it shows that there is a perfect relationship between two variables (Burns and Burns, 2008). Correlations among ERP success, organizational culture, and organizational structure dimensions are presented in Table 3.16.

Table 3.16. Correlation Analysis

	1	2	3	4	5	6	7	8
1. ERP Success		,291	,751**	,236	,651**	,654**	,606**	,561**
2. Centralization	,291		,211	,364*	,440*	,285	,554**	,462**
3. Specialization	,751**	,211		,394*	,632**	,783**	,493**	,637**
4. Formalization	,236	,364*	,394*		,421*	,571**	,143	,594**
5. Involvement	,651**	,440*	,632**	,421*		,691**	,697**	,724**
6. Consistency	,654**	,285	,783**	,571**	,691**		,574**	,817**
7. Adaptability	,606**	,554**	,493**	,143	,697**	,574**		,754**
8. Mission	,561**	,462**	,637**	,594**	,724**	,817**	,754**	

^{**} p<0.01, *p<0.05 N=33

The results showed that centralization (r = 0.291, p = 0.100 > 0.05) and formalization (r = 0.236, p = 0.186 > 0.05) is not associated with ERP success. On the other hand, specialization (r = 0.751, p = 0.000 > 0.01), involvement (r = 0.651, p = 0.000 > 0.01), consistency (r = 0.654, p = 0.000 > 0.01), adaptability (r = 0.606, p = 0.000 > 0.01) and mission (r = 0.561, p = 0.001 > 0.01) have strong association with ERP success.

3.2.4 Regression Analysis

It is not sufficient to determine the effects of independent variables on the dependent variable through correlation analysis. Therefore, multiple regression analysis is conducted to see which variables influence ERP success. "Enter" method was used. To interpret the results of regression analysis, R², F-test and Beta values are checked. R² value indicates the percentage of the criterion variable that is explained by the linear model of independent variables (Burns and Burns, 2008). F value shows whether the regression model is statistically meaningful or not. Multiple regression model assumes that there is no linear relationship between independent variables. To analyze the linearity

relationship in the model, collinearity statistics (VIF and tolerance values) should be examined. Collinearity is not a serious problem if the VIF value approaches 1 or 1 upwards. As the VIF value grows, there are serious multiple linear relationships among the variables. In practice, VIF values above 10 indicate that there is a serious multiple linear relationship (Erkan, 2013). On the other hand, Durbin-Watson value need to be between 1,5 and 2,5 to avoid collinearity.

Before checking the regression results for the hypothesized relationships, a regression analysis was conducted to see whether the control variables influence the dependent variable (ERP success). As shown in the following table (Table 3.17), control variables did not have any significant impacts on the ERP success. Thus, these variables were not included in the subsequent regression analyses.

Table 3.17. Multiple Regression Analysis for Control Variables

Method: Enter	N = 33			
Dependent Variable : Control Variables				Durbin-Watson
Independent Variable				
	Beta	T	p	Collinearity
Control Variables				Tolerance VIF
Age	0.218	1.177	0.249	0.968 1.033
Size	-0.078	-0.424	0.675	0.990 1.010
Industry	0.145	0.784	0.440	0.969 1.032

The results of multiple regression analysis which analyzes the impact of structural dimensions as independent variables on dependent variable (ERP success) can be seen in Table 3.18.

Table 3.18. Multiple Regression Analysis for Organizational Structure

Method : Enter	N = 33				
Dependent Variable : ERP Success				Durbin-V	Vatson
R ² : 0.619 Adjusted R ² : 0.562	df = 4	F = 10.946	p = 0.000	2.422	2
Independent Variable	Beta	T	p	Colline	arity
Organizational Structure				Tolerance	VIF
Centralization	0.199	1.539	0.135	0.846	1.181
Formalization	-0.106	-0.769	0.449	0.748	1.337
Specialization	0.758	5.841	0.000	0.838	1.193

The overall F-test for the model showed that the model is statistically significant explaining 56% of the variance in the respondents' perceptions of ERP success. As it is seen in Table 3.18, specialization has a significant impact (β = 0.758, p < .01) on ERP success. Centralization does not have significant effect on ERP success. Similarly, formalization does not have effect on ERP success statistically according to multiple regression results.

Table 3.19. Multiple Regression Analysis for Organizational Culture

Method : Enter Dependent Variable : ERP Success	N = 33			Durbin-V	Watson
R ² : 0.562 Adjusted R ² : 0.481	df = 5	F = 6.938	p = 0.000	2.031	
Independent Variable	Beta	T	p	Collinea	arity
Organizational Culture				Tolerance	VIF
Involvement	0.276	1.339	0.192	0.383	2.612
Consistency	0.523	2.138	0.042	0.271	3.692
Adaptability	0.375	1.783	0.086	0.366	2.733
Mission	-0.333	-1.109	0.277	0.180	5.555

The multiple regression analysis is conducted again to see the relationships between organizational culture dimensions and ERP success. F-test value showed that this model is significant and explains 48% of the variance in the respondents' perceptions of ERP success. As it is seen in Table 3.19, consistency has a significant impact (β = 0.523, p<.05) on ERP success. Adaptability has also a significant impact (β = 0.375, p<.10) on ERP success. However, involvement and mission dimensions of organizational culture do not influence ERP success.

Summary results for all the hypotheses are presented in Table 3.20.

Table 3.20. Hypotheses Summary

No	Hypothesis	Result
Н1	High levels of centralization will have a positive impact on ERP success.	Not Supported
H2	High levels of formalization will have a positive impact on ERP success.	Not Supported
НЗ	High levels of specialization will have a positive impact on ERP success.	Supported

H4	Organizations which are strong in adaptability will have higher ERP success.	Supported
Н5	Organizations which are strong in consistency will have higher ERP success.	Supported
Н6	Organizations which are strong in involvement will have higher ERP success.	Not Supported
H7	Organizations which are strong in mission will have higher ERP success.	Not Supported

CONCLUSION

In the past three decades, with the rapid development of information technology, companies endeavor to seek new ways to increase their competitive advantage and their organizational efficiency. Struggling with difficult issues such as increasing product quality, reducing costs, meeting customer expectations, strengthening decision-making to adapt changing conditions, they tend to use alternative ways to streamline and improve their operations. ERP is one of such tools that companies utilize to meet the achieve their operational goals.

With the increasing use of ERP systems in organizations, researchers started to investigate the internal and external factors that influence ERP success. However, few studies have so far analyzed empirically the effects of internal organizational factors, such as structure and culture, on ERP success (Ifinedo, 2007). Besides, in the existing research, structural and cultural factors have been discussed only at the conceptual level (Ke and Wei, 2008; Morton and Hu, 2004). In order to fill aforementioned gaps, this dissertation investigated the impact of two important, internal organizational factors, namely organizational structure and culture, on ERP system success in Turkish companies.

The results regarding the impacts of structural dimensions on ERP success showed that among three organizational structural dimensions, only specialization has an impact on ERP success. Organizations with a higher level of specialization are likely to have successful ERP since specialized tasks decrease the complexity of ERP systems. As indicated in the literature, ERP success is likely to be higher in organizations in which roles, tasks, and assignments are clearly delineated. Organizations can maximize the benefits they derive from ERP by differentiating the tasks of individuals based on their specific capabilities (Davenport, 1998; Ifinedo, 2007; Morton and Hu, 2004).

On the other hand, the results of this dissertation do not indicate a positive relationship between centralization and ERP success, in contrast to the findings of the previous studies (Chien et al., 2007; Ifinedo, 2007; Ravasan et al., 2015). This may be due to the fact that most of the participant organizations in this study were small-sized companies (i.e., only six organizations had more than 1000 employees), employees of which may not even observe a clear line between centralization and decentralization. Results also showed that

formalization does not influence ERP success, again on the contrary to the findings in the literature (Ifinedo, 2007; Ravasan et al., 2015; Strong et al., 2001). Previous studies stated that formalization has a positive impact on ERP success, since ERP systems need well-disciplined task behavior within an organization as standardized functions of ERP require formalized procedures. Organizations which formalized their organizational operations tend to have higher success in the implementation and long-term benefits of ERP. But the results of this study did not support this hypothesis. This may be related to the sectoral distribution of the participant organizations. 27% of the organizations were operating in the computer/technology sector and most of them were software companies which do not work with formalized operations and roles, which are mostly seen in government organizations or banks.

Regarding the dimensions of organizational culture, the findings indicated that organizations which are strong in adaptability tend to have higher ERP success. Previous studies have also demonstrated that organizations should be able to foster organizational learning and change to increase the probability of ERP success (Bhatti, 2005; Ke and Wei, 2008). Since ERP systems are continuously updated, organizations need to adapt to technological changes and developments and integrate any kind of update to their existing systems. The findings also indicated that there is a positive relationship between adoption of a consistency culture and ERP success. Scholars have already emphasized that coordination, integration, and shared values, which represent the characteristics of consistency culture, influence ERP success positively since ERP systems require the integration of different functions and departments (Somers and Nelson, 2004). Companies high in consistency tend to establish strong coordination among different departments and/or functional units, which would facilitate the ERP success.

Although adoption of an involvement culture was found to increase the ERP success in previous research, this hypothesis is not supported in this dissertation. Similarly, the results did not provide evidence for the positive relationship between adoption of a mission culture and ERP success, despite the literature stated that having a clear vision, business plans and objectives are necessary conditions for successful ERP practices. It is plausible to present a number of reasons for these non-significant results. First, in some of the participant organizations, survey responses are received from one person working in a specific department. These participants may not know whether employees from

different departments are empowered and involved in the ERP processes or not. Additionally, organizations in the sample were mostly small-sized organizations which may not carry the characteristics of a mission culture leading to skewed distribution of answers.

The results of this study have implications for organizations which are implementing or have already implemented ERP systems. With regard to organizational structure, individuals should be assigned to those tasks or projects for which they have specific knowledge and capabilities to decrease the complexity of ERP. Distinct roles and tasks should be specified for each and every participant (employee) to increase the success of ERP systems. Regarding the organizational culture, companies should foster organizational learning and adaptive orientation to catch up with the new features or developments of ERP systems and fulfill its requirements. In other words, they need to prioritize certain aspects of adaptability culture, which is an important contributor to ERP success. Adoption of a consistency culture also influences ERP success positively. Firms should have a coordinated workforce and departments to comply with the integrative nature of ERP. Different organizational units need to work cooperatively and collaboratively to operate successful ERP systems.

Although some of the results in this dissertation conform to the theoretical predictions and have some practical implications, this research is not without limitations. First of all, the data of this study concerned 33 different organizations in Istanbul, Turkey, which have implemented or are implementing ERP in their operations. Most of the participant organizations in this dissertation were small-sized companies (i.e., only six organizations had more than 1000 employees). The generalizability of the findings is limited until the study is extended to a broader spectrum of organizations in various sizes and ages. Moreover, since the data are cross-sectional, it is not possible to reach causal conclusions with respect to the relationships between selected organizational structure and culture dimensions and ERP success. Future studies may investigate the hypothesized relationships within a longitudinal design, in which ERP success in particular are measured at different points in time. In addition, since the data are collected from only one individual in some of the organizations, it is difficult to make a reliable judgement about the structural elements and cultural orientation in those organizations. Ideally,

researchers would apply the survey to as many individuals as possible working at different ranks, positions, and departments in the sample organizations.

SOURCES

- Aarabi, M., Saman, M., Wong, K., Beheshti, H., & Hemdi, A. 2011, 'Critical Success Factors of Enterprise Resource Planning Implementation in Small and Medium Enterprises in Developing Countries: A Review and Research Direction', *Proceedings of Industrial Engineering and Service Science*.
- Akıncı V., Beril, Z., & Çoşkun, G. 2007, Örgüt Kültürü, 1. Basım, Nobel Yayın, Ankara.
- Al-Fawaz, K., Al-Salti, Z., & Eldabi, T. 2008, 'Critical success factors in ERP implementation: A review', *European and Mediterranean Conference on Information Systems* 2008.
- Al-Mashari, M., Al-Mudimigh, A., & Zairi, M. 2003, 'Enterprise resource planning: A taxonomy of critical factors', *European journal of operational research*, vol. 146, no. 2, pp. 352-64.
- Aydoğdu, A. 2013, 'Örgüt Yapısının İnnovasyon ve Örgüt Kültürüne Etkisi ve Bir Araştırma', Master's Thesis, Marmara University, Istanbul.
- Bhatti, T. R. 2005, 'Critical success factors for the implementation of enterprise resource planning ERP: empirical validation'. *In the second international conference on innovation in information technology*, vol. 110
- Burns, R. P., & Burns, R. 2008, Business research methods and statistics using SPSS, Sage.
- Çalışan, G. 2010, 'Bilişim Sektöründe Organizasyonel Yapinin Performans Üzerindeki Etkileri', Master's Thesis, İstanbul Teknik University, Istanbul.
- Cameron, K. S., & Quinn, R. E. 1999, *Diagnosing and Changing Organizational Culture*, Reading: Addison-Wesley.
- Chien, S. W., Hu, C., Reimers, K., & Lin, J. S. 2007, 'The influence of centrifugal and centripetal forces on ERP project success in small and medium-sized enterprises in China and Taiwan.', *International Journal of Production Economics*, vol. 107, no. 2, pp. 380-96.
- Cunningham, G. B., & Rivera, C. A. 2001, 'Structural designs within American intercollegiate athletic departments.', *The International Journal of Organizational Analysis*, vol. 9, no. 4, pp. 369-90.
- Daft, R. L. 1998, Essentials of Organization Theory and Design, South-Western College Publishing.
- Daft, R. L. 2000, Management, Vol. 5, Chicago: Dreyden Press.
- Davenport, T. 1998, 'Putting the enterprise into the enterprise system.', Harvard Business Review', vol. 76, no. 4, pp. 121-31.
- Denison, D. R., & Mishra, A. K. 1995, 'Toward a theory of organizational culture and effectiveness.', *Organization science*, vol. 6, no. 2, pp. 204-23.

- Denison, D., Nieminen, L., & Kotrba, L. 2014, 'Diagnosing organizational cultures: A conceptual and empirical review of culture effectiveness surveys.', *European Journal of Work and Organizational Psychology*, vol. 23, no. 1, pp. 145-61.
- Deshpande, R., & Webster Jr, F. E. 1989, 'Organizational culture and marketing: defining the research agenda.', *The journal of marketing*, pp. 3-15.
- Eren, E. 2004, Örgütsel Davranış ve Yönetim Psikolojisi, 8. Basım, Beta Yayınları, İstanbul.
- Erkan, S. 2013, 'Çoklu Regresyon Korelasyon Analizinde Varsayımdan Sapmalar ve Çimento Sektörü Üzerine Uygulama'.
- Fryling, M. 2004, The Dynamics of ERP Success.
- Grabski, S. V., Leech, S. A., & Schmidt, P. J. 2011, 'A review of ERP research: A future agenda for accounting information systems.', *Journal of information systems*, vol. 25, no. 1, pp. 37-78.
- Hanafizadeh, P., & Zare Ravasan, A. 2011, 'A mckinsey 7s model-based framework for ERP readiness assessment.', IJEIS, *International Journal of Enterprise Information Systems*, vol. 7, no. 4, pp. 23-63.
- Harrison, R. 1972, 'Understanding your organization's character.', *Harvard Business Review*, vol. 50, no. 3, pp. 119-28.
- Helo, P., Anussornnitisarn, P., & Phusavat, K. 2008, 'Expectation and reality in ERP implementation: Consultant and solution provider perspective.', *Industrial Management & Data Systems*, vol. 108, no. 8, pp. 1045-59.
- Holland, C. P., Light, B., & Gibson, N. 1999, 'A critical success factors model for enterprise resource planning implementation.', *In Proceedings of the 7th European conference on information systems*, vol. 1, pp. 273-87.
- Holland, C. R., & Light, B. 1999, 'A critical success factors model for ERP implementation.', *IEEE software*, vol. 16, no. 3, pp. 30-6.
- Ifinedo, P. 2006, 'Enterprise resource planning systems success assessment: an integrative framework.', University of Jyväskylä.
- Ifinedo, P. 2007, 'Interactions between organizational size, culture, and structure and some IT factors in the context of ERP success assessment: an exploratory investigation.', *Journal of Computer Information Systems*, vol. 47, no. 4, pp. 28-44.
- Ifinedo, P. 2008, 'Impacts of business vision, top management support, and external expertise on ERP success.', *Business Process Management Journal*, vol. 14, no. 4, pp. 551-68.
- Jacobs, F. R. 2007, 'Enterprise resource planning ERP A brief history.', *Journal of Operations Management*, vol. 25, no. 2, pp. 357-63.
- Jones, M. C., Cline, M., & Ryan, S. 2006, 'Exploring knowledge sharing in ERP implementation: an organizational culture framework.', *Decision Support Systems*, vol. 41, no. 2, pp. 411-34.

- Jones, M., & Price, R. L. 2001, 'Organizational knowledge sharing in ERP implementation: a multiple case study analysis.', *ICIS 2001 Proceedings*, vol. 70.
- Kalbasi, H. 2007, Assessing Erp Implementation Critical Success Factors.
- Kampmeier, C. 1998, 'Intellectual Capital: The New Wealth of Organizations', *Journal of Management Consulting*, vol. 10, no. 1, pp. 61-4.
- Kappos, A. 2000, 'Organizational Culture and the Achievement of ERP Strategic Advantages and BPR Performance Improvements', Unpublished M.Sc. Thesis, Concordia University, Montreal, Canada.
- Ke, W., & Wei, K. K. 2008, 'Organizational culture and leadership in ERP implementation.', *Decision support systems*, vol. 45, no. 2, pp. 208-18.
- Keçek, G. and Yıldırım, E. 2009, 'Kurumsal Kaynak Planlaması ve İşletme Açısından Önemi', Electronic Journal of Social Sciences, vol. 8, no 29.
- Keskin, B. 2014, 'Kilmann Ve Quinn & Cameron Modeline Göre Örgüt Kültürü Ile Iş Tatmini Ilişkisi Üzerine Bir Araştirma', Master's Thesis, Marmara University, Istanbul
- Kilmann, R. H., Saxton, M. J., & Serpa, R. 1986, 'Issues in understanding and changing culture.', *California Management Review*, vol. 28, no. 2, pp. 87-94.
- Klaus, H., Rosemann, M., & Gable, G. G. 2000, 'What is ERP? Information Systems Frontiers', vol. 2, no. 2, pp. 141-62.
- Korhonen, O. 2013, 'Successful Management of ERP Implementations: A Case Study'.
- Maldonado, M. 2009, Factors impacting the Success of ERP Implementations.
- Mescon, M. H., Albert, M., & Khedouri, F. 1985, *Management: Individual and organizational effectiveness*, 2nd ed., New York: Harper & Row.
- Mintzberg, H. 1980, 'Structure in 5's: A Synthesis of the Research on Organization Design.', *Management science*, vol. 26, no. 3, pp. 322-41.
- Mintzberg, H. 1993, Structure in fives: Designing effective organizations, Prentice-Hall, Inc.
- Morton, N., & Hu, Q. 2004, 'The relationship between organizational structure and enterprise resource planning systems: a structural contingency theory approach.', *AMCIS* 2004 *Proceedings*.
- Ngai, E. W., Law C. C., Wat F. K. 2007, Examining the critical success factors in the adoption of enterprise resource planning.
- Orhan, B. 2006. 'Critical Success Factors in Enterprise Resource Planning Implementation: Case Studies of Turkish Companies Which Use Oracle ERP Software', Master's Thesis, Ortadoğu Teknik University, Ankara
- Özdamar, K. 2004, *Paket Programlar ile İstatistiksel Veri Analizi*, Kaan Kitabevi, Eskişehir.

- Parr, A. N., Shanks, G., & Darke, P. 1999, 'Identification of necessary factors for successful implementation of ERP systems.', *In New information technologies in organizational processes*, Springer US, pp. 99-119.
- Pertusa-Ortega, E. M., Zaragoza-Sáez, P., & Claver-Cortés, E. 2010, 'Can formalization, complexity, and centralization influence knowledge performance?.', *Journal of Business Research*, vol. 63, no. 3, pp. 310-20.
- Polat, S. 2006, 'Yönetim ve Organizasyon Ders Notları', İTÜ Endüstri Mühendisliği, İstanbul
- Saravanan, R. 2014, Critical Success Factors of ERP Implementations An Analysis, IRC's International Journal of Multidisciplinary Research in Social & Management Sciences, vol. 2.
- Ravasan, A. Z., Nabavi, A., & Mansouri, T. 2015. 'Can Organizational Structure Influence ERP Success?.', *International Journal of Information Systems and Supply Chain Management*, IJISSCM, vol. 8, no. 1, pp. 39-59.
- Russell, R. S. and B. W. Taylor 1995, *Production and Operations Management: Focusing on Quality and Competitiveness*, Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Saunders, M., Lewis, P., & Thornhill, A. 2009, *Research Methods for business students*, 4th edition, Pearson education limited.
- Şaylan, O., Taşkın E., Çakmak Z. 2013, 'Kurumsal Kaynak Planlamasi Sisteminde Kritik Başari Faktörlerinin Belirlenmesine Yönelik Bir Araştırma', *Akademik Bakış Dergisi*, Sayı 35.
- Schein, E. H. 2006, 'Organizational culture and leadership', vol. 356, John Wiley & Sons.
- Schminke, M., Ambrose, M. L., & Cropanzano, R. S. 2000, 'The effect of organizational structure on perceptions of procedural fairness.', *Journal of Applied Psychology*, vol. 85, no. 2, pp. 294-304.
- Seo, G. 2013, 'Challenges in Implementing Enterprise Resource Planning System in Large Organizations: Similarities and Differences Between Corporate and University Environment', Doctoral dissertation, Massachusetts Institute of Technology.
- Shatat, A. S., & Udin, Z. M. 2013, 'Factors affecting ERP system effectiveness in postimplementation stage within Malaysian manufacturing companies.', *International Journal of Business Information Systems*, vol. 14, no. 3, pp. 348-92.
- Slevin, D. P., & Covin, J. G. 1990, 'Juggling entrepreneurial style and organizational structure.', *MIT Sloan Management Review*, vol. 31, no. 2, pp. 43-53.
- Somers, T. M., & Nelson, K. G. 2004, 'A taxonomy of players and activities across the ERP project life cycle.', *Information & Management*, vol. 41, no. 3, pp. 257-78.
- Sousa J. E., and Collado J. P. 2000, Towards the Unification of Critical Success Factors for ERP Implementations. Paper presented in 10th Annual Business Information Technology Conference, Manchester.

- Strong, D., Volkoff, O., & Elmes, M. 2001, 'ERP systems, task structure, and workarounds in organizations.', *AMCIS 2001 Proceedings*.
- Ülgen, H. 1997, İşletmelerde Organizasyon İlkeleri ve Uygulaması, vol. 3, İstanbul Şahinkaya Matbaacılık.
- Umble, E. J., Haft, R. R., & Umble, M. M. 2003, 'Enterprise resource planning: Implementation procedures and critical success factors.', *European journal of operational research*, vol. 146, no. 2, pp. 241-57.
- Van Slooten, K., & Yap, L. 1999, 'Implementing ERP information systems using SAP', *AMCIS* 1999 Proceedings.
- Watson, E., & Schneider, H. 1999, 'Using ERP Systems in Education.', *Communications of the Association for Information Systems* CAIS, vol. 1, no. 9, pp. 2-46.
- Willem, A., & Buelens, M. 2009, 'Knowledge sharing in inter-unit cooperative episodes: The impact of organizational structure dimensions.', *International Journal of Information Management*, vol. 29, no. 2, pp. 151-60.
- Yahyagil, M. 2004, 'Denison Örgüt Kültürü Ölçme Aracının Geçerlik ve Güvenirlik Çalışması: Ampirik Bir Uygulama', *Yönetim*, vol. 15, no. 5, pp. 53-76
- Zhang, L., Lee, M. K., Zhang, Z., & Banerjee, P. 2002, 'Criticial Success Factors of Enterprise Resource Planning Systems Implementation Success in China', *Computer Society IEEE, Proceedings of the 36th Annual Hawaii International Conference on System Sciences*, vol. 8, pp. 236-46.

APPENDICES



APPENDIX A

RELIABILITY AND FACTOR ANALYSIS FOR PILOT STUDY

Table A.1. Reliability Analysis of Organizational Culture Scale

	Involvemen	nt
Items	Corrected Item— Total Correlation	Alpha if Item Deleted
Q1	,307	,582
Q2	,438	,535
Q3	,337	,567
Q4	-,088	,726
Q5	,171	,604
Q6	,639	,498
Q7	,609	,504
Q8	,492	,519
Q9	,154	,615
Numbe	r of items: 9	
Alpha	: 0.606	

	Adaptabili	ity
Items	Corrected Item— Total Correlation	Alpha if Item
		Deleted
Q1	,325	,624
Q2	,635	,558
Q3	,728	,555
Q4	,307	,629
Q5	,670	,554
Q6	,277	,634
Q7	,290	,631
Q8	,021	,762
Q9	,245	,640
Numbe	r of items : 9	
Alpha	: 0.650	

	Consistenc	у
Items	Corrected Item— Total Correlation	Alpha if Item Deleted
Q1	,327	,744
Q2	,485	,727
Q3	,109	,799
Q4	,020	,772
Q5	,472	,725
Q6	,602	,705
Q7	,654	,692
Q8	,721	,673
Q9	,616	,693
Numbe	r of items : 9	
Alpha	: 0.752	

	Mission	
Items	Corrected Item-	Alpha if
1001115	Total Correlation	Item
	Total Correlation	Deleted
Q1	,480	,763
Q2	,672	,734
Q3	,394	,781
Q4	,500	,760
Q5	,594	,757
Q6	,454	,766
Q7	,412	,778
Q8	,583	,749
Q 9	,290	,784
Number	r of items : 9	
Alpha	: 0.785	

Table A.2. Factor Analysis of Organizational Culture Scale

					Comp	onent				
	1	2	3	4	5	6	7	8	9	10
Con_Agr1	,835									
Inv_Emp1	,772									
Adap_Org_Learn1	,757									
Adap_Org_Learn3	,640									
Inv_Cap_Dev1		,852								
Inv_Team3		,734								
Inv_Cap_Dev2		,724								
Mis_Vis3		,596								
Con_Agr2			,831							
Con_Coord1			,815							
Adap_Change1			,671							
Con_Core_Val2			,542							
Con_Agr3			,533							
Con_Coord2			,515							
Adap_Org_Learn2				,761						
Mis_Vis2				,754						
Mis_Goal_Obj2				,728						
Mis_Goal_Obj3				,638						
Mis_Goal_Obj1			_	,595						
Adap_Cust2					,889					
Adap_Change2					,774					
Adap_Change3					,715					
Inv_Team2					,617					
Adap_Cust1					,508					
Inv_Team1R						,911				
Adap_Cust3R						,856				
Con_Core_Val3R						,788				
Con_Coord3R						,666				
Mis_Vis1R							,922			
Mis_Strat3R							,861			
Mis_Strat2							,509			
Inv_Cap_Dev3								,840		
Con_Core_Val1								,650		
Mis_Strat1									,757	
Inv_Emp3									,525	
Inv_Emp2										,832

APPENDIX B

SURVEY

Bu anket Kadir Has Üniversitesi İşletme Fakültesi İşletme Bölümü öğretim üyelerinden Yrd. Doç. Dr. Ceyda Maden Eyiusta danışmanlığında "Örgüt Yapısı ve Kültürünün Kurumsal Kaynak Planlaması Performansına Etkisi"ni anlamaya yönelik yürütülen akademik bir araştırmanın parçasıdır. Çalışma kapsamında toplanan veriler sadece söz konusu araştırmaya hizmet edecek şekilde kullanılacak; başka kişi, kurum ve kuruluşlarla paylaşılmayacaktır. Çalışmadan sağlıklı sonuçlar elde edilebilmesi için anketteki tüm soruların cevaplanması önemlidir.

Araştırmaya gösterdiğiniz ilgi ve yardımlarınızdan dolayı teşekkür ederim.

Emre ALATAŞ Kadir Has Üniversitesi Sosyal Bilimler Enstitüsü, İşletme Bölümü

BİRİNCİ BÖLÜM

Cinsiyet	Bayan ()	Erkek ()			
Yaş					
Mezuniyet	Lian ()	Üniversite	Yüksek	Doktora	
Durumu	Lise ()	()	Lisans ()	()	
	Sağlık/Sos.	Sigortacılık	Sağlık/Sos.	Sigortacılık	Sağlık/Sos.
	İşler ()	()	İşler ()	()	İşler ()
Çalıştığınız	Telekomünikasyon	Taşımacılık	İnşaat	Eğitim()	Gayrimenkul ()
Sektör	()	()	()	Ü ()	
	İmalat/Üretim ()	Madencilik	Turizm	Tarım ()	Bankacılık/ Finans
		()	()		()
	İnsan Kaynakları	Dış Ticaret	Üretim	Ar – Ge	Halkla İlişkiler ()
Çalıştığınız	()	()	()	()	
Departman	Bilgi ()	Finans ()	Satış ()	Lojistik	Diğer ()
	Teknolojileri	i mans ()	Suiiş ()	()	
	Microsoft Axapta	Oracle ()	Logo ()	SAP()	Netsis ()
Kullandığınız	()	Ofacie ()	Logo()	SAF ()	146(518 ()
ERP yazılımı	Mikro ()	Diğer ()			
	WINTO ()				
Kurumun		Kurumun			
Çalışan Sayısı		Yaşı			

İKİNCİ BÖLÜM

SORU NO	Bu bölümde şirketinizde/kurumunuzda kullanılan kurumsal kaynak planlaması uygulamasının (Logo, SAP, Microsoft Axapta, Oracle, Mikro ya da farklı bir yazılım) performansıyla ilgili 25 ifade vardır. Lütfen çalıştığınız kurum / birimdeki uygulamaları düşünerek aşağıdaki ifadelere ne derece katıldığınızı belirtiniz. 1-Kesinlikle Katılmıyorum, 2-Katılmıyorum, 3-Ne katılıyorum, ne katılmıyorum, 4-Katılıyorum, 5-Kesinlikle Katılıyorum	1	2	3	4	5
1.	Kurumsal Kaynak Planlaması (KKP) uygulamamız doğru verilere sahiptir.					
2.	KKP uygulamamızı öğrenmek kolaydır.	4				
3.	KKP uygulamamız iyi özelliklere sahiptir.					
4.	KKP uygulamamız veri entegrasyonuna olanak tanır.					
5.	KKP uygulamamız verimlidir.					
6.	KKP uygulamamız güncel bilgilere sahiptir.					
7.	KKP uygulamamızdaki bilgiler önemlidir.					
8.	KKP uygulamamızdaki bilgiler yaptığımız işlemlerle alakalıdır.					
9.	KKP uygulamamızdaki bilgiler kullanılabilirdir.					
10.	KKP uygulamamızdaki bilgiler ulaşılabilirdir.					
11.	KKP uygulamamız örgütsel öğrenmeyi ve çalışanlar için anımsamayı geliştirir.					
12.	KKP uygulamamız bireysel verimliliği arttırır.					
13.	KKP uygulamamız bireysel görevler için yararlıdır.					
14.	KKP uygulamamız karar verme kalitesini geliştirir.					
15.	KKP uygulamamız bireysel görev ve yükümlülükler için zaman kazandırır.					
16.	KKP uygulamamız çalışanların katılımını geliştirmeye yardım eder.					
17.	KKP uygulamamız örgütsel çapta iletişimi geliştirir.					
18.	KKP uygulamamız sorumluluk duygusu yaratır.					
19.	KKP uygulamamız organizasyonda alt birimlerin verimliliğini artırır.					
20.	KKP uygulamamız çözüm etkinliğini geliştirir.					

21.	KKP uygulamamız bize rekabet avantajı sağlar.					
22.	KKP uygulamamız müşteri hizmet / memnuniyetini artırır.					
23.	KKP uygulamamız iş süreci değişikliğini kolaylaştırır.					
24.	KKP uygulamamız karar vermeye destek olur.					
27.						
25.	KKP uygulamamız kurumsal veri kaynaklarının daha iyi kullanılmasına olanak tanır.					
SORU	Bu bölümde kurum kültürüyle ilgili 36 ifade yer					
NO	almaktadır. Çalıştığınız kurum / birimin koşullarını düşünerek aşağıdaki ifadelere ne ölçüde katıldığınızı gösteren seçeneği işaretleyiniz.	1	2	3	4	5
1.	Çalışanların çoğunluğu yaptıkları işle bütünleşmişlerdir.					
2.	Çalışanlar arasında yeterli ölçüde bilgi paylaşımı olduğundan, gerektiğinde herkes istenilen bilgiye ulaşabilmektedir.	A				
3.	İş planlaması yapılırken, tüm çalışanlar karar verme sürecine belli ölçüde dahil edilmektedirler.					
4.	Farklı bölümler arasında iş birliği yapılamamaktadır.					
5.	Takımlar bu organizasyonun temel yapı taşlarıdır.					
6.	Tüm çalışanlar kendi görevleri ile kurumun amaçları arasındaki ilişkiyi kavramıştır.					
7.	Çalışanlara kendi işlerini planlamaları için gerekli yetki verilmektedir.		7			
8.	Çalışanların iş-görme kapasiteleri sürekli gelişim göstermektedir.					
9.	Çalışanların iş-görme becerilerini arttırmak için sürekli yatırım yapılmaktadır.					
10.	Yöneticiler söylediklerini uygulamaktadırlar.					
11.	İş-görme yöntemlerimize yol gösteren açık ve tutarlı bir değerler sistemimiz vardır.					
12.	İşlerin yürütülmesinde davranışlarımızı yönlendiren ve doğru ile yanlışı ayırt etmemizi sağlayan (etik) değerler yoktur.					
13.	İş faaliyetlerinde bir anlaşmazlık meydana geldiğinde her bir çalışan tatmin edici bir çözüm bulmak için çok gayret göstermektedir.					
14.	Bu iş yerinde güçlü bir kurum kültürü vardır.					
15.	Problemli konularda dahi kolayca bir görüş birliği sağlanabilmektedir.					
L			1		1	

16.	Çalışanlarımız kurumun farklı bölümlerinde de olsalar iş faaliyetleri açısından ortak bir bakış açısını paylaşabilmektedirler.			
17.	Kurumun farklı bölümleri tarafından yürütülen çalışmalar (projeler) kolayca koordine edilmektedir.			
18.	Başka bölümden bir kişiyle çalışmak adeta farklı bir kurumdan biriyle çalışmak gibidir.			
19.	Çalışma (iş-görme) tarzımız oldukça esnek ve değişime açıktır.			
20.	Rakiplere ve iş alanındaki diğer değişikliklere bağlı olarak uygun stratejiler geliştirilebilmektedir.			
21.	İş alanımızdaki yenilik ve gelişmeler, yönetim tarafından izlenmekte ve uygulanmaktadır.			
22.	Müşterilerin istek ve önerileri, iş faaliyetlerinde sıklıkla değişiklikler yapılmasına yol açabilmektedir.			
23.	Tüm çalışanlar, müşterilerimizin istek ve ihtiyaçlarını anlamaya özen göstermektedirler.			
24.	Müşterilerimizin talepleri iş faaliyetlerimizde genellikle dikkate alınmamaktadır.			
25.	Başarısızlığı, öğrenme ve gelişme için bir fırsat olarak görürüz.			
26.	Yenilikçilik ve yapılan islerde risk almak yönetimce istenmekte ve ödüllendirilmektedir.			
27.	Günlük işlerimizde işimiz ile ilgili yeni şeyler öğrenmek önemli bir yer tutar.			
28.	Uzun vadeli (yön tayin edici) faaliyet planlarımız ve iş programlarımız mevcuttur.			
29.	Çalışanların yaptıkları işlere yön verecek net, açık bir kurumsal misyonumuz vardır.			
30.	Kurumun geleceğine yönelik olarak belirlenmiş açık bir stratejisi yoktur.			
31.	Çalışanlar arasında kurumun faaliyet amaçlarına yönelik tam bir uzlaşma vardır.			
32.	Yöneticiler, kurumun temel hedefleri doğrultusunda hareket edebilmektedirler.			
33.	Çalışanlar, uzun dönemde kurumun başarısı olabilmesi için yapılması gerekeni bilmektedirler.			
34.	Gelecekte kurumumuzun nasıl olacağına dair paylaşılmış bir vizyon yoktur.			
35.	Yöneticilerimiz uzun dönemli bir bakış açısına sahiptirler.			

36.	Kısa dönemli iş-talepleri, vizyonumuzdan ödün vermeden karşılanabilmektedir.					
NO NO	Bu bölümde kurum yapısıyla ilgili 13 ifade yer almaktadır. Çalıştığınız bölümün koşullarını düşünerek aşağıdaki ifadelere ne ölçüde katıldığınızı gösteren seçeneği işaretleyiniz.	1	2	3	4	5
1.	İşimde herhangi bir şeyi yapmadan önce yöneticime sormam gerekir.					
2.	Çalıştığım yerde küçük meseleler bile, son karar için daha yukarıdaki birine yönlendirilir.					
3.	Çalıştığım yerde tek başına bir karar almak isteyen bir kişi hemen vazgeçirilir.					
4.	Aldığım her kararda yöneticimin onayı gerekir.					
5.	Çalıştığım yerde yönetici karar alana kadar ufak bir aksiyon alınabilir.					
6.	Çalıştığım birimde bir "kurallar ve prosedürler" kitapçığı mevcuttur.					
7.	Çalıştığım birimin çok sayıda yazılı kural ve politikası vardır.					
8.	Çalıştığım birimde birçok iş için eksiksiz, yazılı bir iş tanımı var.					
9.	Çalıştığım organizasyonda neredeyse herkesin iş performansı hakkında yazılı bir kayıt tutulur.					
10.	Çalıştığım birimde yeni üyelerin çoğu için resmi bir oryantasyon programı vardır.					
11.	Destek görevlilerine (ör. sekreterlere) belirli yetenekleri ve güçlü yönleri doğrultusunda görev ve yükümlülük verilir.					
12.	Yöneticiler ve birim personeline (ör. pazarlama direktörleri), kendi özel yetenekleri doğrultusunda görev ve yükümlülükler verilir.					
13.	Birimdeki gönüllü çalışanlara yetenekleri doğrultusunda belirli görevler verilir.					