

**ANALYZING THE FIT BETWEEN ORGANIZATIONAL
ENVIRONMENT, STRUCTURE, AND CULTURE:
A CASE STUDY OF A PUBLIC ORGANIZATION**

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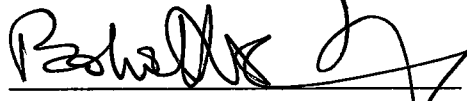
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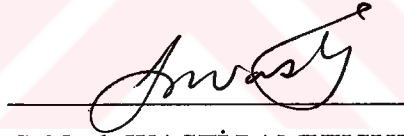
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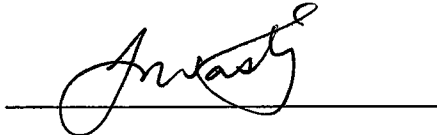


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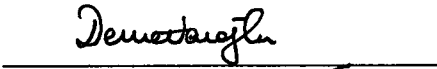
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ABSTRACT

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This thesis examines the structural and cultural aspects of an organization by utilizing the open systems model. The contingency theory of organizations is studied by analyzing a public corporation established to help small and medium sized enterprises in Turkey. The name of the organization is kept confidential.

In this study, the general environment is regarded as posing requirements on the type of organizational structure. When the environment is certain, the structure is expected to be mechanistic; when it is uncertain, the structure is expected to be organic. The task environments are supposed to exist within the larger environment. The task environments are considered to affect the related subsystems' formalization level, interpersonal orientation, time orientation, and goal orientation. Lastly, the organizational climate is studied in two dimensions: collectivism versus individualism and horizontality versus verticality.

The general environment, the task environments, the organizational structure, the subsystems, and the organizational climate are studied through questionnaires and interviews. Data is analyzed quantitatively.

The empirical results imply that when the theories do not apply, there are problems with the organizational structure and culture. Tests show that there are discrepancies in what is expected and what is present, i.e. there are several organizational variables that do not represent fit with the relevant environment.

Key Words: Structure, Environment, Culture, Contingency Theory.

ÖZ

**ÖRGÜTSEL ÇEVRE, YAPI VE KÜLTÜR ARASINDAKİ
İLİŞKİLERİN İNCELENMESİ:
BİR KAMU KURULUŞU ÜZERİNDE ÇALIŞMA**

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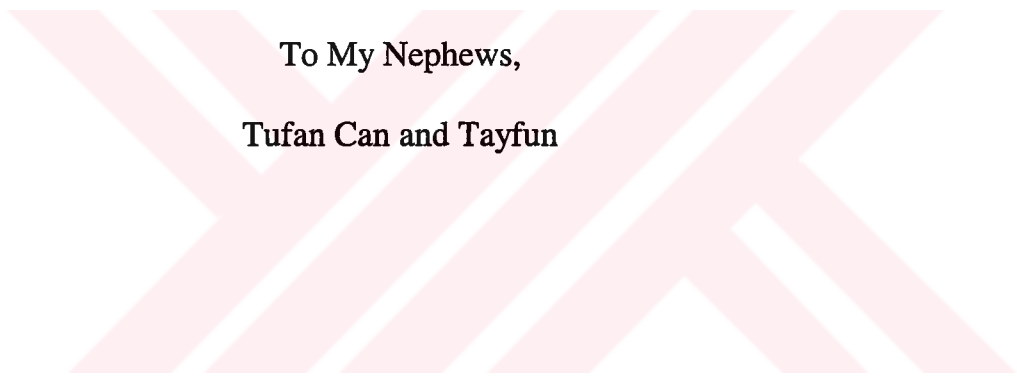
Bu tez, açık sistem modelini kullanarak, bir örgütün yapısal ve kültürel özelliklerini incelemiştir. Örgütsel durumsallık teorisi, Türkiye'deki küçük ve orta ölçekli işletmelere yardım için kurulan bir kamu kuruluşu incelenerek çalışılmıştır. Bu kurumun ismi gizli tutulmuştur.

Bu çalışmada, bir örgütün çevresel özelliklerinin o örgütün yapısında bazı gerekliliklere yol açacağı görüşü benimsenmiştir. Yapının, çevresel özellikler belirli olduğu zaman mekanik; belirsiz olduğu zaman organik olması beklenmiştir. Genel çevre içerisinde iş çevrelerinin olduğu varsayılmıştır. Bu iş çevrelerinin ise ilgili alt sistemlerdeki formelizasyon düzeyini, kişilerarası eğilimleri, zaman yaklaşımlarını ve amaç yaklaşımlarını etkilediği düşünülmüştür. Ayrıca, örgütsel kültür iki boyutta ele alınmıştır: Kollektivizme karşı bireysellik ve yataycılığa karşılık dikeycilik.

Genel çevre, iş çevreleri, yapısal örgütlenme, alt sistemler ve örgütsel kültür, anket ve mülakat yöntemleri kullanılarak incelenmiştir. Bilgiler nicel olarak analiz edilmiştir.

Ampirik sonuçlar, teoriler geçerli olmadığı zaman örgütsel yapı ve kültürle ilgili sorunlar olacağını göstermiştir. Testler beklenen ile olan arasında farklar olduğunu, yani ilgili çevreyle uyum sağlamayan birçok örgütsel değişkenin varlığını göstermiştir.

Anahtar Kelimeler. Yapı, Çevre, Kültür, Örgütsel durumsallık teorisi.



To My Nephews,
Tufan Can and Tayfun

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TABLE OF CONTENTS

ABSTRACT.....	iii
ÖZ.....	v
ACKNOWLEDGMENTS.....	viii
TABLE OF CONTENTS.....	ix
LIST OF TABLES.....	xii
LIST OF FIGURES.....	xiii
CHAPTER	
1. INTRODUCTION.....	1
1.1. Purpose of the Study and Problem Statement.....	1
1.2. Significance of the Study.....	3
1.3. Scope and Organization of the Study.....	3
1.4. Small and Medium Size Enterprises (SMEs).....	5
1.5. The Small And Medium Scale Firms Development Organization (SAM).....	6
2. THE CONTINGENCY THEORY OF ORGANIZATIONS.....	8
2.1. Introduction.....	8
2.2. The Open Systems Model of Organizations.....	12
2.3. The Contingency Theory.....	15
2.3.1. Organic versus Mechanistic Systems.....	19
2.3.2. Differentiation versus Integration.....	22
2.4. Organizational Climate.....	28
2.5. Organizational Design.....	31
2.6. Research Model.....	32

3.	METHODOLOGY.....	36
	3.1. Data Collection Methods.....	36
	3.2. Pilot Study.....	39
	3.3. Data Analysis Methods.....	40
4.	ELEMENTS OF THE GENERAL ENVIRONMENT.....	44
	4.1. Small and Medium Size Enterprises (SMEs).....	45
	4.2. SME Development Organizations.....	50
	4.3. Banks and Financial Institutions.....	55
	4.4. The Government.....	56
	4.5. Other Elements.....	58
	4.6. General Environment Uncertainty.....	60
5.	THE INTERNAL STRUCTURE OF SAM.....	66
	5.1. Organic versus Mechanistic Aspects in SAM.....	70
	5.2. Differentiation versus Integration in SAM.....	75
	5.2.1. Subsystem 1: The Headquarters.....	76
	5.2.2. Subsystem 2: The Institutes.....	78
	5.2.3. Subsystem 3: The SERSAMs.....	80
	5.2.4. Subsystem 4: The TEKSAMs.....	82
	5.2.5. Differentiation between Subsystem Pairs.....	85
	5.2.6. Integration between Subsystem Pairs.....	91
	5.3. Organizational Climate.....	94
6.	DISCUSSION.....	98
	6.1. Problems Regarding General Environment Uncertainty.....	98
	6.2. Problems Regarding Task Environment Uncertainty.....	99
	6.3. Problems Regarding The Organizational Structure.....	101
	6.4. Problems Regarding Integration.....	104
	6.5. Problems Regarding The Organizational Climate.....	107

7.	CONCLUSIONS.....	111
	7.1. Strategic Recommendations.....	112
	7.2. Recommendations Regarding General Environment Uncertainty.	113
	7.3. Recommendations Regarding Task Environment Uncertainty.....	115
	7.4. Recommendations Regarding The Organizational Structure.....	116
	7.5. Recommendations Regarding Integration.....	117
	7.6. Recommendations Regarding the Organizational Climate.....	121
	7.7. Organizational Effectiveness.....	122
	7.8. Limitations of the Research and Future Research Areas.....	127
	REFERENCES.....	130
	APPENDICES	
A.	SAM ÖRGÜTSEL ANALİZ ANKETİ.....	146
B.	INTERVIEW QUESTIONS.....	174
C.	INFORMATION FROM SECONDARY AND ORGANIZATIONAL SOURCES.....	177
D.	OPERATIONALIZATION OF CONCEPTS.....	183
E.	FACTOR AND RELIABILITY ANALYSES FOR ORGANIZATIONAL CLIMATE QUESTIONS.....	186
F.	SMALL AND MEDIUM SIZE ENTERPRISES.....	188
G.	SME DEVELOPMENT ORGANIZATIONS.....	216
H.	GOVERNMENTAL BODIES IN SAM'S GENERAL ENVIRONMENT.....	226
I.	DIFFERENTIATION CATEGORIES AND SCORES ACCORDING TO LAWRENCE AND LORSCH.....	232

LIST OF TABLES

TABLES

3.1. Centers covered and number of respondents	42
4.1. SAM's general environment uncertainty.....	61
4.2. Classification of organizational environments.....	62
4.3. Interview results for SAM's general environment.....	65
5.1. Burns and Stalker's Model.....	71
5.2. Descriptive statistics: Type of SAM's structure.....	72
5.3. Pearson correlations among standardization, formalization, and centralization.....	73
5.4. Number of documents prepared for different purposes.....	74
5.5. Descriptive statistics: The headquarters.....	77
5.6. Descriptive statistics: The institutes.....	79
5.7. Descriptive statistics: The SERSAMs.....	81
5.8. Descriptive statistics: The TEKSAMs.....	83
5.9. Hypotheses for each subsystem.....	84
5.10. Differentiation scores for pairs of subsystems.....	86
5.11. Overall differentiation between subsystems.....	91
5.12. Integration scores of subsystems.....	92
5.13. Descriptive statistics: Organizational Climate.....	96
6.1. The utilization of integration mechanisms at SAM.....	105

LIST OF FIGURES

FIGURES

2.1. The open systems model of organizations.....	14
2.2. The fit between the organization and its environment.....	16
2.3. A systems model of the contingency theory-based strategic research....	17
2.4. Structural adjustment to regain fit: general model.....	19
2.5. The effect of uncertainty on differentiation and integration.....	23
2.6. Research model Part 1 – Burns and Stalker’s theory.....	33
2.7.a. Research model Part 2 – Lawrence and Lorsch’s theory.....	34
2.7.b. Research model Part 2 – Lawrence and Lorsch’s theory on differentiation versus integration.....	35
4.1. Organizational Decision Tree Heuristic.....	64
5.1. General organizational structure of SAM.....	69
7.1. A suggested general model of integration in SAM.....	119
7.3. A general model of organizational effectiveness in SAM.....	123

CHAPTER 1

INTRODUCTION

In this introductory chapter, the purpose, significance, scope, and limitations of the study will be explained along with an explanation for the organization of the study and problem statement. Introductory information about small- and medium-sized enterprises (SMEs) and the Small and Medium Scale Firms Development Organization (SAM) is also provided. The names of the organization and its subdivisions are kept confidential.

1.1. Purpose of the Study and Problem Statement

The role of small- and medium-size companies (SMEs) in the world has changed drastically in the last 50 years (Vianen, 1995: 169). In Turkey, as well, SMEs have played a significant role in economic activities (Alkibay, Songür, and Ertürk, 1999). Among the distinctive characteristics of SMEs have been their potential in creating employment, expanding the ownership of factors of production to the society, supporting big businesses as ancillary industries, and balancing the income distribution. However, SMEs in Turkey face many problems and difficulties that impede their improvement in the long run (Alkibay et al., 1999). Moreover, their needs evolve and change over time. One of the existing mechanisms to find and satisfy these needs is SAM, which is a

semi-governmental organization serving the purpose of supporting SMEs operating in different branches of the Turkish manufacturing industry.

This study is designed for the purpose of analyzing the external and the internal environment of SAM according to the principles adapted from the open systems model of organizations. The contingency theory of organizations, which states a need for a fit between an organization and its environment, will be applied to SAM in order to find whether and where this fit is or is not achieved. There is the assumption that one design will prove more effective than another; in other words, the organization will be more effective if designed in a certain way according to contingencies (Dessler, 1986). The main aim of this study is to find out the effectiveness of SAM in terms of the would-be fit between its structure and environment. If the required fit is found to be missing, then this study will make suggestions as to how SAM can adapt its structure to its environment. "Adaptability-flexibility" has been stated as the most important evaluation criterion in most of the research for measuring the organizational effectiveness (Steers, 1975). Besides, the relationships between the structure and culture will be investigated in this study. The words culture and organizational climate will be used interchangeably.

Turkish SMEs are far behind those of other countries in terms of productivity, regional development, technology, human resources management, marketing, finance, and production. The purpose of this study is to find a relationship between those problem areas and SAM's structure. Another purpose is to arrive at a conclusion whether the structure is compatible with its environment, which consists mostly of SMEs. A second purpose is to look at SAM's culture, identify whether it is more individualist or collectivist and whether it is horizontal or vertical. These dimensions will be discussed in terms of whether they are compatible with the environment and structure of SAM.

1.2. Significance of the Study

There is an apparent need to make a diagnostic study to analyze the current situation in SAM and identify the gaps between what the SMEs require and what SAM provides as an organizational entity. This need arises especially from the importance of SMEs in the national economy and SAM's importance as being one of the authorized organizations dealing directly with SMEs. Being a semi-governmental organization, SAM in part represents the government. In a world where governments have come to recognize the importance of SMEs and their contribution to economic growth, social cohesion, employment, regional and local development (Hewaliyanage, 2001), SAM's importance is apparent. If the relations between SMEs and SAM are not providing value to any of the parties or to the national economy, then problem areas need to be found and solved.

The internal structures of manufacturing firms in major cities of developing countries are different from those of developed countries (Dias, 1985). Therefore, this study is also important since it will point out the difficulties of achieving the same purposes as in other developing or developed countries. Turkish SMEs have to achieve the same development level without having the same resources as developed countries.

1.3. Scope and Organization of the Study

This study concentrated on two important theories under the "contingency theory" heading: Burns and Stalker's organic versus mechanistic systems and Lawrence and Lorsch's differentiation versus integration discussion. Contingency theory states that one organizational outcome is dependent on other organizational and/or environmental characteristics. Therefore, the perfect study would be the one that incorporates all the relevant dimensions of the structure and environment. However, it is almost impossible to investigate relationships among all the variables since changes in one dimension will

affect the others. This study only includes environment on the one hand and the related structural dimensions, such as goal orientation, time orientation, information sharing, and hierarchy of authority, on the other hand.

The organizational climate will be investigated in two dimensions: organizational collectivism versus individualism and organizational horizontality versus verticality. These two dimensions will be discussed along with the organizational structure to decide whether there is a good fit between the climate and the structure. Information will be gathered from personnel at SAM's headquarters and three institutes, in addition to service centers (small industry development centers: SERSAMs and technology development centers: TEKSAMs) in selected places.

After providing introductory information about SMEs and SAM, the second chapter will discuss the contingency theory of organizations in general and go into the details of organic and mechanistic organization types and differentiation and integration in organizations. The research model will be provided in Chapter Two, also, which is followed by the methodology chapter which discusses how the model will be utilized through several data collection and data analysis methods. The fourth chapter is an analysis of SAM's general environment. The general environmental characteristics were investigated through secondary sources and through interview sessions with high-level managers. In this chapter, after analyzing SMEs in the world and in Turkey, the general environment is defined. In Chapter Five, SAM's structure is examined in detail. Its internal analysis is made in two parts: Organic and mechanistic aspects and differentiation versus integration in SAM. This analysis has been accomplished according to questionnaire results. In Chapter Six, the results are examined in terms of SAM' fit with its environment and with its culture. In Chapter Seven, there is a discussion about the problems investigated after the

questionnaire and interview results are analyzed. In the last chapter, conclusions are drawn and recommendations will be presented.

It is accepted that the actual organization design may be far away from the “ideal”; however, it is also suggested that people concerned should (1) think through what an “ideal” organization design would be, (2) see how this fits with the organization’s existing resources and (3) do some tweaking to both the design and the people to get a satisfactory resolution (Davis and Weckler, 1996: 3).

1.4. Small and Medium Size Enterprises (SMEs)

The easiest and most common way of defining an enterprise as small or medium is looking at the number of employees working for the organization (Smokovitis, 1995: 371). However, the notion of small or medium changes from one country to the other. For example, in the USA, small enterprises are considered to be those employing less than 500 employees, whereas those firms are called medium in Germany and Italy. In Greece, small and medium-sized enterprises are considered to be those employing less than 100 people. The situation is slightly different for Turkey. According to the definition of SAM, in association with the Turkish Ministry of Industry and Trade, *industrial enterprises with 1 to 50 employees are small industry enterprises and those with 51 to 150 employees are medium-sized* (SAM, 2002a).

It seems easy to overestimate the importance of big businesses because of their greater visibility compared to SMEs. It is a well known fact, however, that SMEs provide effective means or culture of stimulating indigenous leadership (Ouh, 1995: 29). Perhaps more importantly, they diversify the country’s industrial structure by innovating or developing new technologies for producing a wide range of products to meet the different demands of different markets. SMEs are also effective in subcontracting arrangements with large

enterprises. From another perspective, small firms possess some qualities that make them miniature versions of big corporations, thanks to major breakthroughs in information, communication, and other technologies. Besides, they provide new jobs, introduce innovations, stimulate competition, and aid the processes of big businesses.

1.5. The Small and Medium Scale Firms Development Organization (SAM)

SAM is a public agency associated with the Turkish Ministry of Industry and Trade. It was created by Law no. 3624 which was enacted by the General National Assembly of Turkey on 12th April 1990 and took effect following its publication in the Official Gazette dated 20 April 1990, No: 20498 (SAM, 2002b). SAM is a public corporate entity linked to the Ministry of Industry and Trade. It is subject to a private law in terms of its functioning and operations, while its budget is determined by the Ministry. Therefore, it can be considered as a “semi-governmental organization”. Its purpose is to “help [SMEs] adapt to scientific and technological innovations swiftly with a view of ensuring that they operate effectively so that both their competitiveness and revenues increase, resulting in greater contribution to our economy at the macro level” (SAM, 2002b: 1). SAM also aims to enhance the competitive capacity of small and medium establishments and to ensure industrial integration in conformity with economic development (Gücelioğlu, 1994).

In line with its purposes, SAM provides the following services for SMEs:

- Helping SMEs acquire modern management techniques,
- Dissemination of the knowledge of advanced technologies,
- Channeling innovative ideas and inventions based on science and technology into production (commercialization),
- Helping SMEs make production compatible with international standards and conditions of competition in the EU and the Customs Union,

- Access to international cooperation and information in technical and commercial subjects,
- Preparation of projects for identifying and supporting new investment areas in order to create jobs,
- Establishment, reinforcement, and development of ancillary relations between SMEs and large industrial enterprises,
- Achievement of co-operation between industry and universities,
- Organization of training programs in the areas of technology, financing, management, and marketing with a special emphasis upon exporting,
- Encouragement and development of entrepreneurship,
- Extension of support through experts and consultants,
- Providing consulting services to enable efficient production in line with a modern understanding of management; inspecting, testing, and analyzing raw materials and finished products at special laboratories to remedy inadequacies in information and technology,
- Raising the quality of local and regional output and enhancing competitiveness,
- Providing R&D services aimed at sectoral development,
- Offering solutions to all sorts of infrastructure problems of industrial zones.

CHAPTER 2

THE CONTINGENCY THEORY OF ORGANIZATIONS

2.1. Introduction

An organization has several definitions. According to the “Concise Dictionary of Business Management”, an organization is:

... a group of people brought together for the purpose of achieving certain objectives. As the basic unit of an organization is the ROLE rather than the person in it, the organization is maintained in existence, sometimes over a long period of time, despite many changes of members (Statt, 1999: 118).

Mouzelis (1967: 4) defines an organization “ as a form of social grouping which is established in a more or less deliberate or purposive manner for the attainment of a specific goal”.

Daft (2001) also includes the environment in his definition:

... [organizations are] social entities that are goal-directed, are designed as deliberately structured and coordinated activity systems, and are linked to the external environment (Daft, 2001: 12).

Lastly, let us consider Robey's (1991) definition:

We define an organization as a system of roles and a stream of activities designed to accomplish shared purposes. The phrase system of roles describes the structure of an organization. Stream of activities refers to organizational processes. ... Organizations are designed by human actors, either consciously or unconsciously. Organization design can lead to success or failure, depending on how well it is executed. ... Our definition of an organization identifies shared purposes as the reason why organizations exist (Robey, 1991: 7-8).

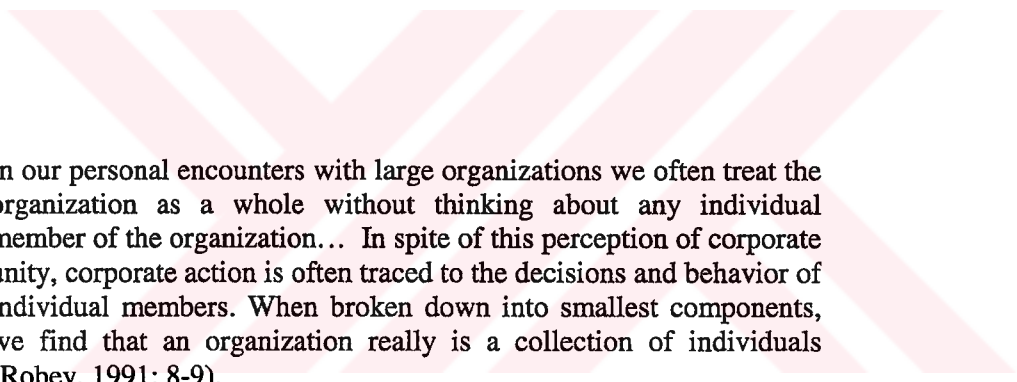
Robbins and De Cenzo (1998) identify the three common characteristics of organizations. The first is a common goal or a set of goals. Second, there are people to achieve these objectives. Third, all organizations develop a systematic structure that defines and limits the behavior of its members.

Other included elements in the definition of organizations are:

- Social relationships, hierarchy of authority, division of labor, purposive activities (Weber, 1947: 145-146),
- Consciously coordinated activities, requirement of communication and motivation (Barnard, 1938: 73),
- Size, complexity, and degree of formalization (Blau and Scott, 1962: 4),
- Social units (human groupings) and power relations (Etzioni, 1964: 3),
- Fixed boundaries, normative order, authority ranks, communication system, incentive system (Scott, 1964: 3),
- Managers' self-interests that may affect the goals of the shareholders and the general public (Donaldson and Lorsch, 1983).

There is probably no single feature or attribute, nor indeed a fixed point on any continuum that demarcates organizations from nonorganizations (Manstead

and Hewstone, 1999: 425). From these definitions, however, two aspects of organizations are emphasized: One is the structural dimension, including the hierarchy, centralization, departmentalization, and other organizational design issues. All these parameters are different in each organization (Gibson, Ivancevich, and Donnelly, 1994) and they represent the “hardware” of an organization. The other dimension is the cultural side, including the decision-making processes, power and influencing relationships, and informal conduct of operations at different levels in the organization. Regarding this side of an organization, goals are shaped according to the behaviors of individuals in organizations (Mintzberg, 1983a). These elements can be called the “software” of an organization. Robey (1991) stresses this distinction in the following quote:



In our personal encounters with large organizations we often treat the organization as a whole without thinking about any individual member of the organization... In spite of this perception of corporate unity, corporate action is often traced to the decisions and behavior of individual members. When broken down into smallest components, we find that an organization really is a collection of individuals (Robey, 1991: 8-9).

Therefore, it will be appropriate to call the focus on individuals the *micro* perspective and the focus on organizations the *macro* perspective. The micro perspective assumes that the task performance largely depends on people’s attitudes toward the task and their co-workers (Robey, 1991). This is reflected in the culture of the organization. In fact, competence in the human aspects of management is no longer seen as a luxury but as an essential ingredient of business success (Lorsch, 1987). “Individual” means “indivisible” in Greek and the concept expresses the idea that human beings are unique units clearly

distinguished from their environment, stable over time and in different situations (Brunsson and Olsen, 1993: 60). The macro perspective assumes that organizations can be improved by redefining jobs and restructuring working relationships. This perspective largely depends on the design and structural components in an organization. The environmental factors, including group task characteristics, reward structure, and the level of environmental stress, determine some part of the group interaction process, which in turn determines performance outcomes (McGrath, 1964). Therefore, the two perspectives complement each other. In this regard, it is useful to think of structure as the *linkage*, or network, between the organization's environment and the internal subsystems- the technology utilized in the transformation process, the relationships among people performing various tasks, and the managerial system of planning and control (Kast and Rosenzweig, 1985: 240).

As part of a diagnostic study, our analysis focuses on two important aspects of organizations: One is the fit between the organization's structural and cultural elements. The other fit investigated is between the organization system as a whole and its environmental conditions and requirements. This second type of fit is especially important if we think of organizations as open systems, a term that will be explained in further detail later. This type of fit can also be called adaptation since adaptation is a general term for the accommodation process between an organization and its environment whereby policy makers modify an organization's structure and processes or its alignment with the environment in order to maintain and improve performance (Lawrence and Dyer, 1983; Ungson, James and Spicer, 1985). Adaptation may encompass multiple changes, ranging from changes in an organization's control systems, allocation of resources, technology, and structure to changes in a firm's strategy, rather than a single type of change (Tushman, Newman, Romanelli, 1986). For our purposes, the required fit between strategy and structure is excluded.

2.2. The Open System Model of Organizations

The mid-1960s was a period in which the idea that organizations could be analyzed in a systems framework gained a strong following (Robbins and De Cenzo, 1998). The systems approach states that an organization is not a mechanical system in which one part can be changed without a concomitant effect on the other parts (Lawrence and Lorsch, 1969). The second relevant critical idea deriving from systems analysis is the idea that social systems such as organizations, unlike mechanical and even biological systems, have the ability to modify themselves in basic structural ways (Buckley, 1967). It is quite useful to employ the systems approach since this approach employs all the factors relevant to our study. Therefore, SAM will be regarded as a system, a set of interrelated and interdependent parts arranged in a manner that produces a unified whole.

The closed system perspective states that organizations are not influenced by and do not interact with the environment. In contrast, an open systems approach recognizes the dynamic interaction of the system with its environment. The environment plays a role in what happens within an organization (Hall, 1977: 55). Both the inputs and the outputs are directly related to the environment and they are the major components in any analysis. Therefore, the closed-system perspective, which defines organizations as closed entities within an environment, almost by definition, is inadequate for a comprehensive understanding of organizations.

The open system model is obviously much broader in its conceptual scope than is the closed system approach (Hall, 1977: 59). An organization is a system as well, with a group of people brought together for the purpose of achieving certain objectives (Statt, 1999). This approach takes its focus from the external environment of the organization and the structure is based on flexibility rather than control (Quinn and Rohrbaugh, 1983; Quinn and Cameron, 1983).

Therefore, the open systems approach is vital for a better understanding and operation of organizations. It is almost impossible for a researcher to include all the various components that must be included in an open system model. Still, the open system model presents a more useful approach for this thesis since it provides a more meaningful and useful representation of reality and combines an external focus and internal structure to deal with problems. Today, variety, change, and speed are considered to be the main determinants in the choice of the new organizational structure, which constitute, in large part, the environmental elements (Galbraith, 1995). Therefore, an organization may have multiple purposes and functions, some of which may be in conflict (Gordon, 1993). Figure 2.1 presents a useful version of the open system model. In this figure, the main elements in a system are inputs, outputs, technology, environment, goals and strategies, behavior and processes, culture, and structure.

The open systems perspective suggests that organizations try to satisfy the demands of their environment. The organization is constantly interacting with its environment to dispose of its product, to obtain materials, to recruit personnel, and to obtain the general support of the outside structures to facilitate these functions. The organization takes inputs from the larger systems, processes them, and returns them in changed form. Therefore, organizations rely on the environment for their inputs and the acceptance of its outputs. Hence subsystems develop within the organization to institutionalize environmental relationships and guarantee such support. Systems theory recognizes the significance of adapting to external forces as a means for determining effectiveness (Donnelly, Ivancevich and Gibson, 1985: 30).

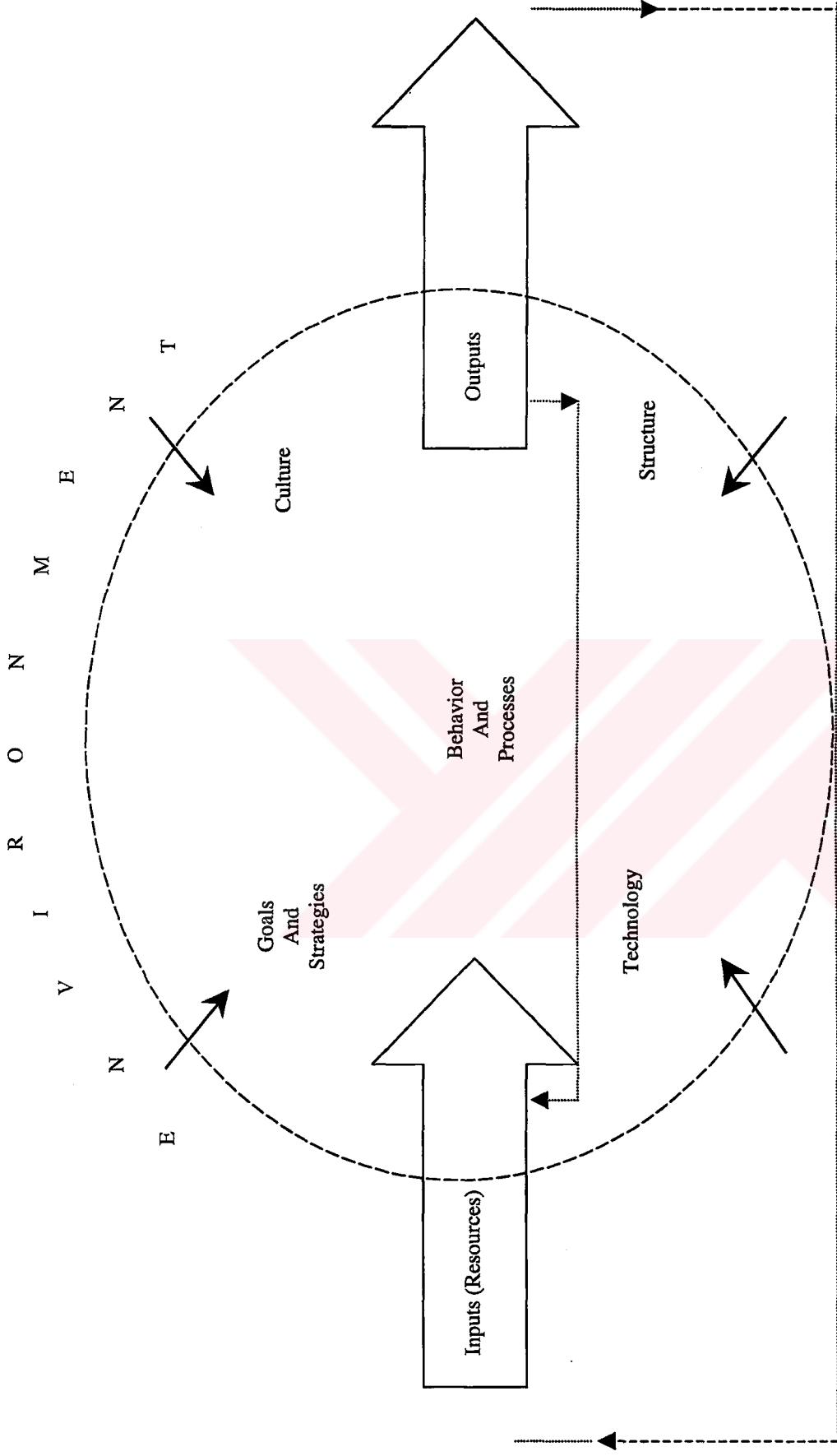


Figure 2.1. The open systems model of organizations (Harrison, 1994: 29).

2.3. The Contingency Theory

A contingency is something that depends on other things, or an organizational characteristic that depends upon the total situation (Daft, 2001). The essence of the contingency approach is that a desired outcome is the consequence of an appropriate “fit” between two or more factors, such as between strategy and structure or between organization and environment (Figure 2.2). Contingency theory essentially means “it depends”. The best-fitting structure depends on the context that the organization faces (Hodge et al., 1996: 17). According to this approach, managerial tasks analyze the organizations in their contexts, taking advantage of opportunities and minimizing constraints through endless combinations of strategies, structures, and policies. Many decision rules can be derived from the literature to generate recommendations depending on the contingencies present (Burton and Obel, 1998). The recommendations relate to organizational properties and structural configurations, including form, complexity, formalization, centralization, span of control, rules and procedures, professionalization, meetings, reporting, and incentives. Specifically, contingency design is the process of determining the degree of environmental uncertainty and adapting the organization and its subunits to the situation (Baker, 2002). Failure to design the organization to fit the environment is as dangerous as totally ignoring the environment; while the ultimate effects of a mismatch between the design and the environment are not always immediately obvious, they are usually severe (Pasmore, 1998:7).

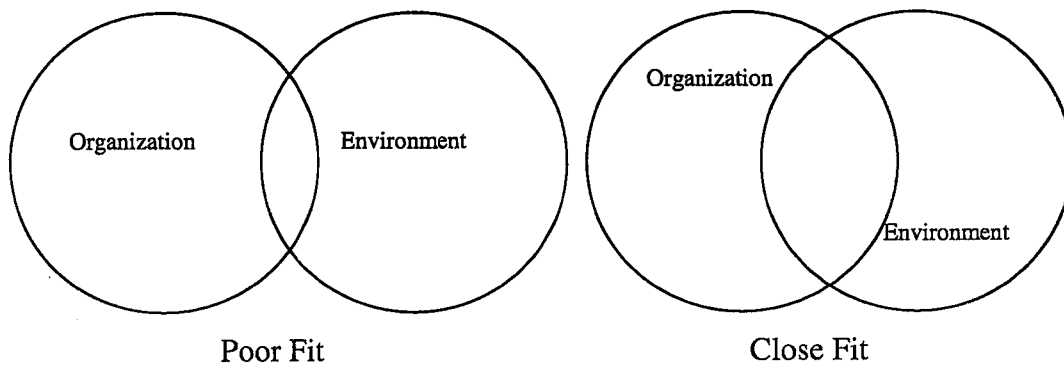


Figure 2.2. The fit between the organization and its environment (Jones, 2001: 170).

Contingency theory was developed during the late 1950s and 1960s as an outgrowth of the application of systems theory to the social sciences. Contingency theorists examined whether some organizational designs fit different environmental conditions better than others and concluded that managers should choose the design that best fits environmental conditions (Bedeian and Zammuto, 1991: 321). Structural contingency theory argues that individual organizations adapt to their environment. The environment is seen as posing requirements for efficiency, innovation or whatever, which the organization must meet to survive and prosper (Hage and Aiken, 1970). A change of the contingency variable moves the organization out of fit into misfit – and hence from equilibrium into disequilibrium. The contingencies of the environment play a major role in the rational, goal-oriented view on organization design. They are not “determinants” of structure in the sense that managers have no control over them. They are, rather, “administrative challenges” that cannot be easily ignored by organizations seeking to prosper (Robey, 1991: 35). Below is a figure showing a systems model of contingency theory (Figure 2.3.).

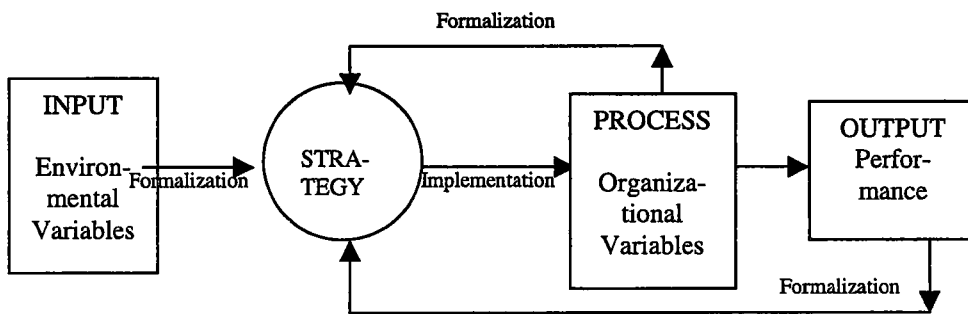


Figure 2.3. A systems model of contingency theory-based strategic research (Ginsberg and Venkatraman, 1985).

As stated earlier, organizations are open systems that need careful management to satisfy and balance internal needs and adapt to environmental circumstances. The organization and its management are environmentally constrained in the choice of structural blueprints (Pennings, 1992: 272). According to Burns and Stalker (1994), an organization's expectations are constantly subject to alteration, and the framework of decisions is constantly being re-set. Therefore, the effective organization of industrial resources does not approximate to one ideal type of management system, i.e. there is no one best way of organizing. The degree of stability or rate of change calls for different systems by which the activities of the concern are controlled, information is conveyed throughout the organization, and decisions and actions are authorized. Therefore, the contingencies or sources of uncertainty facing an organization shape the organization's design. The contingency approach to organizational design tailors organizational structure to the sources of uncertainty facing an organization (Jones, 2001: 57).

Therefore, according to contingency theory, in order to manage its environment effectively, an organization should design its structure to fit with the

environment in which the organization operates (Pfeffer, 1982). In contrast to the classical scholars, most theorists today believe that there is no one best way to organize. There is no single correct managerial action or organizational structure for all organizations (Kaplan and Mackey, 1992). What is more important is that there should be a fit between the organization's structure, size, technology, and the requirements of its environment. This perspective contrasts with that of classical theorists like Weber, Taylor, and Fayol, who thought that there was one best way to run organizations. However, contingency views have been criticized for their assumptions of linearity and as being deterministic and conservative. In this regard, management is an adaptive process of responding to deterministic forces. Such a view may be unrealistic (Kast and Rosenzweig, 1985). There are some facts in the organizational environment that can be verified.

The structural contingency theory stresses four basic propositions (Donaldson, 1995): First one is that there is a fit between the contingency of the structural aspect of divisionalization that affects performance. Second is that organizations move from fit into misfit between structure and contingency as a result of a change in the contingency factor while retaining the existing structure. Thirdly, this misfit causes structural change. The fourth proposition is that organizations in misfit regain fit when they change their structure so that such structural change is therefore structural adaptation (Figure 2.4).

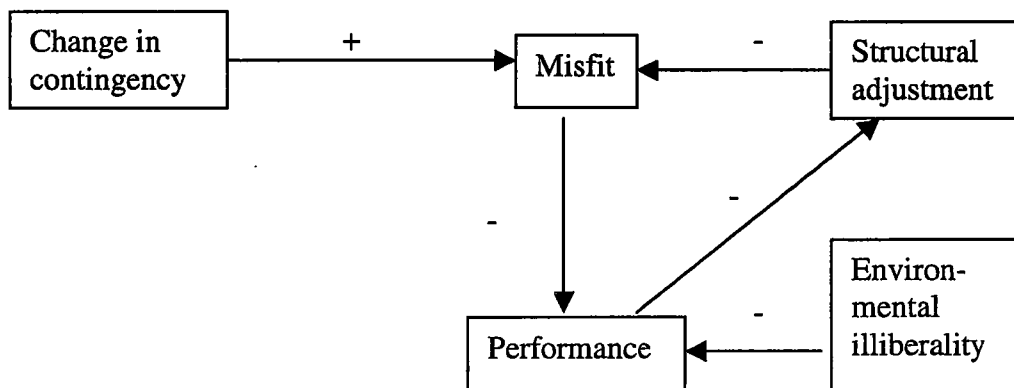


Figure 2.4. Structural adjustment to regain fit: General model (Donaldson, 1987).

Below is a discussion of two important research propositions in contingency theory by Burns and Stalker and Lawrence and Lorsch.

2.3.1. Organic versus Mechanistic Systems

Two divergent systems of management practice were identified by Burns and Stalker (1994) as a result of studies carried out to find different structures responding differently to environmental uncertainties, i.e. contingencies: Organic and mechanistic.

A mechanistic management system is appropriate to stable conditions. It is also called the “stable” organization form (Kast and Rosenzweig, 1985). The characteristics include:

- Functional tasks broken down into specialized components.
- Rigidly defined tasks.
- Strictly defined roles and means.
- A hierarchical structure of control, authority, and communication. Control carried through sanctions that derive from the employment contract between the employee and the organization.

- Relevant information resting with the chief executive.
- Vertical communication between the superior and the subordinate.
- Greater importance given to prestige attached to internal than to general knowledge, experience, and skill. (Burns and Stalker, 1994; Bedeian and Zammuto, 1991: 324)

In a mechanistic organization, the normal procedure for dealing with any matter lying outside the boundaries of one's individual functional responsibility is to refer it to the point in the system where such responsibility is known to reside, or, failing that, to lay it before one's superior. A sizeable volume of matters for solution and decision can thus find their way to the head of the concern. This traditional centralized hierarchical structure, with its long chain of command and pattern of downward communication, is not designed to either discover or respond to change rapidly (Gortner, Mahler and Nicholson, 1989: 121). In contrast, the organic form is more appropriate to changing conditions which increase the likelihood of new problems and unforeseen requirements for action. It is also called the "adaptive" organization form (Kast and Rosenzweig, 1985). This form is characterized by the following features:

- There are common goals; tasks are interdependent, rather than separated.
- Tasks are continuously redefined and adjusted through interaction of organization members.
- Members accept general role responsibility beyond individual role definition.
- There is a network structure of control, authority, and communication. Sanctions are carried out through community of interest.
- Relevant information may reside anywhere in the network, this location becoming the ad hoc center of control authority and communication.

- Communication is both vertical and horizontal, depending on where the information resides.
- Greater importance is given to affiliations and expertise in the external industrial environment. (Burns and Stalker, 1994; Bedeian and Zammuto, 1991: 324)

According to Duncan (1979), when managers experience a high degree of uncertainty – that is, when their information needs are great – the structure of the organization should not be so rigid as to inhibit managers from seeking new sources of information or developing new procedures or methods for doing jobs. Therefore, the environmental contingencies will determine which type best suits an organization.

Accordingly, neither the mechanistic nor the organic model is necessarily the more effective organization design; either can be better depending on the situation. The contingency point of view provides opportunity to get away from the dilemma of choosing between mechanistic and organic models (Gibson, Ivancevich, and Donnelly, 1994: 143). The decision about whether to design an organic or a mechanistic structure depends on the particular situation an organization faces: The environment it confronts, its technology and the nature of the tasks it performs, and the type of people it employs (Jones, 2001: 56). For instance, environmental complexity and instability are negatively related to centralized control over goal formation (Jarley, Fiorito, and Delaney, 1997). The practical conclusion is that the mechanistic design is appropriate for environmental stability, and organic design is appropriate for high environmental uncertainty.

2.3.2. Differentiation versus Integration

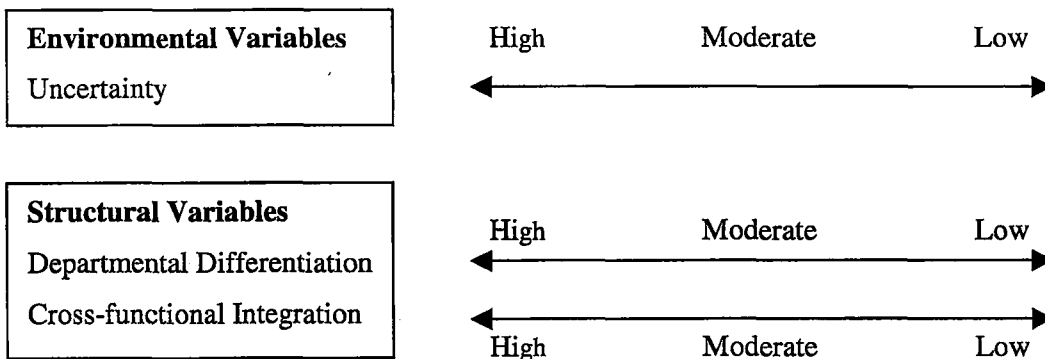
The task environment includes sectors with which the organization interacts directly and which have a direct impact on the organization's ability to achieve its goals (Daft, 2001: 131). Lawrence and Lorsch (1967) argue that as an organization's environment becomes more complex and uncertain, it tends to segment itself into subunits (or subsystems), each concentrating on a particular part of its task environment. This segmentation into distinct subunits is called *differentiation*. In other words, different subunits within an organization may confront different external demands. To cope with these various environments, the organization creates specialized subunits with differing structural features. Therefore, it can be generalized that organizations facing complex, highly uncertain environments typically differentiate so that each organizational unit is facing a smaller, more certain problem (Borgatti, 2001).

However, the greater is the differentiation among units, the greater the chance that their goals, time perspectives, and interpersonal orientations will conflict. Lawrence and Lorsch (1967) hypothesized that it would be more difficult to integrate functional subunits' efforts as differentiation increases. *Integration* is defined as the process of achieving unity of effort among various subsystems in the accomplishment of the organization's task. The balance between differentiation and integration has been regarded as one of the most important and most problematic design challenges of organizations (Jones, 2001). Organizations which manage to achieve high subunit differentiation and yet still maintain high integration between subunits seem to be best equipped to adapt to environmental changes.

Consistent with Burns and Stalker's findings, Lawrence and Lorsch's study also implies that there is no universal best way to design an organization (Bedeian and Zammuto, 1991). Rather, the specific design of an organization and its subunits must fit the organization's environment. Pasmore (1988: 10)

also proposes that the more complex the environment, the more likely it is that a design will fail to satisfy certain important environmental demands. It follows that for the fit between the organization and environment to remain optimal, the design of the organization also must change continuously. Therefore, the “differentiation versus integration” discussion can be regarded as an extension of the contingency theory at the sub-unit level (Taylor and Islam, 2001).

Figure 2.5 shows the relationship between the degree of uncertainty versus the degree of differentiation and integration. A complex, uncertain environment requires that different departments develop different orientations toward their tasks so that they can deal with the complexity of their specific environment. As a result of this high degree of differentiation, such organizations require more coordination (integration). By contrast, no complex integrating mechanisms are found in a stable environment since the hierarchy, rules, and standard operating procedures provide sufficient coordination.



2.5. The effect of uncertainty on differentiation and integration (Jones, 2001: 172).

It should be noted here that subenvironments may differ for each subsystem within the organization. For instance, the sales department may face customers and competitors, while the legal department may confront governmental regulatory agencies (Lawrence and Lorsch, 1969). The result of the studies carried out in ten corporations from the plastics, food, and container industries was that organizations that performed well in uncertain environments had high levels of both differentiation and integration, while those performing well in less uncertain environments had lower levels of differentiation and integration. In the process of division of tasks (differentiation), the organization is also ordering its environment into three sectors: the market subenvironment, the technical-economic subenvironment, and the scientific subenvironment (Lawrence and Lorsch, 1967). The technical-economic subenvironment is oriented towards technical-economic goals; the market subenvironment is oriented towards market goals; and the scientific subenvironment is oriented towards scientific goals. The certainty of these subenvironments are measured by:

- The rate of change in environmental conditions,
- The certainty of information at a given time about environmental conditions,
- The time span of definitive feedback from the environment.

The total score obtained from these measures leads to a rough approximation of the relative certainty of the subenvironments. As a result, the science subenvironment has been found to be the most uncertain among all, followed by the market and the technical-economic subenvironments.

It was further hypothesized by Lawrence and Lorsch (1967) that four attributes of an organizational subsystem would vary with its subenvironment. Therefore, we have four hypotheses for our case study:

Hypothesis 1: Degree of Structure: The greater the degree of certainty, the more formalized the structure. The level of formalization is also called “the degree of structure” by Lawrence and Lorsch (1967), indicating the aspects of behavior subject to pre-existing programs and controls. Leavitt (1958) found that groups working on relatively simple and certain tasks tend to perform the task better when the groups had more structure. Similarly, Hall (1962) found that departments with routine tasks tended to have a higher degree of structure than departments with less certain tasks.

Hypothesis 2: Interpersonal Orientation: When there is moderate certainty, the members will have more social interpersonal orientations. When there is very high or very low certainty, the members will have more task-oriented interpersonal orientations. Subsystem members in their interpersonal relationships will be primarily concerned with either task accomplishment or with social relationships. Fiedler (1960), in studies of group effectiveness, found task-oriented leadership associated with effective performance under the extreme conditions of high and low task certainty, while more socially oriented styles were associated with effective performance under conditions of moderate uncertainty.

Hypothesis 3: Time Orientation: The time orientations of subsystem members will vary according to the modal time required to get definitive feedback from the relevant subenvironment. Market subsystems tend to have the shortest time orientations, the technical-economic subsystems tend to have longer-term time orientations, and the science subsystems tend to have the longest-term time orientations. The time orientations of subsystem members are found to be related to the time span of definitive feedback. This attribute has apparently not been empirically studied in organizations, but it has been used as an important

dimension of the comparative study of cultures (Kluckhohn and Strodtbeck, 1961).

Hypothesis 4: Goal Orientation: The members of a subsystem will develop a primary concern with the goals of coping with their particular subenvironments. Market subsystems have the shortest, technical-economic subsystems have medium, and the science subsystems have the longest term goal orientations. Thus marketing managers could be expected to be more concerned with customer and competitor actions, while production executives would be more oriented toward the operation of equipment and the actions of suppliers (Lawrence and Lorsch, 1967: 8).

Therefore, a high degree of subenvironmental uncertainty leads to high differentiation, which leads to a greater need for but a greater difficulty of achieving integration. The basic mechanism to achieve integration is the management hierarchy. However,

Organizations faced with the requirement for both a high degree of differentiation and tight integration must develop *supplemental* integrating devices, such as individual coordinators, cross-unit teams, and even whole departments of individuals whose basic contribution is achieving integration among other groups (Lawrence and Lorsch, 1969: 13).

One other factor that must be considered in examining the relationship between differentiation and integration is the felt need for joint decision-making. March and Simon (1958) call this "requisite integration", which indicates the degree to which subsystems in an organization require continual collaboration in making decisions before a given subsystem may act. Lawrence and Lorsch

(1967: 10) hypothesize that within any organizational system, given a similar degree of requisite integration, the greater the degree of differentiation between pairs of subsystems, the less effective will be the integration achieved between them. Moreover, the overall performance in coping with the external environment will be related to there being a degree of differentiation among subsystems consistent with the requirements of their relevant subenvironments and a degree of integration consistent with requirements of the total environment. When the environment requires both a high degree of differentiation and a high degree of integration, integrative devices will tend to emerge. As a result, when both differentiation and integration are high, the organizations are considered to be successful.

When integration of the differentiated tasks is concerned, it should be done properly. For instance, radically different tasks should not be combined into a single organizational unit (Lawrence and Lorsch, 1986). Conversely, very similar tasks should not be separated into distinct units. Part-whole relationships are important in understanding the design of organizational subdivisions (Van de Ven and Drazin, 1985: 359).

There are seven important integration mechanisms in the literature. The most powerful mechanism is the integrating department, followed by integrating role, team, task force, liaison role, direct contact, and hierarchy of authority. The hierarchy of authority is the simplest and most widely used integration mechanism (Jones, 2001). It integrates activities by specifying who reports to whom. This is also called direct supervision since one person takes responsibility for the work of others, issuing instructions to them and monitoring their results (Mintzberg, 1983b). Managers from different functions who have opportunities for direct contact with each other can work together to solve common problems. When the need for communication among subunits

increases, one member or a few members from a subunit are likely to have responsibility for coordinating with other subunits (liaison role).

As an organization increases in size and complexity, more than two subunits may need to work together to solve common problems. The solution commonly takes the form of a task force, which is a temporary committee set up to handle a specific problem. When the issue of a task force is dealing with becomes an ongoing strategic or administrative issue, the task force becomes permanent (team). However, as an organization becomes large and complex, communication barriers between functions and divisions are likely to increase. An integrating role is a full-time position established specifically to improve communication between functions. When a company has many employees in integrating roles, the organization creates an integrating department to coordinate the activities of the subunits.

2.4. Organizational Climate

Authors differ in their beliefs as to whether culture and values can be managed (Hall, 1995). The appeal in managing organizational culture is that by fine tuning culture, we can alter the performance of organizational members (O'Reilly and Chatman, 1996). It is the organizational culture that breeds the employees' attitudes, dictates how they behave at work, and instills in them a distinct work ethic. When the organizational culture is positive, employees are naturally more productive. On the other hand, a negative organizational culture makes the employees feel as if they are being treated poorly, mismanaged, and/or taken advantage of, so they feel no loyalty (Mike, 2001). Therefore, the cultural side of the organization is as important as the structural side.

At its most basic level, organizational climate refers to employees' perceptions of their work environment (Altmann, 2000). These perceptions reflect the way in which an employee describes the workplace. Climate has generally been

defined as a set of attributes specific to a particular organization (Campbell, Dunnette, Lawler, and Weick, 1970: 390). Therefore, we can say that an organization's specific culture refers to its organizational climate. The organizational climate focuses on descriptions of an employee's surroundings. In fact, the descriptive information gathered from organizational climate statements is often used to understand value-based perceptions such as an employee's likes and dislikes (Altmann, 2000).

The study carried out by Robert and Wasti (in print) looks at four dimensions in the organizational climate:

Organizational Individualism

Organizational individualism states that the organization is a collection of individuals with potentially different interests and aspirations. The organization is like a machine with detachable, substitutable parts. Individual goals have priority over collective goals. The relationships are contractual, exchange-based, and temporary as long as it is advantageous to the individual. Competition is accepted, perhaps encouraged and meritocracy is valued more than seniority. Individuals are valued in relation to their competence. There is division of labor and rewards are individual-based. Employees do not substitute each other and responsibilities are clear. There is low identification with symbols, myths, and values. In this organization:

- Importance is given to dissenting opinions.
- Individual preferences are catered to (e.g., flexible work hours).
- There is no dress or behavior code.
- Employees will stay as long as it is to their advantage.
- Employees view their relationship as a professional, business relationship.
- Employees are primarily evaluated in terms of their competence, and not their personal characteristics.

- Workers have to learn their jobs by teaching themselves.
- Supervisors believe that competition between workers is desirable.

Organizational Collectivism

Organizational collectivism states that the organization is one whole with a common goal. The organization is like a family. The goal is to contribute towards collective goals, not individual maximization. The relationships are normative, long-term oriented and staying through bad times is expected. Loyalty is valued more than meritocracy. Responsibilities are diffused and substitution is possible. There is high identification with symbols, myths, and values. In this organization:

- Conformity is valued (or rewarded or desired).
- Relationships are personal and warm.
- Employees will cover for each other to keep the organization functioning optimally.
- There are well-established rituals that employees enjoy.

Organizational Horizontality

Organizational horizontality states that there is equality in decision making and everybody's vote is equal. Major decisions can be initiated from the bottom up. There is joint regulation on work procedures. Status differences are minimized.

In this organization:

- Supervisors accord respect to their workers (or workers' ideas).
- All common rooms are shared (e.g., cafeteria, lounge, parking).
- There is no pay secrecy.
- There are very few titles segregating the workforce.
- Workers and supervisors meet on terms of social equality outside working hours.
- Expertise is valued more than status in this organization (Experience sounds like seniority).

- Supervisors treat workers as colleagues.
- Employees have equal access to company resources.

Organizational Verticality

Organizational verticality states that there is limited decision making and that votes are concentrated at the top. Major changes are initiated from the top down. There is hierarchical control. Rank has privileges. In this organization:

- Supervisors are not easy to access and have little time for subordinates.
- Decisions by supervisors are never questioned.
- No action is taken before supervisory approval.
- Supervisors are addressed in tones of extra respect.
- It is easy to tell who is the boss.
- Supervisors receive differential treatment (e.g., their coffee is served while everybody gets their own).

2.5. Organizational Design

Through “organization design” managers select and manage aspects of structure and culture so that an organization can control the activities necessary to achieve its goals. This process involves difficult choices about how to control, coordinate, and motivate employees. These challenges include balancing differentiation versus integration, centralization versus decentralization, standardization versus mutual adjustment, and including elements of mechanistic versus organic structures. Thus managers designing an organization must have a clear idea about what they are trying to achieve and what effect their choices will have on the organization’s stakeholders.

If an organization is to remain effective and successful as it changes and grows and as its environment changes and grows, management must continuously evaluate how the organization divides up the work that needs to be done and how it controls its human, financial, and physical resources (Jones, 2001: 33).

2.5. The Research Model

The research has been divided into three parts as seen in the figures below. Letters A, B, C, D, E, F, and G indicate the section of the questionnaire that the item is located (The questionnaire is available in Appendix A).

The letter “P” indicates that the question is asked during interview sessions (The interview questions are available in Appendix B).

Lastly, the letter “S” indicates that the answer to the question comes from secondary and/or organizational sources (The questions learned from secondary and organizational sources are available in Appendix C).

The first part looks at Burns and Stalker’s findings. The researchers argue that organizations facing a relatively certain environment should maintain a mechanistic structure. Similarly, organizations facing a relatively uncertain environment should maintain an organic structure (Figure 2.6).

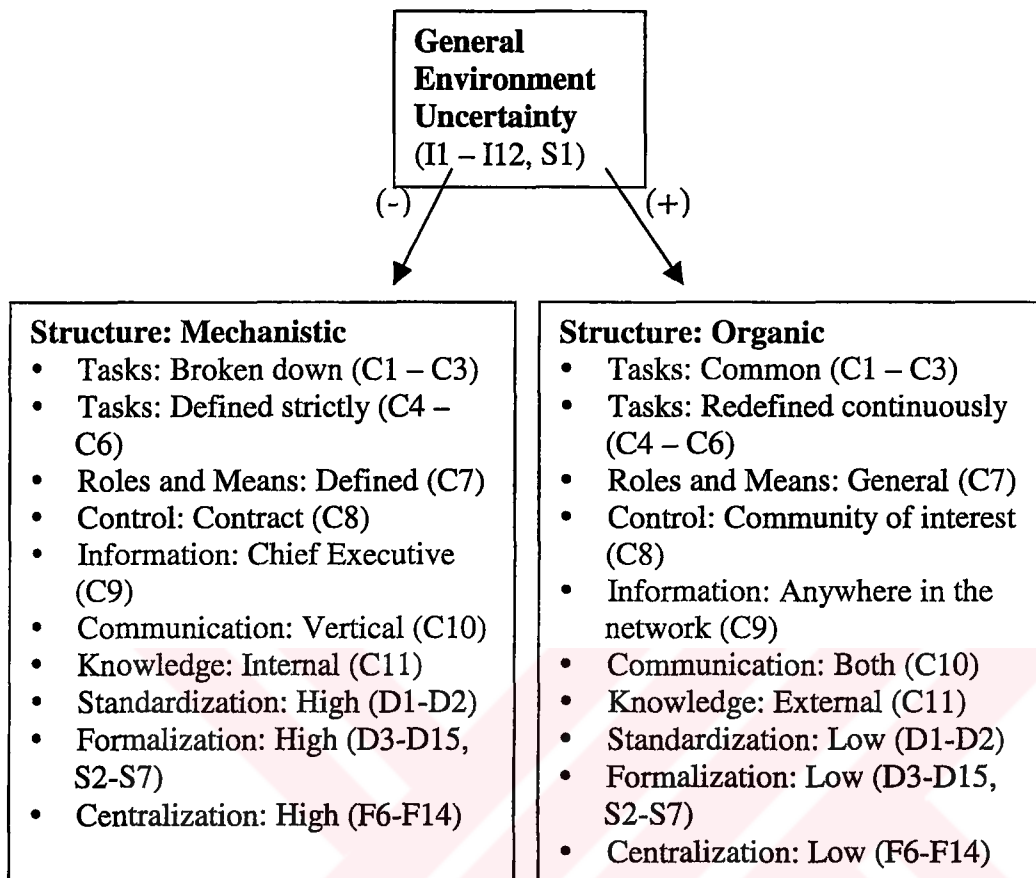


Figure 2.6. The Research model Part 1 – Burns and Stalker’s Theory

The second part in the research model looks at the validity of Lawrence and Lorsch’s (1967) theory. Lawrence and Lorsch mainly state that task environment uncertainty is negatively related to formalization, positively related to time orientation (as task environment uncertainty increases, the time interval within which the subsystem orients itself increases), negatively related to task oriented work relationships, and negatively related to technical-economic goal orientation (and positively related to scientific goal orientation). Subsystems facing a moderately uncertain environment have members with a market goal orientation and socially oriented work relations.

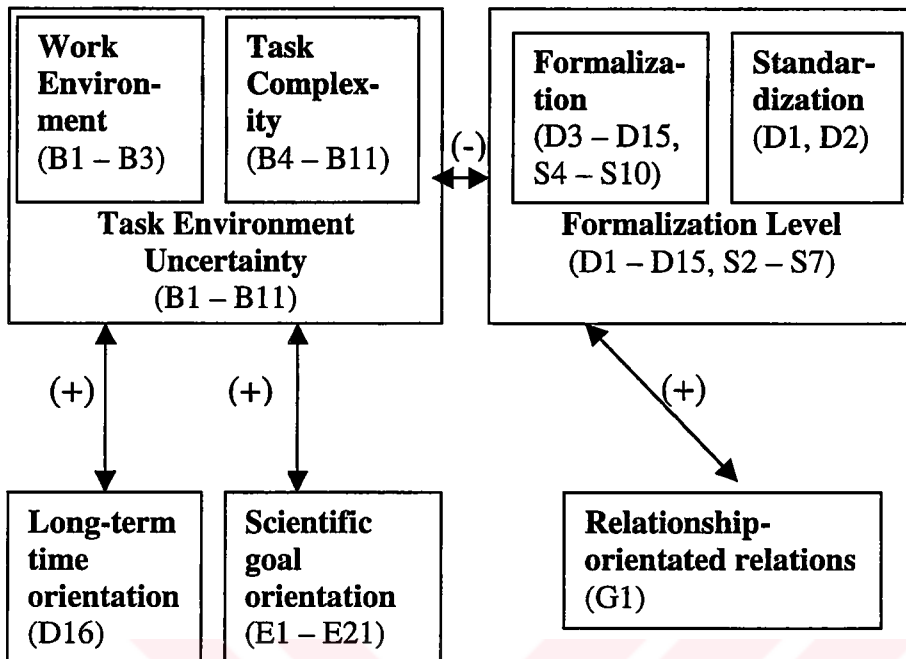


Figure 2.7.a. Research model Part 2 – Lawrence and Lorsch’s theory

After finding a match or mismatch between pairs of variables, issues on “differentiation versus integration” will be discussed:

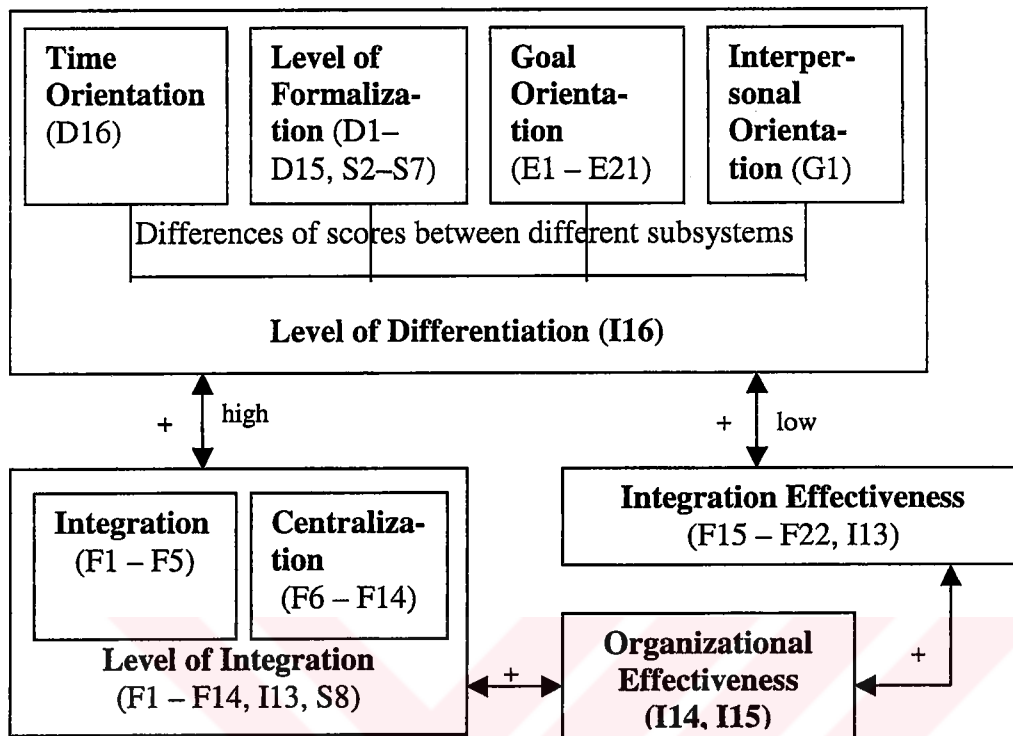


Figure 2.7.b. Research model Part 2 – Lawrence and Lorsch’s theory on differentiation versus integration

In Figure 2.7.b, the level of differentiation is found between different pairs of subsystems. If that differentiation is high, then both the level of integration and the effectiveness of integration should be high for the organization to be effective.

The last part in the research model is about the organizational climate. In this part, the organization is investigated in terms of two dimensions: collectivism versus individualism and verticality versus horizontality. For instance, when there is centralization in the organizational structure, the organizational culture is expected to be high on the verticality dimension. The next chapter discusses how these research models are analyzed for SAM.

CHAPTER 3

METHODOLOGY

In addition to the concepts derived from the literature, four methods are employed in collecting data: Available sources in SAM, a questionnaire, interviews, and observations. The data analysis methods are explained in this chapter.

3.1. Data Collection Methods

There are sources in SAM that give information regarding the organizational structure, and culture. These include:

- The organizational chart,
- Job definitions and specifications,
- Personnel information regarding education, experience, and other characteristics important for organizational functioning,
- Organizational handbooks, such as reengineering documents and the official quality handbook,
- Performance evaluation results,
- Annual meeting notes.

Besides these available sources in SAM, a questionnaire was structured (Appendix A) and was distributed to lower level employees, managers, and

directors. Since the unit of analysis is either the department or the organization, the data had to be aggregated in order to calculate scores for measures of organizational structures (Hage and Aiken, 1969: 368). The second step was to compute an organizational score for each dimension by averaging the means of all respondents' answers.

In building this questionnaire, three important factors were taken as essential for the effective conduct and use of the questionnaire (Rea and Parker, 1992): The first is "questionnaire comprehensiveness". The questions cover a reasonably complete list of alternatives. This is also important for the validity of questions. Secondly, "questionnaire clarity" indicates that the questions are understood by the respondents. This is accomplished by studying the questionnaire with three SAM employees (Cemile Alptekin, Expert Assistant, Public Relations; Ali İhsan Çavdarlı, Expert, Human Resources; Nusret Demirörs, Technician, Human Resources). Lastly, "questionnaire acceptability" is achieved by providing a letter of confirmation to conduct the questionnaire to SAM personnel. Since the sponsorship of the questionnaire is important for the respondents to answer the questions fully (Selltiz, Wrightsman, and Cook, 1976), a letter in front of the questionnaire included the official permission to conduct the questionnaire.

One of the questions in the questionnaire is open-ended and the rest is closed-ended. The open-ended question is about the integration mechanisms in SAM and requires the respondent answer freely, without prespecified restrictions. There are no specific alternatives as suggested by the distributor (Rossi, Wright, and Anderson, 1983). For some of the closed-ended questions, a Likert scale is used specifying the degree of conformance to the statement from 1 (the least) to 5 (the most).

The third data collection method is the interview. Another advantage of the interview is its greater sensitivity to misunderstandings (Seltiz, Wrightsman, and Cook, 1976). Its flexibility makes the interview a far superior technique for the exploration of areas where there is little basis for knowing either what questions to ask or how to formulate them. Therefore, if respondents answer the questions in one or two words, the interviewer may prod further for a better understanding of the reasons behind the short answers (Argyris, 1970).

The reason for taking a semi-structured interview approach (asking some pre-planned questions in standard ways) is that the semi-structured interview has relatively higher validity. In other words, if some of the questions are prepared before the interview begins, the possibility that the interview is measuring what it is supposed to measure increases (Harris, 1989).

The interviews were conducted through a step-by-step approach. First, there was a brief introduction about the subject of the thesis and the subject of the interview. In the first interview, the appointment for the second phase of the interview was arranged. The second phase included asking the previously prepared questions about the general environmental uncertainty, integration effectiveness, and organizational problems related with the organizational structure. When there was a point that needed to be clarified, or when the respondent evoked a situation that needed more explanation, the “broad brush” questions were asked to open the area (Drake, 1972: 112). Careful listening without interruptions was followed by asking more questions. After the point was clarified, the next pre-planned question was asked. After all the questions were satisfactorily answered, the interview was concluded.

The general environmental uncertainty analysis was done through secondary sources and interviews. There were no questions in the questionnaire that attempted to measure general environmental uncertainty. The reason is that a

single employee may be able to observe the characteristics of his/her *task* environment, but the *general* environment can be scrutinized by higher level managers in addition to observations and analyses carried out by other researchers. Therefore, the general environmental uncertainty was investigated through utilizing secondary sources and interviews.

In addition, data is also collected through observation. The observation is based on the researcher's one-year work experience in SAM, plus a more direct and systematic observation while conducting the questionnaire and interview studies. Since one cannot hope to observe everything, selective sampling is a practical necessity and is theoretically mandatory (Schatzman and Strauss, 1973). It is used as supplementary to all the other methods of collecting information and for gathering information that is not readily recorded (Hurley, 1988). Bits of information that could be obtained through observations are the flow of operations, methods of work, pace of work and discipline, working conditions, attitudes and behavior of personnel, and interpersonal and intergroup relations.

Appendix D summarizes the information that was learned from the questionnaire, interviews, and secondary and organizational sources and how they are integrated.

3.2. Pilot Study

After preparing the questionnaire, it was reviewed by three employees in SAM. After this review and editing process, a pilot study was carried out on thirty-one people with different backgrounds. Nineteen questionnaires were distributed to graduate students in the Turkish Armed Forces (TSK) who reviewed the questionnaire in terms of wording, understandability, clarity, and ease of responding. Three questionnaires were handed out to personnel in METU Continuous Training Center (ODTÜ Sürekli Eğitim Merkezi) who are

experienced in questionnaire preparation and use. Five questionnaires were reviewed by research assistants at METU, Department of Business Administration. They have also studied the items in terms of understandability, simplicity, and explicitness. Moreover, two graduate students who are research assistants in the same department and are trained in questionnaire building and survey methods have examined the questionnaire. Lastly, two doctorate students (Akdeniz University and George Washington University) analyzed the questionnaire in terms of validity and clarity.

After getting the results and discussing their feedback with some of the pilot respondents, the questionnaire was improved further by changing some question types, some expressions, and the sequence of some questions.

3.3. Data Analysis Methods

Two types of data have been gathered: The first type consists of numbers. The questionnaire results provide the individual scores for each respondent and for each organizational concept. They are summed to come up with departmental and organizational scores. This type of data was analyzed by using “Statistical Package for Social Sciences” (SPSS). Some of the scores are used in averages, some of them in correlations, and some others in hypotheses. The other type of data consists of statements, which mostly come through the interviews. This type of data is used for developing interpretations.

One way of analyzing data is subgroup comparisons. The purpose of subgroup descriptions is comparative (Babbie, 1975: 322). This method is used to compare and contrast the scores for each organizational subsystem. An index is constructed through simple accumulation of scores assigned to individual attributes (Babbie, 1975: 338).

There is a set of questions for each of the concepts that are measured. For the reliability of these questions, the Cronbach alpha has been calculated. Alpha calculates the internal reliability of the questions by determining the consistency in measuring the same variable. Factor analysis is another method in assessing the internal reliability of a measured variable. This method looks at the whole data and discovers patterns among the variations in the values of several items (Babbie, 1975). The factor analysis is used only for the organizational climate questions. The factor analysis method has not been utilized for all data for several reasons:

1. The questionnaire items are taken from original sources. They have already been checked for validity and reliability. There is no reason for finding the factor loadings for the whole data a second time.
2. In factor analysis, factors are generated without any regard to substantive meaning. We may find very high loadings for a group of substantively disparate variables or find low loadings for similar variables. Moreover, some of the variations in data may in fact be superficial (Kim and Mueller, 1978).
3. Some of the questions do not assume linearity. For instance, the question 9 in Part C of the questionnaire is nominal. Since we cannot include those questions in the factor analysis (Kim and Mueller, 1978) and since we cannot ignore them in the analyses, factor analysis is inappropriate.

The criterion-related validity of the questionnaire can be considered as proved since most of the questions are directly taken from their original sources. The rest of the questions just ask the information directly, so we can take questions as valid.

Regarding the content validity of the questions, some steps have been taken: First of all, since it is important to specify the full domain of content (Carmines and Zeller, 1979), except Likert scale questions, all the possible answers are written for each question. Moreover, blank spaces are provided for other possible answers. These answers are then included in all analyses. Secondly, samples from different cities are used in order to include their cases in the analyses.

Table 3.1. Centers Covered and Number of Respondents

	Total Number of Employees	Number of Respondents	Percentage Covered
The Headquarters	137	33	24 %
Regional Development Institute	28	9	32 %
Market Research and Export Development Institute	13	6	46 %
Entrepreneurship Development Institute	19	7	37 %
METU TEKSAM	17	3	18 %
OSTİM SERSAM	21	12	57 %
İzmir SERSAM	13	6	46 %
Çorum SERSAM	6	3	50 %
Nevşehir SERSAM	2	2	100 %
Kayseri SERSAM	8	4	50 %
Trabzon KTÜ TEKSAM	2	2	100 %
İstanbul BÜ TEKSAM	5	5	100 %
İstanbul İMES SERSAM	11	9	82 %
Denizli SERSAM	9	7	78 %
Van SERSAM	3	3	100 %
Total	294	111	38%

Hence the response rate from these centers is 89.52%. From the 124 questionnaires handed out or mailed, 111 were returned. We can say the sample is representative because all types of centers and institutes are included in the analyses. Moreover, representatives from different places around Turkey are chosen in order to reflect their situation as well.

Lastly, the construct validity is also satisfied since each index we use is “a particular measure related to other measures consistent with theoretically derived hypotheses concerning the concepts that are being measured” (Carmines and Zeller, 1979: 23). For instance, the mechanistic and organic types of structures are identified with levels of centralization, formalization, standardization, location of knowledge, and other variables. They are both theoretically and statistically correlated, and the questionnaire has construct validity.

The interview questions are analyzed by looking at statistical means. The mean score for all the items determines the level of uncertainty in the general environment of SAM (Dickson and Weaver, 1997).

CHAPTER 4

ELEMENTS OF THE GENERAL ENVIRONMENT

The objective of this chapter is to determine the level of uncertainty in SAM's general environment using secondary knowledge and interview findings. The relevant environment of an organization includes the legal/regulatory factors (e.g. industry standards), pseudo-member factors (e.g. stockholders), general socioeconomic factors (e.g. consumer spending), input factors (e.g. labor supply), throughput factors (e.g. labor mobility), and output factors (e.g. customers) (Lombardo, McCall, and DeVries, 1983). Some of these factors can affect all other organizations, but some of them are specific to the organization and are called the "task environment" of the specific person or group. The general and task environments can be certain or uncertain, simple or complex, and stable or unstable. Environmental uncertainty is defined by the amount of complexity and the rate of change in the organization's environment (Duncan, 1972).

The elements in SAM's general environment are determined using Churchman's (1968) classification. He suggests asking whether the element in question is relevant to the accomplishment of the system's goals and objectives. If the answer is no, that element is neither in the system nor in the environment. If the answer is yes, we have to ask another question: Can the

system control the element? If the answer is yes, the element is said to be in the organizational system. If the element cannot be controlled and if it has a direct impact, then it is said to be an element of the organization's specific environment. If the relevant element cannot be controlled and has an indirect impact, then it is in the general environment. Therefore, the general environment is considered to comprise seven sectors, namely the social, cultural, legal, political, economic, technological, and physical sectors (Hatch, 1997). For SAM, the general environment includes SMEs, SME development organizations, nongovernmental organizations, banks and financial institutions, the government, and other elements that may affect SAM, such as social and political circumstances. These elements are discussed below.

4.1. Small and Medium Size Enterprises (SMEs)

Small and medium enterprises are not isolated from the business environment; they interact with each other and with other organizations and systems (Sariaslan, 1995: 145). In all sectors, the vast majority of enterprises are SMEs (ENSR, 1995). They operate in an economic system that both affects SMEs and is affected by them. Competition is provided by the existence of a large SME sector since small business owners tend to be achievement-oriented, as opposed to managers of large firms, who tend to be power- and prestige-oriented. Therefore, SMEs foster innovation (Rachman, Mescon, Boveé and Thill, 1993). SMEs are important not only because they produce products and services, but also because they complement big businesses (TMMOB, 1999). The role of SMEs and their importance lead us to conclude that the importance attached to SMEs comes from four major sources: providing jobs, introducing new products and services, supplying the needs of large organizations, and providing specialized goods and services.

It is universally accepted that SMEs play a very important role in the economic development of a country (Nasir, 2002). They are considered to be the growth

generators for economies worldwide (Hlava, 2002). Especially in developing countries like Turkey, the economic and social significance of small-scale enterprises is well recognized (Scott, 2000; O'Rourke, 2002). Small-scale enterprises in developing countries tend to be concentrated in a small number of industrial sectors.

The discussion in this chapter is based on the information in Appendix F, which shows the characteristics of SMEs both in the world and in Turkey. According to these results (Alkibay et al., 1999; Taymaz, 1997), the most problematic area for Turkish SMEs is finance, followed by personnel, marketing, and production. 73% reported that they had not made use of SAM services before. Those who had, utilized SAM services mostly in the laboratory, advisory, and training areas. Almost all (92%) of the SMEs reported that they have not benefited from government services before.

Generally speaking, Turkish SMEs have financial, technological, human resources, information, and regulatory problems and other problems related to infrastructure, marketing, consultancy, and taxation (Kepir, 1998; Baykal, 2000; Öncü, 2000). The main sources of these problems are their financial incapacity, technological insufficiency, inability to attract qualified personnel, lack of competitiveness in purchasing and marketing facilities, inadequate infrastructure, changing economic conditions, and insufficient knowledge about relevant regulations (Gücelioğlu, 1994). Compared to European SMEs, Turkish SMEs get less or inefficient support (Şahin, 2000).

Some statistics about SME characteristics in Turkey are quite similar to those of other countries in the world (Dilik and Duran, 1998). For instance, the proportion of SMEs in enterprises of all sizes is about 99.5% in Turkey, while it is 97.2% in the US, 99.8% in Germany, 98.8% in the UK, and 97% in France (Müftüoğlu, 1998). The proportion of SMEs in employment is 56.3% in

Turkey, while it is 50.4% in the US, 64% in Germany, 36% in the UK, and 49.4% in France. The unsatisfactory figure for Turkey is that the proportion of SMEs in the total credits given to firms is only 3% in Turkey, while it is 42.7% in the US, 35% in Germany, 27.2% in the UK, 48% in France. The implication is that the regulatory parties have to increase the importance and priority given to SMEs.

The “SME Investment Encouragement Law” (“KOBİ Yatırım Teşvik Kanunu”), carried out by the Treasury Undersecretariat, has many areas of support including value-added tax, fund-supplied investment and enterprise credits, investment discounts, and exemption from customs duties. In 1998, most of the incentive certificates were given to SMEs in the Marmara, Central Anatolia, and Aegean regions. On a city-based scale, the highest ranks were shared by İstanbul, Ankara, and İzmir. However, there is not an equal distribution among the regions and cities in Turkey. The initiatives are valuable in supporting Turkish SMEs; however, since 1996, the year when these encouragement activities have begun, there has been not enough progress toward achieving the objectives set forth (Dilik and Duran, 1998). Moreover, most of the support has been given to the developed regions of Turkey while it should have been given to regions that are prioritized for development, or in other words, underdeveloped regions.

Therefore, Turkish SMEs have many problems that stem from two sources: The first is the economic instability and financial insufficiency, and the second one is managerial problems. Especially the first of these sources is uncertain. Although the problems related to the internal structure of the SMEs are somewhat predictable, the economic and political conditions in Turkey create uncertainty for SMEs and for SAM services.

During interviews conducted for this thesis, valuable information was gathered about SMEs. The following is the summary of interview findings regarding the nature of relationships between SAM and SMEs and whether SMEs represent uncertainty for SAM:

- ▶ There are studies and analyses made about Turkish SMEs. These studies provide important and useful information for SAM to understand SME needs. These studies are able to show the current needs but not able to predict their future needs. The number of SMEs may increase or decrease through time or under certain circumstances, but their characteristics do not change very much.
- ▶ By their nature, SMEs are flexible to respond to changes. For this reason, they are among the most adaptable types of organizations in the face of uncertainty. However, when unexpected situations occur, like the economic crisis in 2001, they cannot find enough resources to recover their expenses. Although SMEs have been stated as the most flexible and adaptable types of organizations, Turkish SMEs are vulnerable to unfavorable changes.
- ▶ Both the facilities and priorities of SAM change according to changes in SME characteristics and needs. In fact, that is what SAM stands for. SAM should and does prioritize its activities according to SMEs. Therefore, any change in SMEs should be reflected directly in SAM. However, not all the needs and priorities of Turkish SMEs are reflected in SAM's plans and activities. This is an uncertainty because unplanned situations may occur anytime and necessitate changes that cannot be realized quickly. For instance, while SMEs say they need money, not suggestions, SAM still continues to provide them with intellectual help, but not financial help¹. When the economic crisis occurred in 2001, this situation got worse.

¹ It has also been stated by one of the managers during interviews that SMEs in fact do not need capital but suggestions. When they get the money, they do not know where to invest it. Even when they know where to invest it, they do not know what it would bring to the firm in the long run. Therefore, the most important problem may be stated as the deficiencies in organization and management (Akgemci, 2001).

However, many of the SAM executives stated that the decision about not giving direct financial help is right. According to them, SAM should provide only managerial and organizational guidance. Moreover, SAM should focus on a smaller area of service, such as engineering, since there are other organizations in Turkey that give services in other areas. However, according to many studies and many of the SAM personnel, SMEs need finances first of all. Other problems such as marketing and human resources come next. Therefore, there is a dilemma in what Turkish SMEs expect from SAM and what SAM provides (or wants to provide).

- ▶ The most important problems of Turkish SMEs have been stated as finance, marketing, and human resources. If analyzed carefully, these problems stem from another important factor: the lack of a professional management system in SMEs. As in the rest of the world (Lamberts, 2002), most Turkish SMEs are family-owned businesses. All the personal and family-related problems are reflected directly on the SME. Even when there is enough money, the manager does not know where to invest it or invests it without proper analyses. Therefore, even though the problems and priorities seem to be clear (finance, marketing, and human resources), the root problems vary from one SME to another, which creates uncertainty for SAM. It has been stated that the characteristics or needs of a single SME alone are not important for SAM. SMEs are not analyzed case by case, but rather according to aggregate reports and the annual governmental plans.
- ▶ In recent years, membership in the Customs Union and attempts to be a member of the European Union have initiated new efforts to educate SMEs in such areas as the CE sign and legislature congruence. The increasing demand for training in these areas has created a burden on SAM for two reasons: Firstly, even though SMEs themselves are not aware of what they need to learn. They take information which SAM thinks important. Secondly, such an increased demand for certain types of SAM services was

not expected, which created a need for new activities and educational facilities. This in fact represents an example of complexity created by SMEs.

- ▶ Although SMEs represent uncertainty for SAM, their needs could be predicted in advance if research and analyses were done properly. However, those activities are either not enough to correctly determine SME needs or are done improperly. Furthermore, even when SMEs behave as predicted, due to bureaucracy and inapplicable plans, actions cannot be taken at the right time. For instance, due to efforts to enter the European Union, SMEs are trying to understand and apply the new rules for their businesses. However, the rise in applications for the kind of services related to the EU, SAM has found itself incapable of satisfying the high demand. Therefore, although the increase in demand was predicted in advance, SMEs still created an uncertainty for SAM because both SMEs and SME development organizations, including SAM did not anticipate such an increase in demand. This can be generalized for the future, because another unexpected demand for a certain type of service may increase and create uncertainty.
- ▶ Turkish SMEs show different characteristics in different regions. The main sectors, sector characteristics, needs, and expectations all vary according to the region where SMEs are located. Therefore, there is no single solution to Turkish SMEs' problems. One service may be useful for a service center in Van, but may be totally useless in İstanbul.

To summarize, SMEs create uncertainty for SAM. They have been categorized among the most uncertain elements in the general environment.

4.2. SME Development Organizations

Although the importance of small enterprises has been generally recognized for some time, it was not until the 1960s that governments felt it necessary to

establish units focusing on small-enterprise development (Neck, 1987: 19). Policies promoting small enterprises were introduced to support the growing interest in this area as a means of economic and social development, and these resulted in financial and non-financial assistance programs to promote the sector.

The disappointing results of small-enterprise development programs in many countries show that if such enterprises are to flourish, the right conditions must exist (Marsden, 1987). In most developing countries, small enterprises are either left to their own devices and are unable to realize their full potential because of distorted and over-regulated markets, or help is extended to them by governments in ways that are often largely ineffective or may even hinder their growth. Development programs focused specifically on small enterprises can also be useful provided that they reinforce and supplement private sector initiatives, rather than replace them.

Key supporting factors are two-fold: government involvement and non-government involvement in financial, managerial, and technical aspects (Nelson, 1987). The critical activities are training, technology, marketing, linkages (SMEs as inputs to large enterprises), finance, and venture capital. There are several programs and organizations in the world that try to enhance SMEs' competitiveness and increase their strengths while minimizing their weaknesses (Gücelioğlu, 1994). For instance, there is a separate support program for SMEs within the European Union's scope since 1983.

Similar programs exist in Turkey as well. The new Technopark Statutes of Turkey is generated for (SAM, 2002c):

- Generating technological know-how that is export-directed, competitive in international markets, and in cooperation with universities and other R&D institutions.

- Renovating products and production methods and increasing the quality standards.
- Decreasing production costs, commercializing technological know-how, encouraging technology-based production and entrepreneurship, helping SMEs be in line with high-technologies, and creating investment areas in line with the Science and Technology High Council's decisions.
- Creating job opportunities for researchers and creative entrepreneurs.
- Helping technology transfer through establishing and maintaining technoparks that speed up the process of knowledge import.

This new technopark policy has somewhat regulated the activities of technoparks, which in turn decreased the uncertainty for SAM in these institutions' activities. The Turkish technopark policy has been to build them into areas where the educational level is high, the technical and industrial applications are higher, and where there is more than one university. This policy has been justified in terms of Turkey's broad geographical territory and a limited number of opportunities for costly technopark-building activities (Çolakoğlu, 2000). Two applications have been approved by the Technopark Evaluation Council: TÜBİTAK-MAM (TÜBİTAK-Marmara Research Center) and METU-Technopolis.

Technology development centers are established by SAM in Turkey. SAM's definition of a technology development center (TEKSAM) is an organization supporting SMEs that have the possibility of improving a product or technology by giving technical support, space, and office services. Through technology development centers, entrepreneurs are provided with common facilities, technical, financial, managerial, and consultancy assistance, information services, training programs, laboratory and prototype manufacturing workshop facilities, including financial support for equipment/material, participation in fairs, software acquisition and professional

personnel recruitment. Technoparks differ from technology development centers by providing access to enterprises of all sizes. There are six technology development centers belonging to SAM, all of which are operational.

The High Council for Science and Technology (TÜBİTAK), the highest authority in Turkey on science and technology policy, is in charge of selecting certain fields for R&D, developing plans and programs, promoting R&D in the private sector, and controlling the science and technology system. (TÜBİTAK, 1993: 1). According to the 1996-2000 7th 5-Year Development Plan, the main target should be the dissemination of advanced technology applications and benefiting from the commercialization of knowledge in different areas of life (Ministry of Industry and Trade, 1998: 105). A special effort will be directed to joint research projects with appreciable socio-economic impact. In this context, technological support and development centers, technoparks, technology institutes, pre-competitive research collaborations, public research institutes, and industry research centers will be given extensive support.

Appendix G gives information about different types of SME development organizations around the world, such as science parks and technoparks. Information about nongovernmental SME development organizations in Turkey is also available in Appendix G. According this information, most of the organizations work in line with the objectives of SAM. At least they do not try to decrease the effectiveness of SAM services to increase their gains thus they should not be treated as uncertain. Therefore, they should be considered not as “competitors”, but as “partners”. The information also reflects that only technoparks and technology development centers are available in Turkey. They work through similar goals with SAM and their activities are known. Therefore, they do not represent uncertainty for SAM.

During the interviews, important information has been gathered about SME development organizations in Turkey. Among them, nongovernmental organizations, such as the Union of Chambers of Turkish Engineers and Architects (TMMOB) and the Confederation of Turkish Craftsmen and Tradesmen (TESK) are especially important since they may serve the same as or similar services to SAM.

- ▶ Nongovernmental organizations in Turkey do not attempt to engage in joint projects to serve SMEs with SAM. Even though some of the nongovernmental organizations serve the same target market with the same or similar purposes, they do not consider SAM as a partner. There is not an effective plan to direct the efforts towards a common goal and thus attain synergy. However, generally speaking, nongovernmental organizations are not uncertain.
- ▶ Some of the nongovernmental organizations, namely TESK and The Union of Chambers of Commerce, Industry, Maritime Trade and Commodity Exchanges of Turkey (TOBB), are official members in SAM's executive committee, which makes all the decisions regarding SAM's activities. Therefore, the priorities and requirements of these organizations are directly reflected in SAM's decision making process. Their needs and wants can change from time to time; however, these changes are expected and do not create uncertainty. However, it was been stated by some of the interviewees that TESK does not take SAM seriously and concentrates on its own priorities. Moreover, it is sometimes difficult to understand what TESK and TOBB want from SAM. Therefore, they are uncertain from time to time.
- ▶ Universities are considered among nongovernmental organizations. They are as important as other organizations, as stated by the interviewees. Universities should provide scientific information and SMEs should be able to utilize the information given. The TEKSAMs in SAM's body are established for this purpose. However, at the moment, neither universities

nor SMEs are successful at reaching their goals in terms of SME development. In sum, universities are not uncertain, and if they work properly, they may even decrease the uncertainty for SAM.

- ▶ There are consultant committees (“danışma kurulları”) established by the nongovernmental organizations in Turkey. They aim to provide SMEs with needed information and consultancy; however, SMEs do not take advantage of these committees fully.

Therefore, even though the intended results are not obtained, Turkish SME development organizations do not create uncertainty for SAM.

4.3. Banks and Financial Institutions

The fact that most firms in the Turkish production system are SMEs and that they have an immense impact on the value-added in the economy has initiated the practice of “SME credits”. Credits are available for SMEs with which they can purchase materials, equipment, and satisfy other organizational needs. Some banks also give financial support to encourage exporting. Among banks that give SME credits are Emlakbank, Eximbank, the World Bank, Halkbank, Sınai Yatırım ve Kredi Bankası, and Vakıfbank. Besides these, SMEs have the option of obtaining financial credit from The Foreign Trade Undersecretariat. There are also other financial options available for SMEs, such as leasing, factoring, franchising, and forfeiting. However, SMEs suffer from the lack of sufficient financial credit and support to pursue their operations. As mentioned earlier, SAM does not give financial credits to SMEs.

The interviews produced the following conclusions regarding banks and financial institutions as elements of SAM’s general environment:

- ▶ There is an indirect relationship between banks and SAM. SMEs satisfy their financial needs through banks and other financial institutions. When banks are unable to provide enough credits, SMEs turn to other types of SAM services, such as education and governmental trade fair subsidies.

However, according to some of the interviewees, while SAM and the banks should create joint programs and medium- and long-term plans to support Turkish SMEs, SAM should not directly work with the banks.

- ▶ SAM deals with banks and financial institutions just like a customer. It does not have any joint projects or plans with the banks at the moment. Halkbank, for instance, deals directly with SMEs; however, SAM does not have any direct relationship with Halkbank.

Therefore, banks are not major determinants of SAM activities and they do not create uncertainty for SAM.

4.4. The Government

Since SAM is a semi-governmental organization, its operations and services depend very much on the government. First of all, its budget is determined by the Ministry of Industry and Trade. Secondly, there are general and special laws that limit SAM activities in certain ways.

The industrial infrastructure construction is important since unplanned urbanization and environmental pollution are prevented, agricultural land areas in developed regions are protected, and industrial activities are introduced in underdeveloped regions. By the Law numbered 3143, the Ministry of Industry and Trade is authorized to establish and controlling Small Scale Industrial Estates and Industrial Zones, in addition to allocating credits to them (Arıcan, 1999: 19).

It has been argued that efficient support of SMEs has to start where businesses and the entrepreneurs have their weaknesses and deficits (Röthig, 1999). Related to this is the entrepreneurs' lack of knowledge in trade activities. In order to be successful in the market, the entrepreneur needs to have a knowledge of marketing, purchasing and sales, bookkeeping/accounting, and

taxation. Therefore, efficient support should be given to SMEs in the following areas (Röthig, 1999: 10):

- Training and retraining of founders of new businesses and entrepreneurs about trade activities.
- Creation of the infrastructure which provides solid preconditions for the foundation and further development of the SME.
- Support in the operative business by forming cooperations and by bidding syndicates and umbrella trade marks.
- Support of international sales and especially of exports by joint stands of firms (when participating in fairs).
- Development of regional networks with chambers and associations, but also with business round-table talks and regional exhibitions.
- Personal support by experienced entrepreneurs.

The relations between the government and SAM are strong in the sense that most of the operations are managed and controlled by the Ministry of Industry and Trade. The governmental bodies that may affect SAM activities are summarized in Appendix H. This information states that most of the governmental bodies do not affect SAM activities directly, except for the Ministry of Industry and Trade.

The interviews have revealed the following points about the government and governmental bodies:

- ▶ Any change in the Ministry's policies is reflected directly on SAM, which creates uncertainty. However, radical changes are first discussed and accepted in the executive committee, therefore SAM has enough knowledge about important changes in advance.
- ▶ There are frequent changes in laws and regulations about SME development, such as laws about priority regions for development. These changes may change the budgets for certain types of activities and SME

development practices. The changes in laws and regulations affect both SMEs and SAM. However, SMEs are affected more by these changes and SAM is affected only indirectly.

- ▶ The country-wide political system and the party (or parties) in power affect SAM activities directly. When there is a change in the political system, there are changes in SAM's structure and functioning. There may be some personal relationships and even quarrels between certain people from the government and people in SAM. Therefore, the government represents uncertainty.
- ▶ The government expects SAM to accomplish some "drudgery" tasks. Sometimes these tasks cannot be predicted in advance.

Therefore, since SAM is semi-governmental and since there is political instability in the country, SAM faces uncertainty regarding its relations with the government.

4.5. Other Elements

According to interview results, SAM's general environment also includes the following groups:

- ▶ Large firms and associations are not a part of SAM's target group and they do not affect SAM directly. There are some efforts to make Turkish SMEs ancillary industries of Turkish large-scale enterprises (LSEs) or to carry out benchmarking studies; however, these efforts do not create uncertainty. Some of the interviewees stated that the Japanese integrative models are quite appropriate and useful for Turkish SMEs. However, those models cannot be applied at the moment because SMEs are not able to satisfy large firms' expectations. Large firms generally take advantage of SMEs and do not help them. However, since there is not the intended connection between large and small firms at present, large firms do not create uncertainty for SAM.

- ▶ Similarly, the general economic and social factors affect SAM indirectly. For instance, with the economic crisis in 2001, SMEs needed more capital but banks were not able to give credits since they were also affected adversely. This caused SMEs to demand government subsidies through SAM more than before. For example, many of the SMEs had to shut down their operations making SAM's target market smaller. Therefore, the types of services and the methods of services can change according to general economic and societal factors, which may indirectly create uncertainty.
- ▶ The trends in the social system can affect SAM, however, only indirectly. Through press and publications, SAM's priorities can be altered but these changes are reflected firstly through the executive committee and the government. An example was given by one of the managers. There was a reengineering program in SAM in 1998 which changed many methods and structural factors. After this reengineering program, all the activities are linked to a process that is linked to SMEs. This program started a "systems thinking" in SAM, since activities and services started to be considered as parts of a whole system. Before the reengineering movement, SMEs took advantage of SAM services without giving anything in return. After the reengineering program, SMEs were asked for certain amount of money (or percentage of the cost of the service) called "katkı payı" as a service fee. After this change, some of the SMEs stopped receiving help from SAM, and most of them started to be more careful about what SAM provided and what it will bring. This change was mostly about SMEs' habits and the trends in the social system. However, even this situation did not create uncertainty.
- ▶ Developments in managerial and technical aspects of organizations and new technologies presented by developed nations affect SAM. When the need for reengineering arises due to these changes and if SAM has enough time and resources to carry out the change process, the new developments are applied. These are long-term issues and generally SAM has enough

time to adjust itself ahead of time, therefore, they do not create uncertainty for SAM.

- ▶ Similarly, technological developments are important elements in SAM's general environment, because they specify the types of SMEs' activities and directions. SAM should have clear knowledge of new technological developments in the world and in Turkey, together with their applications among Turkish SMEs so that the objectives are set accordingly. At the moment, however, these technological advancements can be predicted, and if not predicted, do not create uncertainty because most of the time, SAM has enough time to adjust its activities according to SMEs' new needs.
- ▶ Lastly, the political environment of SAM can be analyzed separately from other elements. The relations with the Ministry of Industry and Trade can be uncertain as specified before. Moreover, development in the political arena in the world may also affect SAM. For instance, the initiatives to enter the European Union brings about changes in the legislature and new practices for SMEs. This may create an uncertainty for SAM, apart from the problem of SMEs' increasing demand of related services for SAM.

Therefore, the above-cited factors are important elements in SAM's general environment, but they are not uncertain and can be predicted in advance.

4.6. General Environmental Uncertainty

There are several environmental properties such as complexity, diversity, change, turbulence, hostility, and uncertainty (Ford, Armandi, and Heaton, 1988; Khandwalla, 1977). Uncertainty is defined as the level of predictability of changes in the organization's environment. Complexity and uncertainty are different items, but they are used together to define an organization's environment. So far five sectors of the environment have been analyzed: SMEs, SME development organizations, banks and other financial institutions, the government, and other elements. Table 4.2 is a summary of the analysis about the level of uncertainty in SAM's environment related to these sectors.

Table 4.1. SAM's General Environment Uncertainty.

Sector	Relevant Information	Results
SMEs	SME needs change and evolve over time. The most important problems are in finance, personnel, marketing, and production. SMEs are not given priority by the government. There is an unequal distribution of resources among SMEs in different regions.	They represent an uncertain sector of SAM's environment.
SME Development Organizations	SME development organizations may work interdependently. For instance, there are several programs carried out in SAM which require the cooperation of TÜBİTAK. Therefore, all the organizations discussed do not work against SAM, but rather in accordance with SAM. SME development organizations are not "competitors" of SAM.	They do not restrict SAM activities and do not create uncertainty.
Banks and Financial Institutions	They carry out the financial parts of SAM activities. Since SAM does not give credits to SMEs, banks and other financial institutions supplement SAM activities. Country-based economic situation may change banks' policies, but this causes uncertainty for SMEs, not for SAM.	Therefore, banks and financial institutions do not generate uncertainty.
The Government	The government in our case is represented by the Ministry of Industry and Trade. The Ministry of Industry and Trade may decrease SAM's budget due to several reasons such as an economic crisis in the country.	This situation together with unanticipated changes in laws create uncertainty.
Other Elements	Other elements include large firms, general economic and social factors.	These factors affect SAM services only indirectly, and do not generate uncertainty.

According to the classification made by Duncan (1979), there are two dimensions of an organization's environment: simple/complex and static/dynamic (Table 4.2).

Table 4.2. Classification of Organizational Environments (Duncan, 1979: 175).

	Simple	Complex
Static	<p><i>Low Perceived Uncertainty</i></p> <ul style="list-style-type: none"> ▪ Small number of factors and components in the environment ▪ Factors and components are somewhat similar to one another ▪ Factors and components remain basically the same and are not changing <p>Example: soft drink industry</p>	<p><i>Moderately Low Perceived Uncertainty</i></p> <ul style="list-style-type: none"> ▪ Large number of factors and components in the environment ▪ Factors and components are not similar to one another ▪ Factors and components remain basically the same <p>Example: food products</p>
Dynamic	<p><i>Moderately High Perceived Uncertainty</i></p> <ul style="list-style-type: none"> ▪ Small number of factors and components in the environment ▪ Factors and components are somewhat similar to one another ▪ Factors and components of the environment are in continual process of change <p>Example: fast-food industry</p>	<p><i>High Perceived Uncertainty</i></p> <ul style="list-style-type: none"> ▪ Large number of factors and components in the environment ▪ Factors and components are not similar to one another ▪ Factors and components of environment are in a continual process of change <p>Examples: commercial airline industry, telephone communications</p>

According to the above classification and from the information gathered up to this section, it can be said that the number of factors and components in SAM's environment is large, which leads us to the right-hand side of the table. These factors and components are not similar to one another. SMEs in different regions around Turkey show different characteristics. By the same token, SME development organizations, banks, and even the government do not display similar characteristics. However, these factors do not change much over time. Therefore, SAM's general environment is perceived to have moderately low perceived uncertainty, which also means it is complex, but static.

Another classification has been made by Duncan (1979) by using an "organizational design decision tree", which is provided in Figure 4.1 below.

According to Figure 4.1, the nature of the goals and the environment of SAM are complex rather than simple, since we can segment the environment into different parts. These elements are static rather than dynamic. Therefore, there is low uncertainty in the environment, and in order to be fit, SAM has to have a decentralized organization.

Apart from the above-cited general classifications, the uncertainty level in SAM's general environment is found utilizing Dickson and Weaver's (1997) questionnaire consisting of five questions. These questions were asked to the general managers during the interviews since these managers are better able to determine the uncertainty level in SAM's general environment, rather than the lower-level employees who are only able to see their task environment. These questions and the mean scores for each question according to thirteen managers' answers out of five points are provided in Table 4.3.

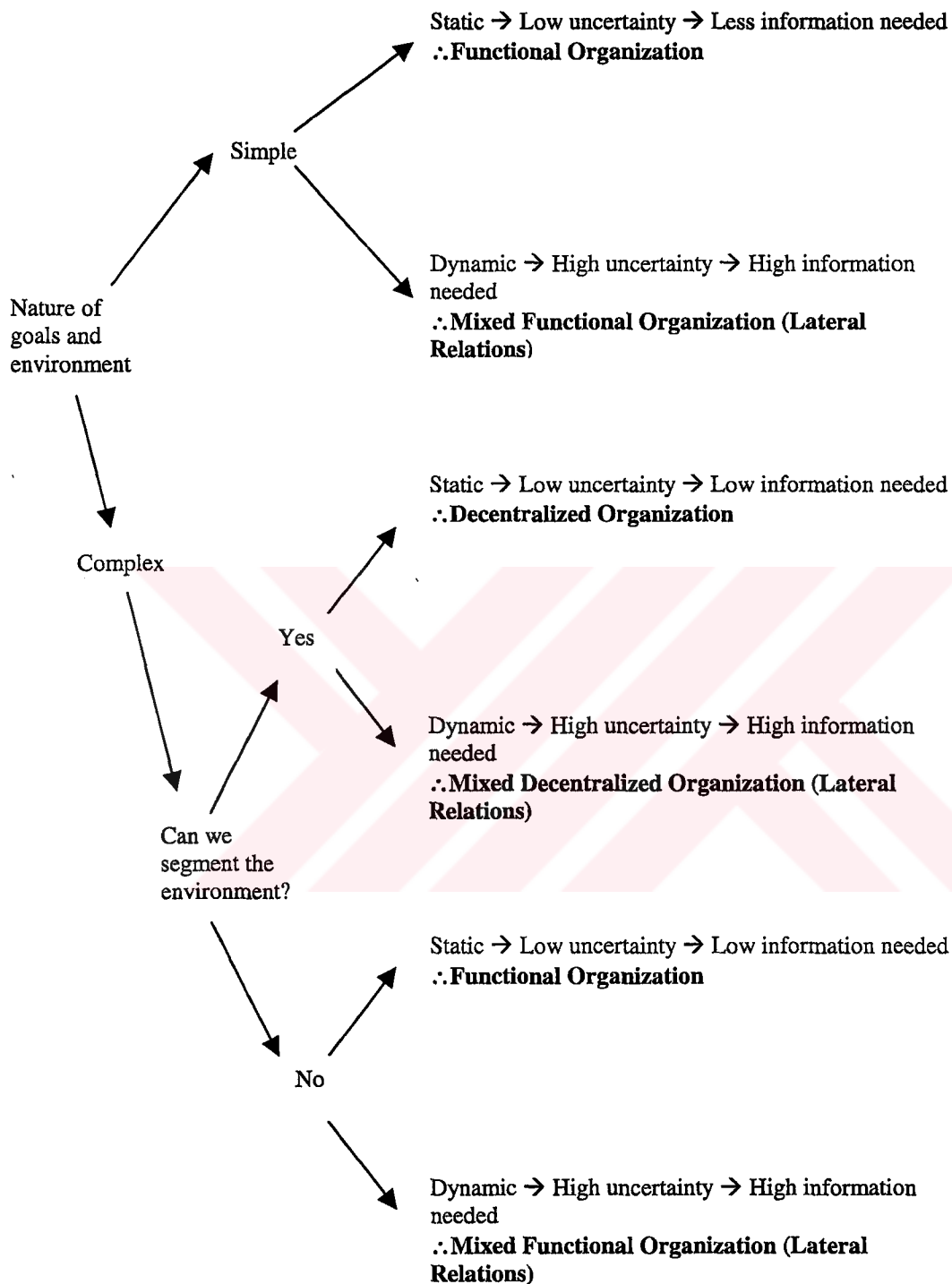


Figure 4.1. Organizational design decision tree heuristic (Duncan, 1979).

Table 4.3. Interview Results for SAM’s General Environment Uncertainty.

Question	Mean	Median	N
1. There are frequent changes due to changes in the organization’s target market and/or other organizations that are interacted with.	3,77	4	13
2. The services should be changed frequently according to new situations and through time.	2,15	2	13
3. The possible changes about the organizations with which SAM has interactions cannot be predicted in advance.	2,85	2	13
4. The possible changes about the target market cannot be predicted in advance.	3,15	3	13
5. The methods of services change over time.	2,08	2	13
Overall Mean	2.80		

The overall mean of the thirteen answers for the five questions is 2.8. As the level of uncertainty in the general environment increases, the score decreases. Therefore, the score shows the “certainty level” in the general environment and will be called “the certainty score” hereafter. This number is greater than 2.5, but not very high. This confirms the above analyses which showed that the general environment is moderately uncertain. This certainty score will be utilized in Chapter 5 in relating the general environmental uncertainty to the type of structure.

CHAPTER 5

THE INTERNAL STRUCTURE OF SAM

This chapter will describe the internal structure and design of SAM according to organizational sources and questionnaire findings, in accordance with the information derived from Chapter 4. This chapter will also examine the relationships between the defined subenvironments and their associated subsystems according to the theories explained in Chapter 2. In order to understand the role of SAM in small and medium industry development, the types of services it offers must be re-specified (SAM, 2002d):

- Supplying Information
- Promoting Entrepreneurship
- Consultancy
- Laboratory Services
- Supervision Services
- Quality Improvement
- Sectoral Improvement and Development
- Industrial Zones Design Services
- Training
- Marketing Services
- Employment Creation and Regional Development Services
- Services Provided in Co-operation with the EU

Before studying the current organizational arrangement in SAM, it will be useful to distinguish it from other types of organizations. First of all, SAM is a *not-for-profit* organization. It is established for the purpose of serving Turkish SMEs in the various ways summarized in the former sections. Secondly, it is a *semi-governmental* organization. It is independent in its internal systems and its practices towards SMEs. However, it is restricted in some ways, such as budgetary controls, fundamental strategy, and basic policies.

The important organs within SAM are the General Assembly, the executive committee, the headquarters, the institutes, and the service centers. The General Assembly is chaired by the Prime Minister or a designated Minister. Its major function is providing the annual budget for SAM. There are thirty-two members including several ministers. The Executive Committee (“İcra Komitesi”) is chaired by the Minister of Industry and Trade and has a major role in the establishment of rules and procedures. In the head office, or headquarters, there are major departments governing the performance evaluation of SAM personnel, human resources policies, administrative and financial matters, technology development, and information systems planning and control systems.

The main functions of the institutes are to develop plans, models, and strategies for SMEs. The Regional Development Institute aims to minimize regional differences between SMEs, ensure balanced development in Turkey, increase Turkish SMEs’ competitiveness, improve employment, and prevent domestic migration (SAM, 2002e). The Entrepreneurship Development Institute’s objective is to search for and apply the mechanisms that help entrepreneurs develop themselves and solve their problems (SAM, 2002f). The Market Research and Export Development Institute searches for export opportunities, establish connections with trade organizations and foreign firms, and works on sectoral development (SAM, 2002g).

There are two primary types of service centers: Small Enterprise Development Centers (SERSAMs) and Technology Development Centers (TEKSAMs). Their main function is to apply the models developed by the institutes to SMEs. The SERSAMs' main responsibility is to consult SMEs in a region, train them in important areas, provide them with laboratory services, and give information and guidance if direct help cannot be provided. There are twenty-eight operational SERSAMs in Turkey. TEKSAMs are established on university campuses for the purposes of helping people get trained in scientific and technological fields, establishing new technology-based enterprises, supporting existing SMEs, and strengthening university-industry cooperation. Six TEKSAMs are currently operational. Two of them are in Ankara (Middle East Technical University and Ankara University), three are in İstanbul (Boğaziçi University, Yıldız Technical University, and Maslak), and one is in Trabzon (Karadeniz Technical University).

The current divisionalization in SAM is based on several different factors. First of all, there is divisionalization based on the type of services provided although the customers are nearly the same except for differences due to geographical positions. Secondly, there is geographical divisionalization, as there are different SERSAMs and TEKSAMs in different locations around Turkey. Within each division, whatever the type of service may be, there is functional departmentalization. However, some of the important functions are centralized at the institutes, such as the Regional Development Institute. In fact, SAM's structure has been defined as an "amoeba" in organizational documents, which describes its hybrid structure.

Figure 5.1 shows the general organizational arrangement of SAM.

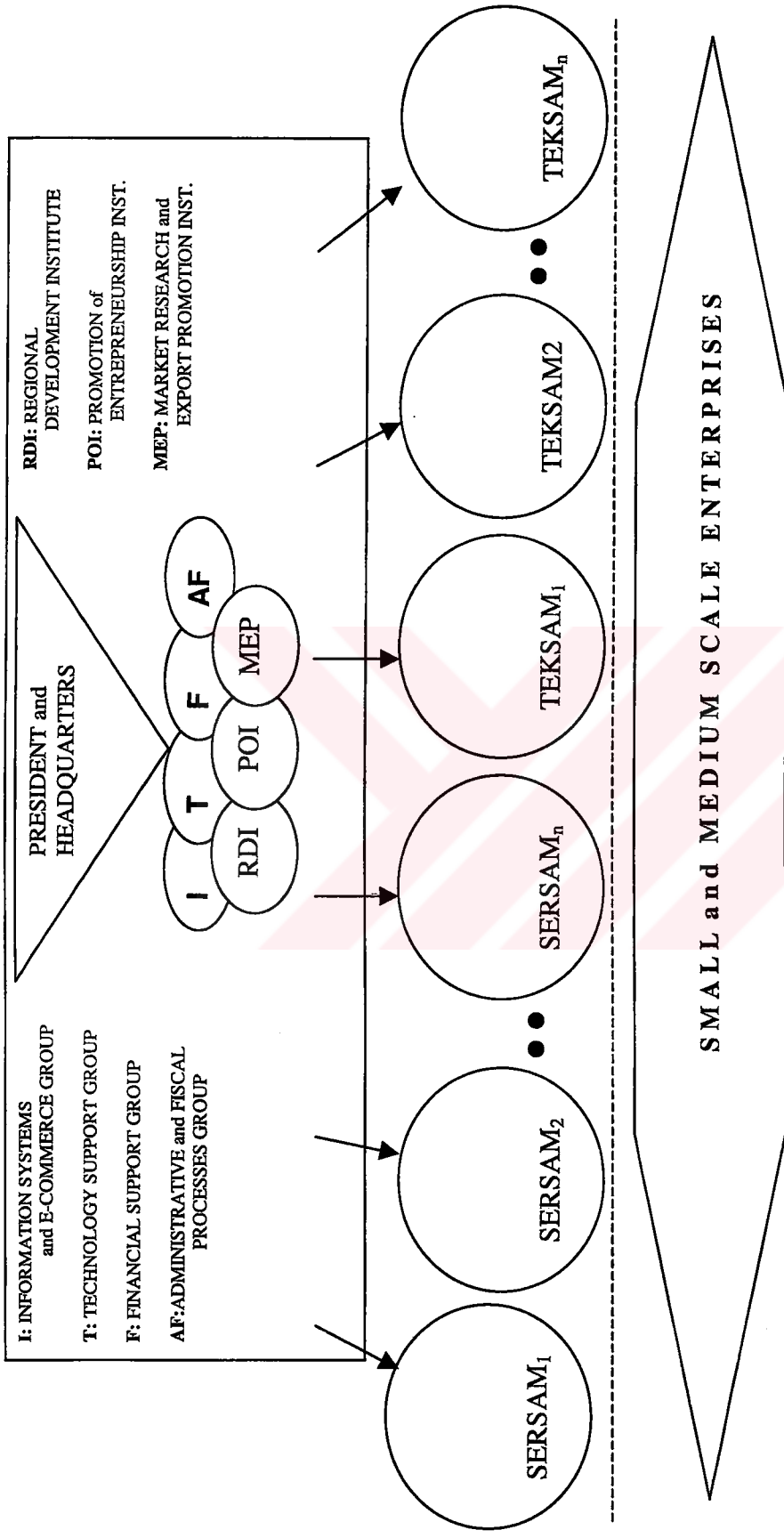


Figure 5.1. The general organizational structure of SAM (Üzunoğlu, 1998: 10).

In this section, different propositions of contingency theory will be analyzed separately. Firstly, the organic and mechanistic aspects of SAM will be discussed together with the general environment characteristics. Secondly, differentiation and integration including the task environment characteristics in SAM will be examined.

5.1. Organic and Mechanistic Aspects of SAM

The central hypothesis of this study based on contingency theory is that if the environment is stable, the system should be mechanistic; if it is unstable with constantly changing conditions, the system should be organic. The general environment includes factors that apply to all of the subsystems within the SAM structure, namely the SMEs, the government, banks and financial institutions, and other institutions that SAM works with. SAM will be analyzed using elements of Burns and Stalker's definitions.

In the previous chapter, the general environment uncertainty was determined as moderately uncertain with a "certainty" score of 2.8 out of 5. According to Burns and Stalker, an uncertain environment necessitates an organic structure. However, the uncertainty level is not very high for SAM. Duncan's analysis concluded that there should be some decentralization in the organization since we can segment SAM's environment into distinct groups. Therefore, we should expect SAM to have a mechanistic structure, but a low level of centralization.

SAM's structure is determined through the questionnaire. The type of structure and the associated expected organizational characteristics are summarized in Table 5.1. The explanations for which questionnaire item is used to measure which organizational variable are explained in Appendix D.

Table 5.1. Burns and Stalker's Model (1994).

Variable	Mechanistic Structure	Organic Structure
Tasks	Broken down Defined strictly	Common Redefined continuously
Roles and means	Defined	General
Control	Contract	Community of interest
Information	Chief executive	Anywhere in the network
Communication	Vertical	Both vertical and horizontal
Knowledge	Internal	External
Standardization	High	Low
Formalization	High	Low
Centralization	High	Low

A general descriptive statistics table is quite useful at this point. Table 5.2 shows the index being measured, the number of questions that measure the index, the alpha score of the index questions, the mean score and the standard deviation of the index, and the number of respondents. The related questions are indicated by the section letters. For example, B1 is the first question in part B of the questionnaire.

Table 5.2. Descriptive Statistics: Type of SAM's Structure.

	Mean	S.Dev	N
Task characteristics (11 items, alpha: 0.69) C1-C7 ^a C8-C11 ^b	2.95	0.47	111
Standardization (2 items, alpha: 0.80) D1-D2 ^a	3.40	0.93	111
Formalization (14 items, alpha: 0.85) A6 ^c , D3-D15 ^a	3.52	0.51	111
Total formalization (16 items, alpha: 0.88) Standardization + Formalization	3.46	0.65	111
Centralization (10 items, alpha: 0.77) F6-F15 ^a	3.64	0.64	109
Mechanistic / Organic (37 items, alpha: 0.84) Task characteristics+Total formalization+Centralization	3.35	0.50	111

^a On a scale from 1: "I strongly disagree" to 5: "I strongly agree".

^b First statement score: 1; Last statement score: 3; Middle statement score: 5.

^c Two scores: If (s)he has a contract: 5; if (s)he does not have a contract: 1.

As Table 5.2 shows, SAM has a mechanistic structure with a score of 3.35 out of 5. The general environment certainty was 2.8 out of 5. Therefore, the uncertainty in the general environment is incorporated well into the structure. The mechanistic structure is appropriate for this level of uncertainty. However, the certainty score is very close to 2.5, the half point. This means that the general environment includes elements that are uncertain. In addition, the score defining the type of structure is closer to 2.5 than to 5. In fact, Burns and Stalker were quite explicit in theorizing the mechanistic-organic as a continuum and not a dichotomy (1994). For instance, according to Duncan (1979), when the environment can be segmented into groups, there should be decentralization. However, there is not much decentralization in SAM. As

Table 5.2 shows, centralization is high. This is a problem to be investigated in Chapter 6.

The correlation matrix in Table 5.3 illustrates other important points about the general organizational structure in SAM.

Table 5.3. Pearson Correlations among Standardization, Formalization, and Centralization

	Standardization	Formalization	Centralization
Standardization	1,000	0,952**	-0,030
Formalization	0,952**	1,000	-0,075
Centralization	-0,030	-0,075	1,000

** Correlation is significant at the 0.01 level (2-tailed).

According to Table 5.3, standardization in SAM is positively correlated with formalization at the 0.01 significance level. This result is not surprising since standardization is one way of formalization (Hackman and Oldham, 1980; Bedeian and Zammuto, 1991; Child, 1973). However, several researchers report that centralization is negatively related to formalization (Scott, Mitchell, and Birnbaum, 1981). Some others have also stated that geographic dispersion (such as in SAM) hinders formalization and encourages centralization (Wollnik and Kubicek, 1976). In other words, as more power and control are kept at the top of the organization, there is no need to create written rules for the activities and behaviors. However, this does not hold true in SAM. Rather, both formalization and centralization are high. Centralization may be high to control activities or to concentrate decision-making power. But some research indicates that centralized decision making is positively related with the frequency of administrative changes and is negatively associated with the

frequency of technological changes (Kimberly and Evanisko, 1981). There are frequent administrative changes in SAM; when there are governmental changes, there are changes in SAM, as well.

Both formalization and centralization are high in SAM, which creates an unneeded bureaucracy, or “bureaucratic inflexibility” that may lead to absences and turnover (Indik, 1965). The bureaucratic inflexibility problem was also stated by SAM managers. For instance, one of the institute managers stated that most of the documents come from and go to other departments or groups within the organization (Table 5.4), rather than to SMEs. The first three rows below are related to coordination and other purposes, and the last row is related to main activities.

Table 5.4. Number of Documents Prepared for Different Purposes.

Document Description	Number	Percentage
Number of documents that go to the headquarters	363	53%
Number of documents that go to SERSAMs and TEKSAMs	224	33%
Other documents	80	12%
Number of documents that are related to main activities	20	3%

As seen in Table 5.4, the percentage of documents prepared for main activities is only 3%. 97% of the documents are prepared for communication and other

purposes. Although the example in Table 5.4 is for one year and for one institute only, it clearly illustrates the problem of bureaucratic inflexibility. This situation was put into words by the manager in this way: “We create bureaucracy by ourselves and we dance with ourselves.”

In summary, Section 5.1 has illustrated the following facts about SAM regarding its general environment uncertainty and type of structure:

- o The general environment is not uncertain; but the certainty score is not very high. Therefore, there are uncertain elements in the general environment. For this level of uncertainty, we would expect SAM to have a mechanistic structure, but high decentralization.
- o SAM has a mechanistic structure; however, decentralization is low.
- o Moreover, formalization is high, which also means SAM is overly bureaucratic.

5.2. Differentiation versus Integration in SAM

The starting point in this analysis is determining the subsystems. According to the interviews and organizational sources, four subsystems exist in SAM's structure: The headquarters, the institutes, SERSAMs, and TEKSAMs. Each of these subsystems deals with a different type of environment and carries out different functions. The four subsystems' task uncertainty levels were measured according to questionnaire items and secondary sources. The task environment characteristics were asked to the employees since they are better able to define their own work environment. Secondary sources were also used in the analyses to complement employee beliefs and ideas. Although the hypotheses are not tested statistically, we can still make inferences whether the findings represent fit or unfit.

5.2.1. Subsystem 1: The Headquarters

The headquarters is located in Ankara. Its main function is to control and coordinate the activities of institutes and service centers (SERSAMs and TEKSAMs). According to questionnaire results, the task environment certainty score for SAM is 2.74 over 5. The score is greater than 2.5; therefore, it can be said that the headquarters faces a relatively certain task environment. Other scores regarding the organizational variables and indices specified by Lawrence and Lorsch (1967) are provided below in Table 5.5. A high score means the variable being measured has a high level in SAM.

The formalization score is obtained by adding two indices: The first is based on straightforward formalization questions and the other is based on written standardization questions, since written standardization is one way of obtaining formalization in an organization (Hackman and Oldham, 1980, Bedeian and Zammuto, 1991, Child, 1973).

The total task environment certainty score is obtained from two sources: The first is the task environment uncertainty score obtained from the first question in Part B of the questionnaire. The organizations that the subsystems deal with are listed in terms of uncertainty and scores are given accordingly. The second source is the task environment certainty score. Here, respondents gave points from 1 to 5 to the statements. The total certainty score is obtained by averaging the certainty score and the reverse of uncertainty score.

Table 5.5. Descriptive Statistics: The Headquarters

SUBSYSTEM 1 – THE HEADQUARTERS	Mean	S.Dev	N
Task environment uncertainty - source 1 (16 items, alpha: 0.51) B1 ^a	40.75	12.72	32
Task environment certainty - source 2 (10 items, alpha: 0.60) B2-B10 ^b B11 ^c	3.02	0.46	33
Total task environment certainty (26 items, alpha: 0.41) Reverse (Task environment uncertainty - source 1) + Task environment certainty - source 2	2.74	0.48	33
Standardization (2 items, alpha: 0.73) D1-D2 ^b	2.99	0.87	33
Formalization (14 items, alpha: 0.85) A6 ^d , D3-D15 ^b	3.36	0.51	33
Total formalization (16 items, alpha: 0.85) Standardization + Formalization	3.18	0.59	33
Interpersonal orientation (18 items, alpha: 0.84) G1-G18 ^e	64.21	21.88	29
Short-term time orientation (1 item) D16 ^f	54.81	27.54	32
Medium-term time orientation (1 item) D16 ^f	28.50	20.67	32
Long-term time orientation (1 item) D16 ^f	17.00	22.36	32
Technical-economic goal orientation (7 items, alpha: 0.83) E1, E4, E8, E10, E14, E18, E21 ^b	2.65	0.87	33
Market goal orientation (7 items, alpha: 0.89) E2, E6, E9, E11, E13, E17, E20 ^b	2.45	0.96	33
Scientific goal orientation (7 items, alpha: 0.92) E3, E5, E7, E12, E15, E16, E19 ^b	2.48	1.00	33

^a On a scale from 1: “No interaction” to 5: “High interaction”.

^b On a scale from 1: “I strongly disagree” to 5: “I strongly agree”.

^c On a scale from 1: “Never” to 5: “More than once a week”.

^d Two scores: If (s)he has a contract: 5; if (s)he does not have a contract: 1.

^e On a scale from 1: “agree with the statement on the left” to 8: “agree with the statement on the right”. The total equals 8 x 18.

^f Percentage.

The total formalization score is high, for the headquarters. The headquarters' members have social interpersonal, short-term time, and technical-economic goal orientations.

Hypothesis 1: For a relatively certain task environment, high formalization is appropriate. The first hypothesis is satisfied.

Hypothesis 2: Since there is a moderate level of uncertainty in the task environment (rather than very high or very low levels of uncertainty), a relationship-oriented or social interpersonal orientation is in line with the hypothesis of Lawrence and Lorsch.

Hypothesis 3: There is a moderate level of task environment uncertainty; therefore, the time orientation should be medium-level, rather than short-term. The headquarters does not satisfy the third hypothesis.

Hypothesis 4: A technical-economic goal orientation is not suitable for a moderately certain task environment. The goals should be market goals for this level of uncertainty. However, the scores for each type of goals are close to each other. Therefore, this hypothesis can be considered as satisfied.

5.2.2. Subsystem 2: The Institutes

All of the three institutes are located in Ankara. Their main function is to prepare models to be used by SERSAMs and TEKSAMs, analyze the difficult situations the service centers face, and prepare solution plans.

The questionnaire findings show that the mean score for the institutes' task environment certainty level is 2.66 over 5, which is slightly lower than the headquarters. That means institutes face a relatively more uncertain task environment. The scores are shown in Table 5.6:

Table 5.6. Descriptive Statistics: The Institutes

SUBSYSTEM 2 – THE INSTITUTES	Mean	S.Dev	N
Task environment uncertainty - source 1 (16 items, alpha: 0.36) B1 ^a	41.22	10.72	18
Task environment certainty - source 2 (10 items, alpha: 0.81) B2-B10 ^b B11 ^c	2.86	0.61	22
Total task environment certainty (26 items, alpha: 0.66) Reverse (Task environment uncertainty - source 1) + Task environment certainty - source 2	2.66	0.41	22
Standardization (2 items, alpha: 0.82) D1-D2 ^b	3.16	0.88	22
Formalization (14 items, alpha: 0.88) A6 ^d , D3-D15 ^b	3.50	0.53	22
Total formalization (16 items, alpha: 0.90) Standardization + Formalization	3.33	0.64	22
Interpersonal orientation (18 items, alpha: 0.94) G1-G18 ^d	71.75	26.54	20
Short-term time orientation (1 item) D16 ^f	56.11	23.23	18
Medium-term time orientation (1 item) D16 ^f	27.78	13.09	18
Long-term time orientation (1 item) D16 ^f	16.11	17.54	18
Technical-economic goal orientation (7 items, alpha: 0.84) E1, E4, E8, E10, E14, E18, E21 ^b	3.35	0.94	21
Market goal orientation (7 items, alpha: 0.86) E2, E6, E9, E11, E13, E17, E20 ^b	3.00	0.89	21
Scientific goal orientation (7 items, alpha: 0.90) E3, E5, E7, E12, E15, E16, E19 ^b	3.08	0.93	21

^a On a scale from 1: “No interaction” to 5: “High interaction”.

^b On a scale from 1: “I strongly disagree” to 5: “I strongly agree”.

^c On a scale from 1: “Never” to 5: “More than once a week”.

^d Two scores: If (s)he has a contract: 5; if (s)he does not have a contract: 1.

^e On a scale from 1: “agree with the statement on the left” to 8: “agree with the statement on the right”.

^f Percentage.

The total formalization score is high, for the institutes. The institute members have social interpersonal, short-term time, and technical-economic goal orientations.

Hypothesis 1: If we compare Table 5.5 and Table 5.6, we see that the end results are the same. Although the task environments of the institutes are more uncertain than the headquarters, the formalization levels are the same. The environmental certainty score is greater than 2.5, so the task environment is certain; therefore, the fact that formalization is high is acceptable. However, while the task environment is more uncertain, the formalization level (3.33 out of 5) is higher than the headquarter's formalization level (3.18), which represents a problem. However, the difference in formalization levels is not significant². Therefore, the first hypothesis is satisfied with cautions.

Hypothesis 2: A relationship-oriented interpersonal orientation is appropriate for a moderate level of task environment uncertainty.

Hypothesis 3: A short-term time orientation is inappropriate for a moderately uncertain task environment. Since the certainty score is slightly greater than 2.5, the institutes should have medium-term time orientation.

Hypothesis 4: Similarly, the goals should not be technical-economic for a moderate level of uncertainty. The hypothesis is not satisfied.

5.2.3. Subsystem 3: The SERSAMs

There are 29 SERSAMs in different places around Turkey. 8 of them located in Ankara, Çorum, Denizli, İstanbul, Kayseri, İzmir, Nevşehir, and Van were included in this study and a total of 46 questionnaires were gathered. In the completed questionnaires, the task environment certainty level of SERSAMs has been given as 2.71 over 5, close to 2.5. The scores are shown in Table 5.7.

² A 2-tailed independent samples t-test yielded a t-value of 0,376, which is smaller than critical t-value of 2.080. The hypothesis that the means are equal cannot be rejected.

Table 5.7. Descriptive Statistics: The SERSAMs.

SUBSYSTEM 3 – SERSAMs	Mean	S.Dev	N
Task environment uncertainty - source 1 (16 items, alpha: 0.47) B1 ^a	37.76	11.32	45
Task environment certainty - source 2 (10 items, alpha: 0.68) B2-B10 ^b B11 ^c	2.79	0.51	46
Total task environment certainty (26 items, alpha: 0.58) Reverse (Task environment uncertainty - source 1) + Task environment certainty - source 2	2.71	0.43	46
Standardization (2 items, alpha: 0.76) D1-D2 ^b	3.77	0.87	46
Formalization (14 items, alpha: 0.83) A6 ^d , D3-D15 ^b	3.62	0.49	46
Total formalization (16 items, alpha: 0.86) Standardization + Formalization	3.70	0.63	46
Interpersonal orientation (18 items, alpha: 0.91) G1-G18 ^e	59.55	24.61	44
Short-term time orientation (1 item) D16 ^f	59.61	23.41	43
Medium-term time orientation (1 item) D16 ^f	28.98	19.38	43
Long-term time orientation (1 item) D16 ^f	10.26	10.71	43
Technical-economic goal orientation (7 items, alpha: 0.71) E1, E4, E8, E10, E14, E18, E21 ^b	3.35	0.77	46
Market goal orientation (7 items, alpha: 0.88) E2, E6, E9, E11, E13, E17, E20 ^b	3.11	1.01	46
Scientific goal orientation (7 items, alpha: 0.90) E3, E5, E7, E12, E15, E16, E19 ^b	2.90	0.99	46

^a On a scale from 1: “No interaction” to 5: “High interaction”.

^b On a scale from 1: “I strongly disagree” to 5: “I strongly agree”.

^c On a scale from 1: “Never” to 5: “More than once a week”.

^d Two scores: If (s)he has a contract: 5; if (s)he does not have a contract: 1.

^e On a scale from 1: “agree with the statement on the left” to 8: “agree with the statement on the right”.

^f Percentage.

Total formalization score is high for the SERSAMs. SERSAMs. SERSAM members have both social and task interpersonal, short-term time, and technical-economic goal orientations.

Hypothesis 1: For a relatively certain environment, formalization is higher than needed. The first hypothesis is satisfied with cautions.

Hypothesis 2: The interpersonal orientation here is a combination of relationship- and task-orientation. The uncertainty score illustrates a moderately certain task environment. In such an environment, developing both social and task-oriented interpersonal relations is appropriate.

Hypothesis 3: The task environment is not completely certain; however, members have a short-term time orientation when they were expected to have a medium-term time orientation. The third hypothesis is not satisfied.

Hypothesis 4: Similarly, technical-economic goal orientation is more heavily adopted in the SERSAMs, although the task environment uncertainty necessitates the opposite. Although the SERSAMs are different from institutes in terms of goals as determined after reengineering efforts, the goal orientation score is the same in both types, i.e. technical-economic goals are followed. SERSAMs are expected to be more market-oriented, while institutes are expected to be more scientific. The fourth hypothesis is not satisfied, either.

5.2.4. Subsystem 4: TEKSAMs

The TEKSAMs are very close to SERSAMs in terms of their position on the hierarchy and function. Like SERSAMs, they deal directly with SMEs but help them in different areas. The task certainty level for TEKSAMs is 2.77 over 5. The scores are displayed in Table 5.8.

Table 5.8. Descriptive Statistics: The TEKSAMs.

SUBSYSTEM 4 – TEKSAMs	Mean	S.Dev	N
Task environment uncertainty – source 1 (16 items, alpha: 0.25) B1 ^a	40.40	7.75	10
Task environment certainty – source 2 (10 items, alpha: 0.63) B2-B10 ^b B11 ^c	3.06	0.51	10
Total task environment certainty (26 items, alpha: 0.55) Reverse (Task environment uncertainty – source 1) + Task environment certainty - source 2	2.77	0.32	10
Standardization (2 items, alpha: 0.92) D1-D2 ^b	3.60	0.81	10
Formalization (14 items, alpha: 0.83) A6 ^d , D3-D15 ^b	3.63	0.43	10
Total formalization (16 items, alpha: 0.87) Standardization + Formalization	3.61	0.57	10
Interpersonal orientation (18 items, alpha: 0.66) G1-G18 ^e	68.40	11.88	10
Short-term time orientation (1 item) D16 ^f	60.50	18.92	10
Medium-term time orientation (1 item) D16 ^f	28.00	14.94	10
Long-term time orientation (1 item) D16 ^f	10.50	5.50	10
Technical-economic goal orientation (7 items, alpha: 0.46) E1, E4, E8, E10, E14, E18, E21 ^b	3.44	0.52	10
Market goal orientation (7 items, alpha: 0.81) E2, E6, E9, E11, E13, E17, E20 ^b	2.93	0.78	10
Scientific goal orientation (7 items, alpha: 0.65) E3, E5, E7, E12, E15, E16, E19 ^b	2.66	0.57	10

^a On a scale from 1: “No interaction” to 5: “High interaction”.

^b On a scale from 1: “I strongly disagree” to 5: “I strongly agree”.

^c On a scale from 1: “Never” to 5: “More than once a week”.

^d Two scores: If (s)he has a contract: 5; if (s)he does not have a contract: 1.

^e On a scale from 1: “agree with the statement on the left” to 8: “agree with the statement on the right”.

^f Percentage.

The total formalization score is high for the TEKSAMs. TEKSAM members have social interpersonal, short-term time, and technical-economic goal orientations.

Hypothesis 1: Although the formalization level is high relative to its task environment uncertainty, we can consider the first hypothesis as satisfied.

Hypothesis 2: The relationships are social; however, the social orientation score is slightly lower than the other subsystems. The second hypothesis is satisfied.

Hypothesis 3: There should be a medium-term time orientation, not short-term. The third hypothesis is not satisfied.

Hypothesis 4: This subsystem should maintain a market goal orientation, rather than a technical-economic one based on the moderate score of task environment uncertainty. The fourth hypothesis is not satisfied, either.

Table 5.9 shows whether Lawrence and Lorsch's hypotheses are satisfied in each organizational subsystem.

Table 5.9. Hypotheses for Each Subsystem.

	Hyp. 1	Hyp. 2	Hyp. 3	Hyp. 4
Headquarters	Yes	Yes	No	Yes
Institutes	Yes	Yes	No	No
SERSAMs	Yes	Yes	No	No
TEKSAMs	Yes	Yes	No	No

Table 5.9 shows that hypotheses 1 and 2 are satisfied in all subsystems. However, hypothesis 3 is not satisfied in any of the subsystems. The fourth hypothesis is satisfied in the headquarters only. The implications are discussed in Chapter 6.

5.2.5. Differentiation between Subsystem Pairs

The next task is to find the differentiation score for each pair of subsystems based on the method by Lawrence and Lorsch (1967). Since there is some uncertainty in the task environments, we expect that there is also differentiation between pairs of subsystems. The differentiation score is calculated by computing the differences in each attribute score (formalization, interpersonal orientation, time orientation, and goal orientation) for each pair of relevant units. The range of differences in each attribute was divided into quintiles. Each quintile was assigned a “unit of differentiation score” from one (least differentiated) to five (most differentiated). These five-point units of differentiation scores for each attribute made it possible to arrive at a rough measure of the relative differentiation between pairs by summing the score for each pair of subsystems in all four attributes.

After making all the calculations (Appendix I) Table 5.10 is obtained, indicating the differentiation scores for each pair of organizational subsystem. These scores are generated out of 5 points. Therefore, a score of 5 means there is high differentiation between the subsystems indicated in the row for the organizational attribute indicated on the column. Conversely, a score of 1 means the two subsystems are not different in terms of that organizational attribute. Appendix I includes the t-tests carried out to find whether the differences are statistically significant.

Table 5.10. Differentiation Scores for Pairs of Subsystems.

Subsystem pair	Task environment uncertainty	Formalization	Interpersonal orientation	Short-term time orientation	Medium-term time orientation	Long-term time orientation	Technical-economic goals	Market goals	Scientific goals
Headquarters – Institutes	4	1	1	1	3	1	5*	5*	5*
Headquarters – SERSAMs	1	5*	2	5	2	5	5*	5*	3
Headquarters – TEKSAMs	1	5*	2	5	2	5	5*	4	1
Institutes – SERSAMs	2	4*	5	3	5	5	1	1	1
Institutes – TEKSAMs	5	3	2	4	4	5	1	4	3
SERSAMs – TEKSAMs	2	1	4	1	4	1	1	1	1

*The difference is statistically significant at 95% confidence level, based on a 2-tailed independent samples t-test (See Appendix I).

Table 5.10 reveals that subsystem pairs are quite differentiated in terms of some attributes, but very similar to each other in terms of other attributes. Statistically significant differences also got higher differentiation scores in Lawrence and Lorsch’s method (Appendix I). However, differences, which got 3, 4, and 5 according to Lawrence and Lorsch will be treated as different in this thesis since they also represent high differentiation between subsystem pairs.

We can now look at differentiation versus integration effects in each subsystem pair.

→ Subsystem Pair 1: Headquarters versus Institutes

The two subsystems seem quite differentiated in terms of their task environment uncertainty. Although the headquarters and institutes are slightly differentiated from each other in terms of formalization, interpersonal orientation, short-term goal orientation, and long-term time orientation, they are differentiated in terms of medium-term time orientation since the headquarters has a tendency towards adopting longer-term orientations. Moreover, the two subsystems are mostly differentiated in terms of all three types of goal orientations. The headquarters' orientation scores for technical-economic, market, and scientific goals are quite similar to each other: 2.65, 2.45, and 2.48, respectively. The institutes, on the other hand, are oriented more towards market and scientific goals than the headquarters. The reason may be the fact that the units and organizations that the institutes interact with are more uncertain. The differentiation score for task environment uncertainty is only 4; therefore, a differentiation score of 5 for goal orientation attributes is reasonable.

→ Subsystem Pair 2: Headquarters versus SERSAMs

The differentiation score for task environment uncertainty is 1, meaning that the task environment uncertainties are almost the same in two subsystems. The certainty score is 2.74 for the headquarters and 2.71 for the SERSAMs, indicating that the SERSAMs' task environments are slightly more uncertain. Therefore, it is normal to have a high differentiation score between the headquarters and SERSAMs also in terms of formalization. However, the difference is just the opposite of what it should be according to Lawrence and Lorsch's model. The SERSAMs should have less formalization since their task environments are more uncertain. However, the SERSAMs have more formalization (3.70) than the headquarters (3.18) and the difference is statistically significant³. The headquarters and SERSAMs are moderately

³ A 2-tailed independent samples t-test yielded a t-value of 3.775, which is greater than critical t-value of 1.995. The hypothesis that the means are equal is rejected.

differentiated in terms of market and scientific goal orientation. Both goal types are higher in the SERSAMs. The reason is because the task environment is more uncertain. Therefore, these results are reasonable. The two subsystems are hardly differentiated in terms of interpersonal orientation. This is also reasonable because both two subenvironments are moderately uncertain. There is less differentiation between the subsystems in terms of medium-term time orientation, but very high differentiation in terms of short- and long-term differentiation because the SERSAMs are more short-term oriented. This is contradictory to theory since SERSAMs should be longer-term-oriented due to a lower score of task environment certainty.

→ Subsystem Pair 3: Headquarters versus TEKSAMs

The headquarters and the TEKSAMs are not differentiated in terms of task environment uncertainty even though their internal or external customers are conceptually very different. Yet another problem is that even though their task environments seem to be the same in terms of uncertainty, formalization, short-term orientation, and long-term time orientation differentiation scores are at their highest. Formalization is different in these two subsystems because the TEKSAMs have more formalization even though task environment uncertainty scores are similar (2.74 and 2.77). The TEKSAMs are mostly short-term oriented. Medium-time orientation scores are almost the same in the two subsystems (28.5 in the headquarters and 2.8 in the TEKSAMs). This is expected since their task environments are similar. The fact that the TEKSAMs are more short-term oriented and less long-term oriented than the headquarters is expected since the TEKSAMs are faced with a more certain task environment. Regarding interpersonal orientation and scientific goal orientation, the headquarters and the TEKSAMs are similar, as expected. In terms of technical-economic and market goal orientations, the differentiation scores are high because the TEKSAMs have higher scores on both of these

attributes. This is also expected since the TEKSAMs' task environment score is higher.

→ **Subsystem Pair 4: Institutes versus SERSAMs**

The task environment uncertainties are similar in the institutes and the SERSAMs but the formalization scores are different. The institutes have less formalization, but their task environment is less certain, so this is consistent with the theory. The interpersonal orientations are also different in these two subsystems. The SERSAMs have a tendency to have a task orientation. This is not as expected since the institutes were expected to display this tendency. Medium- and long-term time orientations are highly differentiated and short-term time orientation is less differentiated, which is as predicted. Regarding goal orientation, all three types of goals are seen in similar degrees in both subsystems. This is also likely since task the environments are not so differentiated.

→ **Subsystem Pair 5: Institutes versus TEKSAMs**

The differentiation score for task environment uncertainty is 5, indicating the highest difference between a pair of subsystems. In fact, the TEKSAMs' task environment is more certain than the institutes' task environment. However, the time orientations are quite different in two subsystems because the TEKSAMs are shorter-term oriented than the institutes, which is expected. Formalization is higher in the TEKSAMs, which is also as predicted. The TEKSAMs have more technical-economic goals than the institutes. This is in line with their shorter-time orientation. However, the interpersonal orientations are very similar in two subsystems, which does not correspond well with the high task environment uncertainty differentiation score.

→ Subsystem Pair 6: SERSAMs versus TEKSAMs

The task environment uncertainty differentiation score is 2 between the SERSAMs and TEKSAMs and the SERSAMs' task environment is more uncertain (certainty score: 2.71) than the TEKSAMs' (certainty score: 2.77). According to this level of difference between two subsystems, the differentiation score of 1 in terms of formalization is as expected.

The differentiation score is also 1 for all types of goal orientation attributes. In fact, the scores are lower in the TEKSAMs. The TEKSAMs are more technically oriented than the SERSAMs, which are more market oriented. This situation is in line with the difference in terms of task environment uncertainty. The interpersonal differentiation score is 4 between the SERSAMs and the TEKSAMs. Although both subsystems have members who are socially oriented, the SERSAMs have a score that is closer to task-orientation, which is as predicted. The SERSAMs and the TEKSAMs are differentiated in terms of medium-term time orientation. The SERSAMs' time orientation concentrates on the medium-term, while the TEKSAMs' time orientation concentrates more on a shorter-time interval. This is also consistent with the theory because the TEKSAMs' task environments are more certain.

→ Overall Differentiation versus Integration in SAM

The next task is to find the level of overall differentiation in each subsystem. Table 5.11 shows each subsystem's level of differentiation with respect to the other subsystems in terms of organizational structure. The table below provides the mean differentiation scores for formalization, interpersonal orientation, short-, medium-, and long-term time orientations, and technical-economic, market, and scientific goal orientations for each pair of subsystems. The scores are over 5. A score higher than 2.5 means the overall differentiation between those subsystems is high.

Table 5.11. Overall Differentiation between Subsystems

	Head- quarters	Insti- tutes	KÜ- GEMS	TEK- MERS	Mean
Headquarters	-				
Institutes	2.75	-			
SERSAMs	4.00	3.13	-		
TEKSAMs	3.63	3.25	1.75	-	
Mean	3.46	3.04	2.96	2.88	3.09

The overall mean of 3.09 indicates that generally, differentiation is high in SAM. The following list is obtained for the level of differentiation between pairs of subsystems, from most differentiated to least differentiated:

1. Headquarters – SERSAMs: 4
2. Headquarters – TEKSAMs: 3.63
3. Institutes – TEKSAMs: 3.25
4. Institutes – SERSAMs: 3.13
5. SERSAMs – TEKSAMs: 1.75

This picture was expected since the headquarters and the SERSAMs interact with clearly distinguished elements and they are structured differently.

5.2.6. Integration between Subsystem Pairs

We have data about the required level of integration, the current level of integration, integration effectiveness, and the level of integration mechanisms used in SAM. All scores are over 5 (Table 5.12). In this table, requisite integration shows the level of integration required in that subsystem and the current level of integration shows the current total integration achieved in that subsystem. The integration mechanisms score represents the level of utilization of integrative mechanisms, including hierarchy of authority, direct contact,

liaison role, task force, team, integrating role, and integrating department. The mechanisms are not equally powerful in terms of integrative potential. This fact has been counted for when calculating the integration mechanisms score by giving higher weights to more powerful mechanisms. The integration mechanisms score is calculated by averaging the individual means of scores given to the utilization of the mechanism, multiplied with the mechanism's capacity score. Lastly, the integration effectiveness score illustrates whether current devices are utilized effectively in that subsystem.

Table 5.12. Integration Scores of Subsystems.

SUBSYSTEM 1 – THE HEADQUARTERS	Mean	S.Dev	N
Requisite integration (2 items, alpha: 0.90) F1-F2 ^a	3.50	0.98	33
Current level of integration (12 items, alpha: 0.79) F3-F14 ^a	3.62	0.54	33
Integration mechanisms (5 items, alpha: N/A) F22 ^b	2.09	0.53	33
Integration effectiveness (6 items, alpha: 0.93) F15-F21 ^a	3.35	0.90	33
SUBSYSTEM 2 – THE INSTITUTES	Mean	S.Dev	N
Requisite integration (2 items, alpha: 0.67) F1-F2 ^a	3.98	0.80	21
Current level of integration (12 items, alpha: 0.70) F3-F14 ^a	3.61	0.46	21
Integration mechanisms (5 items, alpha: N/A) F22 ^b	2.15	0.26	22
Integration effectiveness (6 items, alpha: 0.73) F15-F21 ^a	3.49	0.53	21

Table 5.12. (cont)

SUBSYSTEM 3 – SERSAMs	Mean	S.Dev	N
Requisite integration (2 items, alpha: 0.64) F1-F2 ^a	3.75	0.88	46
Current level of integration (12 items, alpha: 0.55) F3-F14 ^a	3.58	0.43	46
Integration mechanisms (5 items, alpha: N/A) F22 ^b	2.02	0.65	46
Integration effectiveness (6 items, alpha: 0.83) F15-F21 ^a	3.59	0.63	45
SUBSYSTEM 4 - TEKSAMs	Mean	S.Dev	N
Requisite integration (2 items, alpha: 0.70) F1-F2 ^a	3.60	0.94	10
Current level of integration (12 items, alpha: 0.43) F3-F14 ^a	3.37	0.56	10
Integration mechanisms (5 items, alpha: N/A) F22 ^b	2.18	0.32	10
Integration effectiveness (6 items, alpha: 0.94) F15-F21 ^a	3.61	0.87	10

^a On a scale from 1: “I strongly disagree” to 5: “I strongly agree”

^b Ranking of mechanisms from 1 to 5.

The headquarters are quite differentiated from the other subsystems in terms of several organizational attributes, including formalization, interpersonal orientation, time orientation, and goal orientation. Therefore, according to Lawrence and Lorsch, the requisite level of integration should also be high. However, the requisite integration score for the headquarters is the smallest among other scores. Although the requisite integration is 3.50, the current level of integration is 3.46, which is significantly lower⁴. Moreover, integration effectiveness is even lower with a score of 3.41. The reason may be because not all integration mechanisms are used (the integration mechanisms score is 2.09).

⁴ A 2-tailed “paired” samples t-test yielded a t-value of 2.851, which is greater than critical t-value of 2.038. The hypothesis that the means are equal is rejected.

The institutes are also highly differentiated from the other subsystems. The reason may be that total integration and integration effectiveness are both lower here than most subsystems. Therefore, members may perceive a higher required level of integration. In other words, they may *need* more integration since the current level is not enough. Integration mechanisms are utilized, but not all of them are used.

The SERSAMs are differentiated from the headquarters and the institutes, but not much differentiated from the TEKSAMs. In terms of the mean differentiation score, SERSAMs come second to the headquarters. Requisite integration is again high with a score of 3.75. The current level of integration, on the other hand, is lower, with a score of 3.63. Although integration mechanisms are not used extensively, the mechanisms at hand are used effectively. Integration effectiveness is higher in the SERSAMs than in the headquarters and the institutes.

Although the mean differentiation score is lowest in the TEKSAMs, they are especially differentiated from the headquarters and institutes. Requisite integration is high with a score of 3.60. The TEKSAMs are the only subsystems whose current level of integration is higher than required. They also have the highest score on both integration effectiveness and the utilization of integration mechanisms.

5.3. Organizational Climate

Only the organizational climate questions have been analyzed first by employing a factor analysis. When four reliability analyses were carried out, collectivism and horizontality have provided the best results. Therefore, two of the four variables are selected for measurement: Collectivism and horizontality. Collectivism is regarded as the opposite of individualism and horizontality is regarded as the opposite of verticality. A factor analysis was carried out for the

25 items that measure the two variables (Outputs are available in Appendix E). Two factors were obtained in this data reduction analysis by utilizing the maximum likelihood extraction method and varimax rotation. All the items loaded on the two factors as intended, except for two questions. The 23rd and the 33rd questions loaded in the horizontality scale instead of the collectivism scale. Question 23 asks to agree or disagree with the following sentence: "This organization sponsors social events outside of work". Question 33 asks to agree or disagree with the following statement: "Mealtimes are seen as a time to socialize with one's coworkers". Respondents may have considered social events and meal times as a way of establishing and maintaining lateral relations with both their colleagues and managers. For instance, one horizontality question asks for the level of agreement to this statement: "Workers and supervisors eat meals side by side at the same tables". Respondents may have seen the 23rd and the 33rd question as very similar to this statement, and therefore regard them as horizontality questions. To ensure reliability, two more reliability analyses have been carried out, with the results presented in Appendix E. Both sets have alpha scores greater than 0.85, thus the climate questions can be considered as reliable.

Therefore, the organizational climate has been investigated by measuring two cultural dimensions through the questionnaire (collectivism versus individualism and horizontality versus verticality). Table 5.13 shows the mean score for each cultural dimension in each subsystem.

Table 5.13. Descriptive Statistics: Organizational Climate.

	Mean	S.Dev	N
Organizational collectivism (14 items, alpha: 0.85) H3, H6, H10, H16, H18, H20, H25, H27, H29, H36, H39 ^a	3.16	0.59	111
Organizational horizontality (11 items, alpha: 0.84) H7, H11, H15, H22, H23, H26, H30, H33, H34, H37, H40, H42, H43 ^a	3.09	0.60	111

^a On a scale from 1: "I strongly disagree" to 5: "I strongly agree".

Organizational collectivism is high in SAM, with a score of 3.16 on average. It is the highest in the TEKSAMs, followed by the headquarters, the SERSAMs, and the institutes. This also means organizational individualism is low in SAM.

If we analyze this dimension more carefully, we see that some of the questions that measure collectivism got higher scores from the respondents. For instance, on average, the highest score is given to this statement: "It is easy for workers in this organization to ask their coworkers for help when they need it". The second highest score is given to the statement: "Workers strive to help new employees fit in". The third highest score is given to the statement: "People feel free to discuss both work-related and personal concerns with their coworkers". All these sentences seem to measure a very similar concept, such as working together, cohesiveness, or closeness.

A second factor analysis for the twelve questions that measure collectivism showed that three of the questions constitute a separate factor. These questions (questions 10, 12, and 15) are as follows:

- "Workers are often friends outside of work."
- "Employees in this company socialize with each other outside of work."
- "Management strives to make this a family-friendly place to work."

The above questions ask respondents whether a group feeling is also prevalent outside work. The mean score for the three questions is about 3.13 over 5, indicating that group feeling outside work is high.

Organizational horizontality is also high in SAM, with a score of 3.09 on average. It is the highest in the TEKSAMs, followed by the institutes, the SERSAMs, and the headquarters. This also means organizational verticality is low in SAM.

According to factor analysis results carried out for the thirteen questions that measure horizontality, questions 7, 11, 42, and 43 represent one factor. The questions are as follows:

- “Employees at all levels of the organization are recognized when they have good ideas.”
- “Supervisors treat workers as equals.”
- “Supervisors consider the needs of employees when making decisions.”
- “Supervisors keep workers informed about matters that directly affect them.”

This factor most probably measures whether employees are equally treated or not. The mean of scores for these questions is about 3.2, which is high.

CHAPTER 6

DISCUSSION

In this chapter, the implications of the results and their implications will be discussed. Before making connections with organizational effectiveness, several problems about the organizational design have to be explained in this section. The following points discuss the problems detected during the analyses made in Chapter 5.

6.1. Problems Regarding General Environment Uncertainty

The general environment certainty score is 2.8. In other words, the uncertainty level is 3.2 out of 5 points indicating that SAM has an uncertain environment, other things being equal. However, the uncertainty is not high. For a certainty score of 2.8, formalization should be close to 2.8. However, formalization is 3.04. Therefore, formalization is unnecessarily high in SAM.

A study carried out by Pugh (1973) over two hundred companies and municipalities indicates that government departments have “personnel bureaucracies”, where centralization is high and formalization is low. However, both formalization (3.04) and centralization (3.58) are too high in SAM, which creates bureaucratic inflexibility.

The fact that both centralization and formalization are high in SAM may not be unusual for a Turkish public organization. According to Hofstede's (1984) national culture classification, there are four dimensions that differentiate national cultures: Individualism (people look after their own interests) versus collectivism (people protect group membership), power distance (the extent to which a society accepts that power is distributed unequally), uncertainty avoidance (the extent to which a society feels threaten by uncertainty and avoids it), and masculinity versus femininity (whether materialism or concern for others is valued). In terms of these dimensions, Turkey has higher scores for collectivism, power distance, uncertainty avoidance, and femininity (Hofstede, 1980). High power distance may lead to a tendency among subordinates to accept management directives, or centralization (Devine, O'Clock, and Rooney, 2000). Since high formalization in an organization creates predictability (Robbins, 1993: 607), high uncertainty avoidance may lead to formalization through which employees avoid uncertainty, ambiguity and stress that would exist in the case of no rules (Devine, O'Clock, and Rooney, 2000).

According to managers, another reason for high levels for both centralization and formalization may be the quality system in SAM. Within the quality system, several reports, documents, and forms are prepared. These written documents may lead to formalization although they do not create an unneeded burden on the personnel. Moreover, formalization may be the result of centralization, since managers expect things to be written.

6.2. Problems Regarding Task Environment Uncertainty

The time orientations of all subsystems contradict theoretical expectations. Moreover, three of the subsystems employ the wrong goal orientation. Either the task environments are perceived incorrectly by the respondents or the subsystems really have those characteristics, which was not expected. In fact,

the first choice is likely because all the subsystems of an organization cannot have the same type of time and goal orientations while their task environments and activities are different.

In order to argue on the possibility that the task environments are perceived incorrectly by the respondents, the SERSAMs were chosen as the subsystem and secondary data was gathered about each SERSAM's task environment. The points below discuss each SERSAM's characteristics (Koçak and Başmanav, 1997a, 1997b, 1997c, 1997d), the scores obtained from the questionnaire results, and the information's relevance to the SERSAMs' task environment uncertainties.

- The most uncertain task environment is in Nevşehir, and the most certain task environment is in Çorum. However, the two cities are very close to each other geographically. The number of respondents is also very close. The difference is that in Çorum there are almost as twice as many SMEs as in Nevşehir. However, according to the questionnaire results, Nevşehir is much more uncertain. Similarly, Ankara is stated as being more certain than İstanbul, İzmir, Nevşehir, Kayseri, and Denizli. In fact, except for İstanbul and İzmir, there are more SMEs in Ankara. This may be an indication that the task environment uncertainties are perceived incorrectly by the respondents.
- If we compare İstanbul and İzmir, we see that İzmir's task environment has been stated as more uncertain. However, the structure is more mechanistic than İstanbul. Therefore, if we adopt Lawrence and Lorsch's theory, either the task environment or the structure is perceived inaccurately. The probability that the task environment is perceived incorrectly is higher because the type of organization structure is determined in this questionnaire by several measures, including seven separate task characteristics, standardization, formalization, and centralization.

- The most uncertain parts in the environment are the Ministry, SMEs and other SAM units. İzmir deals with these uncertain elements more frequently than İstanbul. The only elements that İstanbul interacts more than İzmir are nongovernmental organizations, including universities, and other governmental units. It seems that İzmir concentrates on a smaller subset of the environment, while İstanbul has diversified its activities into more distinct segments. Logically, İstanbul's task environment should be more complex because it deals with more elements, but it is not.
- According to the Campbell R. Harvey Global Industry Risk Analysis (Harvey, 2002), forestry is the riskiest (and so most uncertain) industry, followed by paper and printing, metal, food and household, chemicals, and textile industries. SMEs in Denizli concentrate mainly on textile and metal industries and the task environment certainty score is 2.51. SMEs in Van concentrate mainly on the forestry industry, but the task environment uncertainty score is 2.90, meaning it is more certain than Denizli. However, according to industrial risk figures, the SERSAM in Van should have more uncertainty.

These examples show that the task environments are not carefully analyzed and the uncertainty levels are not correctly determined by the respondents. The most visible proof is the fact that the headquarters and TEKSAMs have the same uncertainty level of task environment uncertainty. They deal with totally different organizations and factors (The headquarters: The Ministry, other governmental organizations, other SAM units; the TEKSAMs: SMEs), but they see their task environment uncertainty as if they are the same.

6.3. Problems Regarding the Organizational Structure

Even if we accept that the task environments are quite similar in all subsystems, we still have to deal with other problems about the organizational structure. Firstly, all the subsystems of SAM are short-term oriented. This is

quite a controversial situation because a long-term orientation is a crucial issue for the survival of any organization (Miller, 1998). The time orientations of members are calculated independently from all the other calculations. Therefore, SAM is not considering the long-term direction and is thus losing an important contingency for organizational success. This point is especially important for the headquarters and the institutes, which make important decisions about organizational functions.

All the subsystems are oriented towards technical-economic goals. This is also similar to the time orientation problem. The task environment uncertainty is medium, so SAM should also engage in market-oriented goals to better serve SMEs and in scientific goals to develop models and solution strategies.

Formalization is much higher than needed in the SERSAMs. In terms of task environment uncertainty, the SERSAMs' task environment is much more uncertain than most of the subsystems. Yet formalization is the highest. Even if the task environment uncertainty is 2.71 as predicted by the respondents, formalization level is still too high.

The fact that the structural characteristics (formalization, time orientation, goal orientation, interpersonal orientation) are quite similar in the four subsystems may also be problematic because it seems not logical. The environments and activities are distinct, but structures are similar. One possibility is that the task subenvironments are perceived incorrectly, so the subsystems are structured in the wrong way. Another possibility is that because there have been changes in the structure of the organization, such as the reengineering program that changed the processes, activities, and systems altogether, the positions of members have changed. Those members have experienced work environments and structures in different subsystems that might lead to a general, average judgment about the environments and structures. Another reason for the

similarity of environments and structures may be the tendency of personnel to share risk and responsibility for certain types of activities, which in turn may lead to a tendency to do parts of the same job, and so similar tasks.

There is also a problem about the requisite integration level of the headquarters. Although its mean differentiation score is 3.09, the second highest among all subsystems, its requisite integration score is 3.09, a lower figure than the institutes. The functions and activities of the headquarters necessitate a very high level of integration. Therefore, the requisite integration level is lower than expected. The reason may be that the respondents may feel they need less integration, concentrate on their own set of operations and ignore the others. Although there is more of a “systems thinking” after the reengineering initiatives, it seems like the headquarters continues to act upon a functional way of thinking.

The fifth problem related with the above dilemma is in the TEKSAMs. Although the requisite level of integration is low compared to the other subsystems, the current level of integration is the highest. The needed and current levels are not congruent. A high level of integration may be an indication of high centralization.

The sixth problem is that the SERSAMs and institutes sometimes carry out similar activities. Although the institutes are responsible for generating models and strategies and the SERSAMs are responsible for applying those solutions to the SMEs, the institutes sometimes find themselves doing what the SERSAMs should do. The reason for this dilemma is not clear; however, at the moment, this problem is clear. This is also stated by all institute managers during interviews.

6.4. Problems Regarding Integration

There is the problem of a lack of effective integration in SAM. Almost all interviewees stated that there are enough means of achieving integration; however, these means stated to be not utilized effectively. The questionnaire respondents gave 3.6 points to the current integration level and another 3.6 points to the level of integration effectiveness on average. The reason for the difference in opinion may be either the questionnaire respondents are unable to detect the problems or that only the interviewees, who are all managers, are experiencing the integration problems. The second option seems more logical because the biggest difference between the current level of integration and effectiveness of integration in the unfavorable direction is at the headquarters. The most apparent implication is that the top managers at the headquarters encounter integration problems mostly because they hold the key positions within the organization. Yet another implication is that, as also stated by one of the managers, the integration can be obtained vertically (probably through centralization), but horizontal integration cannot be obtained within the organization. This may be experienced by managers more than the lower-level employees, since managers are responsible for gathering information and making decisions for all the subsystems.

We can analyze the integration problem further by using the answers given to the integration mechanism questions in the questionnaire. In the literature, the integrating department is the most powerful mechanism, followed by the integrating role, team, task force, liaison role, direct contact, and hierarchy of authority. The mean scores over five for the usage of each integration mechanism for each subsystem is given in Table 6.1. The scores for the integration role and integrating department are both zero since those mechanisms do not exist in SAM.

The rest of the mechanisms, namely hierarchy of authority, direct contact, liaison role, task force, and team, are utilized at different degrees in different subsystems. The mean scores for the subsystems are calculated by weighing for the potential of the mechanism to provide integration. The weight for hierarchy of authority is 1, for direct contact, 2; for liaison role, 3; for task force, 4; and for team, 5.

Table 6.1. The Utilization of Integration Mechanisms at SAM

Mechanism	Headquarters	Institutes	KÜ-GEMs	TEK-MERs	Mean Score for the Mechanism
Hierarchy of Authority	3.66	3.64	3.88	3.89	3.76
Direct Contact	4.38	4.23	4.23	4.10	4.26
Liaison Role	2.66	2.50	3.09	3.00	2.83
Task Force	2.34	2.70	2.02	2.33	2.28
Team	2.03	2.09	1.91	2.44	2.03
Integrating Role	0.00	0.00	0.00	0.00	0.00
Integrating Department	0.00	0.00	0.00	0.00	0.00
Mean Score for the Subsystem	2.09	2.15	2.02	2.18	2.08⁵

The most widely used integration mechanism is direct contact where the managers meet face to face to discuss things. Therefore, establishing personal relationships between people at all levels in different functions is important at the headquarters. However, direct contact is also used highly in other SAM units. This is rational because each subsystem element contains a small number of people, which is appropriate for direct contact.

⁵ An overall mean of 2.08 for integrative mechanisms indicates that integrative mechanisms are not utilized fully in SAM.

The second most widely used mechanism is the hierarchy of authority. This is the simplest integrating device, which differentiates people by how much authority they have (Jones, 2001). Because the hierarchy dictates who reports to whom, it coordinates various organizational roles. The hierarchy of authority is used mostly within the SERSAMs. However, in most SERSAMs there is not a sufficient number of people to talk about hierarchy. As indicated by one of the interviewees, in some SERSAMs there are only two people, one of them managing the other. In such a small subsystem component, integration may be necessary only to integrate with other SAM units. Then the hierarchy of authority may be helpful. However, the hierarchy may still be not be helpful to coordinate all the SERSAMs. For instance, employees in SERSAMs in remote locations may not even talk to top managers. This problem has also been stated by the managers such that SERSAMs and TEKSAMs may not be able to even find the related manager to get approvals or opinions. Horizontality, with which employees are treated equally and top managers are accessible is the lowest in the SERSAMs.

The third mechanism is the liaison role and is used frequently. The member of the organization who takes responsibility for the liaison role has the duty of coordinating with other subunits. The person in charge should be able to develop in-depth relations with people in other units. Liaison roles are used mostly in the SERSAMs and TEKSAMs. Most probably, the SERSAM or TEKSAM manager takes responsibility for the liaison role and establishes contacts with managers in other SAM units.

The next most widely used mechanism is the task force, in which managers meet in temporary committees to coordinate cross-functional activities. Task forces are used mostly in the institutes, followed by the headquarters. In these task forces, a senior manager is usually involved to chair the meetings. Although we have the questionnaire results about the integrative mechanisms

used within each subsystem, we do not have information about the integrative mechanisms used between pairs of subsystems. Still, it is known from the interviews that the SERSAMs and TEKSAMs may take part in these meetings if necessary.

Lastly, teams, in which managers meet regularly in permanent committees to coordinate activities are used mostly in the TEKSAMs. The issue to be discussed is an ongoing strategic or administrative issue (Jones, 2001), so a team is a permanent task force. In fact, there is not a separate group or team to coordinate the activities of the TEKSAMs; however, the respondents may attend meetings more than other subsystems and therefore they may consider these meetings as permanent. For example, there is an “Education/Training Unit” located at the headquarters which regularly and continuously coordinates the training needs of SAM personnel. This unit may be considered as a team that permanently integrates subsystems in terms of training requirements.

Lastly, integrating roles and integrating departments do not exist in SAM’s structure. Although they are the most powerful integrative devices (Jones, 2001), they are not utilized.

6.5. Problems Regarding the Organizational Climate

Organizational climate (or culture) is concerned with how employees perceive the characteristics of an organization’s culture, not with whether or not they like them (Robbins, 1993: 605). Therefore, it is a descriptive term and should be differentiated from job satisfaction. The climate comes from shared values. However, we can still make inferences on how to develop the existing culture into a more effective one that also displays characteristics of success, effective integration, and efficiency.

Previous analyses showed that the mechanistic structure in SAM is perceived as a way of increasing integration. Integration in turn is considered as increasing collectivism and horizontality in SAM. First of all, managers and employees should be technically trained in the importance and ways of achieving integration and taught that a centralized organizational structure does not lead to integration automatically. Secondly, they should be alerted that trying to do everything together, or too much collectivism and horizontality, does not mean effectiveness, and may even sometimes decrease effectiveness.

The mean collectivism score is 3.16 in SAM and the most collectivist subsystem is the TEKSAMs. All the subsystems have scores of collectivism higher than 3 over 5. That means SAM has a highly collectivist culture and this is not without drawbacks. First of all, conformity should not be treated as a necessary element in making decisions. Individual opinions are also important and may sometimes lead to better solutions. Because in high collectivism, people find it important to respect the group's decisions, rather than discuss and raise opinions (Chiou, 2001). This may arise from "groupthink" in SAM, in which a group making decisions strongly affects the others' decisions, or decisions relate only to a limited category of decision-making events (Stern and Sundelius, 1994). Moreover, high collectivism may lead to low levels of competition in the organization (Robert and Wasti, in print), which in turn may decrease effectiveness, though it may increase efficiency.

However, the negative effects of high collectivism are not highly seen in SAM, mainly because collectivism is not a permanent part in SAM' culture. It may change form time to time and according to different managers. Only a few of the negative effects are especially seen in SAM, such as the lack of professional management styles and the lack of effective participation of lower level employees within the decision making process. There is not a tendency

for all employees to participate in the decision making process, and so the process is not slow.

Individualism does not necessarily lead to self-pursuit of one's own interests. Individualism may be characterized by the beliefs that personal interaction is not confrontational and the self may be developed and maintained only through a shared and common process of self-discovery with others (Sampson, 1989). Individuals who exhibit high levels of personal development competitiveness are likely to subordinate their own interests to those of the group in order to maximize mutual cooperation and close association with others in the evaluative setting. Ryckman et al., (1997) found that, individualist cultures are more concerned with the welfare and emotions of others, are more highly motivated to develop cooperative working relationships, and place greater value on the shared experiences of the group.

The mean horizontality score in SAM is 3.09, a figure higher than 2.5 which represents high horizontality. Although high horizontality has some advantages such as equality in votes, joint regulation on work procedures, and minimization of status differences, it has some disadvantages as well. For instance, high horizontality may lead to the dissatisfaction of higher-level managers who cannot order his/her subordinates even when necessary. The decision-making process may slow down due to time-consuming phases of reaching agreements. Horizontality is the lowest in the headquarters indicating that status differences are recognized and it is clear who the boss is. The score is highest in the TEKSAMs, which is also dangerous because SMEs need quick solutions to their problems. After all, it is the "decision structure" (the pattern of influence on decision making) and not the communication structure which determines the task performance of the group (Mulder, 1960).

According to managers, as in collectivism, horizontality score may change in other times. It is not stable. Moreover, not all the negative effects of high horizontality are seen in SAM because the nature of the job requires dynamic interaction between managers and employees. Furthermore, in most of SERSAMs, there are only a small number of personnel (such as one manager and one expert), therefore experiencing high horizontality is expected.

The next chapter will present recommendations that attempt to solve and prevent problems stated so far.



CHAPTER 7

CONCLUSIONS

Turkish SMEs have many expectations from SAM in order to overcome their problems and grow. First of all, the financial aid from private organizations are too limited to be truly helpful (Günday, 1993). SAM was expected to be a partner of the “Turkish Tradesman and Craftsman Bank” (TESBANK – Türkiye Esnaf ve Sanatkarlar Bankası) in the establishment process (Müftüoğlu, 1993). However, SAM has not been established for the purpose of providing financial credit to SMEs. Therefore, SMEs may have to find other ways of eliminating their financial needs and problems. According to a study carried out in the Gaziantep region, SMEs have stated that in order to compete in national and international markets, they have to use new technologies (Gücelioğlu, 1994). The reasons for the inability to use the new technologies have been stated as insufficient capital and insufficient credit availability. SMEs expect SAM to provide some inter-firm linkages in order to learn new production technologies. They also state that these linkages would be better if they were established with foreign firms. Another regional study carried out in Ankara, Gaziantep, and İstanbul revealed the fact that most SMEs have significant difficulties finding and hiring quality personnel. They usually hire primary school graduates as apprentices and train them on the job (Gücelioğlu, 1994). For this reason, SAM is expected to provide these SMEs with technical

and managerial training courses and seminars so that they can provide their employees with enough education to deal with operational and organizational problems. SAM is also expected to establish some partnerships with other educational and other types of organizations, such as TESK (information provided in Appendix G). SAM is expected to increase the educational facilities in rural areas, as well. Although there are some activities to educate, inform, and direct entrepreneurs in rural areas, these are not enough since they are only initiated by personal endeavors (Dilik and Duran, 1998).

7.1. Strategic Recommendations

Although there is no data regarding the strategic effectiveness of SAM, the below recommendations are necessary to ensure that top-level managers accept there are areas of improvement. The problems discussed in the preceding chapter are also related with the strategy of SAM.

As it is clear from the studies, Turkish SMEs expect from SAM all they can expect from an organization. They do not see the difference between SAM and other organizations, such as nongovernmental organizations. As also stated by most of the managers, there is a presentation problem in SAM. The organization is not known by many people and many SMEs. Yet SAM does not take further steps to introduce itself to the society and SMEs. One suggestion for SME development organizations when there is confusion over the suitability of the organization's support is to offer training needs analysis or research to determine the businesses' needs, involve businesses in the design and development of the courses, offer tailor-made training for sectors, or groups of companies, and carry out an evaluation of the service to check that it continues to be relevant and meet SMEs' needs (ADAPT Support Unit, 2001). Carrying out such reality checks will both provide recent information about SMEs and increase the likelihood that SAM services are understood and valued. Moreover, according to managers, it will increase the likelihood that

SMEs are better known since a good presentation requires the knowledge of the target market.

Although SAM has services for SMEs in the manufacturing sector, some service organizations can get help from SAM, such as through educational programs. Some of the services, such as education and consultancy, are general-purpose and do not specifically solve a particular problem. Although it is impossible and not wise for SAM to take care of SMEs one by one, it should specifically concentrate its activities on certain areas, such as manufacturing or engineering. It should do this by also looking at other SME development organizations in Turkey, what they do, what they focus on and what they provide. A phrase in The Wall Street Journal newspaper says, “It’s okay to fire your customers” (Edler, 1995). SAM should decrease its domain in order to give better service to the remaining customers.

We know that a change in strategy is more likely to produce a change in structure than a change in structure is to produce a change in strategy (Amburgey and Dacin, 1994). Moreover, changes in structure follow more closely upon the heels of a change in strategy. Therefore, we can expect SAM to change its strategy before it changes its structure. In other words, without changes in strategy, or other important determinants of its functions, such as mission and goals, SAM is less likely to change its structure since it will not recognize any reason to do so. Apart from the above-stated strategic changes, SAM should also solve its organizational problems stated in Chapter 6. The recommendations for the structural and cultural problems are discussed below.

7.2. Recommendations Regarding General Environmental Uncertainty

The bureaucratic inflexibility problem stems from two sources: over-centralization and over-formalization. This problem is especially prevalent in the SERSAMs, where bureaucracy should be the lowest since they need

flexibility and quick adjustment to changing SME conditions. High centralization and high formalization may also be due to the effects of national culture, as indicated before. High bureaucratic inflexibility may also stem from the general legal system in Turkey. As managers have stated, the legal system in Turkey requires the preparation of numerous documents for different purposes. Some of these reports and documents are not directly used in SAM, but are necessary to comply with the rules, which may increase formalization.

Integration should be achieved not through centralization and written standards, but through objectives set forth by managers and employees together. This can be done through utilizing the Management by Objectives (MBO) method. Objectives explain the abstract concepts and they are concrete enough to suggest specific actions (Miller, 1998). Objectives are more detailed than organizational goals and they explicitly show what needs to be done in order to accomplish the goals. If members of subsystems know their own set of objectives and if those objectives are in line with general purpose goals, an the mission and vision of SAM, integration will be achieved. Because everyone will be acting upon predetermined objectives, there will not be any deviations from the expected actions and behaviors.

A similar version of the suggested MBO method is currently utilized in SAM within the quality system activities. The groups and units develop periodical goals and objectives by incorporating the personnel in lower levels. Currently, however, there is doubt whether performance evaluation is carried out according to pre-defined goals and objectives.

Under MBO, the employee and manager discuss and agree on what the employee's job objectives and responsibilities shall be, and on how the employee will be evaluated (Ford, Armandi, and Heaton, 1988: 150). Some of the managers state they suffer from a lack of appropriate performance

evaluation system. They say feedback is not provided appropriately. MBO may also solve the performance appraisal problem since it emphasizes participatively set goals that are tangible, verifiable, and measurable (Robbins, 1993). The goals cover an explicit time period with feedback on goal progress. If all subsystems adopt this type of management, goals are set concurrently and integration can be achieved at the organization level.

7.3. Recommendations Regarding Task Environment Uncertainty

The first thing to do is to correctly determine each subsystem's and each subsystem's own components' (i.e. each SERSAM's and each TEKSAM's) task environments. According to the questionnaire results, the headquarters interact mainly the government and other SAM units. Therefore, its task environment uncertainty should be lower. The institutes interact with the government, other SAM units, and SMEs. However, they should mainly interact with nongovernmental organizations and universities in order to prepare models and problem solutions. SERSAMs and TEKSAMs deal mainly with SMEs, which is correct. However, the uncertainty in their task environment is in fact much higher than stated by the respondents.

Moreover, according to the questionnaire results, all task environments in SAM are certain. The task environment certainty scores range from 2.66 to 2.77. It seems irrational that all organizational units face very similar work environments in terms of uncertainty. Therefore, SAM should first educate its employees or let them learn more about the task environment they work in. Some of employees may be held responsible to track changes in the work environment. Frequent and regular market research may be carried out by the institutes.

7.4. Recommendations Regarding the Organizational Structure

According to the task environment and general environment characteristics, the appropriate time and goal orientations should be adopted. The headquarters should adopt a short-term, technical-economic orientation since they deal with operational and procedural issues. The institutes should adopt a long-term, scientific orientation because they try to find the correct ways to help SMEs. The SERSAMs and TEKSAMs should adopt a medium-term, market orientation since they interact directly with SAM's market, i.e. SMEs.

In addition, the SERSAMs and institutes should stop doing similar tasks. The institutes should concentrate their activities on public policies, strategies, and models rather than day-to-day SME services. The responsibilities of institutes and SERSAMs should be established clearly. For instance, a general-purpose model for the functioning of SAM service centers and institutes may be resembled to the functioning of a restaurant. The customer in this process is a hungry person who comes to a restaurant, who is an analogy to an SME coming to a SERSAM or TEKSAM due to a need or problem. She/he explains what she/he wants to eat (The SERSAM or the TEKSAM explains the problem). The waiter then goes to the kitchen to tell the cook what the customer wants (The SERSAM or the TEKSAM explains the need or problem to the institutes). The cook then goes to the warehouse or supply room to check for available resources (The institute interacts with the headquarters for formal and procedural activities). The cook returns from the supply room and cooks the meal (The institute develops a model or a strategy to solve the problem or satisfy the need). The waiter takes the meal and serves the customer (The SERSAM or the TEKSAM takes inputs for solution strategies from the institutes and gives the necessary service to the SME). This process is an explanation of how different subsystems should function in the long run. When the SME need or problem is obvious, then necessary services can be provided to the SME by the SERSAMs or TEKSAMs directly. The implication is that

the waiter, the cook, and the supplier should know his/her duties and specialize in particular areas of expertise so that a nutritious meal can be served to the customer. How the relationships and checks are put into reality will be explained in the next section discussing integration solutions.

7.5. Recommendations Regarding Integration

After finding the accurate task environment uncertainties and corresponding orientation types, the correct differentiation scores will be obtained. Most probably, requisite integration will be higher in SAM. Even if the requisite integration stays the same at about 3.71, the integration will still be highly needed. For a needed integration level of 3.71 over 5, the current total integration is 3.57, indicating a discrepancy between what is required and what is present⁶. Integration effectiveness is also 3.57 most probably because the integrative devices are not utilized fully (total mechanisms score is only 2.08). Moreover, the requirement for a high degree of differentiation and hence a high degree of integration requires supplemental integrating devices (Lawrence and Lorsch, 1969). Therefore, integration should be increased in SAM.

However, integration is an issue that applies to all subsystems. We cannot integrate one pair of subsystems and leave the others. To integrate all subsystems, utilizing the most powerful integration mechanisms (integrating role and integrating department) will be appropriate. Since the number of employees is high in SAM (494 employees) and the number of subsystem components is high (a total of 42, including the headquarters), simple mechanisms are not enough to coordinate a large domain of activities that serve a large number of customers (SMEs). As also suggested by some of the managers during the interviews, there should be at least one permanent position in each SERSAM and TEKSAM that interacts with all three institutes.

⁶ A 2-tailed "paired" samples t-test yielded a t-value of 1.211, which is smaller than critical t-value of 1.983. The hypothesis that the means are equal cannot be rejected. However, p-value is close to 80%.

Institutes should inform these people about current problem solving solutions and models and update the information frequently. The current managers may carry out these activities, who will be called the liaison people. Similarly, there should be three people at the institutes that interact with the headquarters about recent affairs. Their function would be liaison roles. Therefore, there should be a total of three liaison roles at the three institutes.

However, in order to integrate the activities of different SERSAMs and TEKSAMs (also their activities with those of the institutes), integrating roles should be established. Regional integrating roles can serve the integrating function of specific SERSAMs and TEKSAMs. For each of the seven regions in Turkey, there should be seven integrating roles located at the strategic locations in each region. Therefore, besides the liaison roles, there should be seven integrating roles.

Since it is quite difficult to integrate the activities of the SERSAMs and TEKSAMs with the headquarters through integrating roles, there should be one integrating department that deals with these service centers. All the information related with services and intra-organizational issues should be transmitted to the headquarters through this integrating department. Moreover, since the SERSAMs' and TEKSAMs' task environments are more uncertain, meetings could be used for more effective coordination (Van de Ven, Delbecq, and Koenig, 1976). Figure 7.1 summarizes the model suggested.

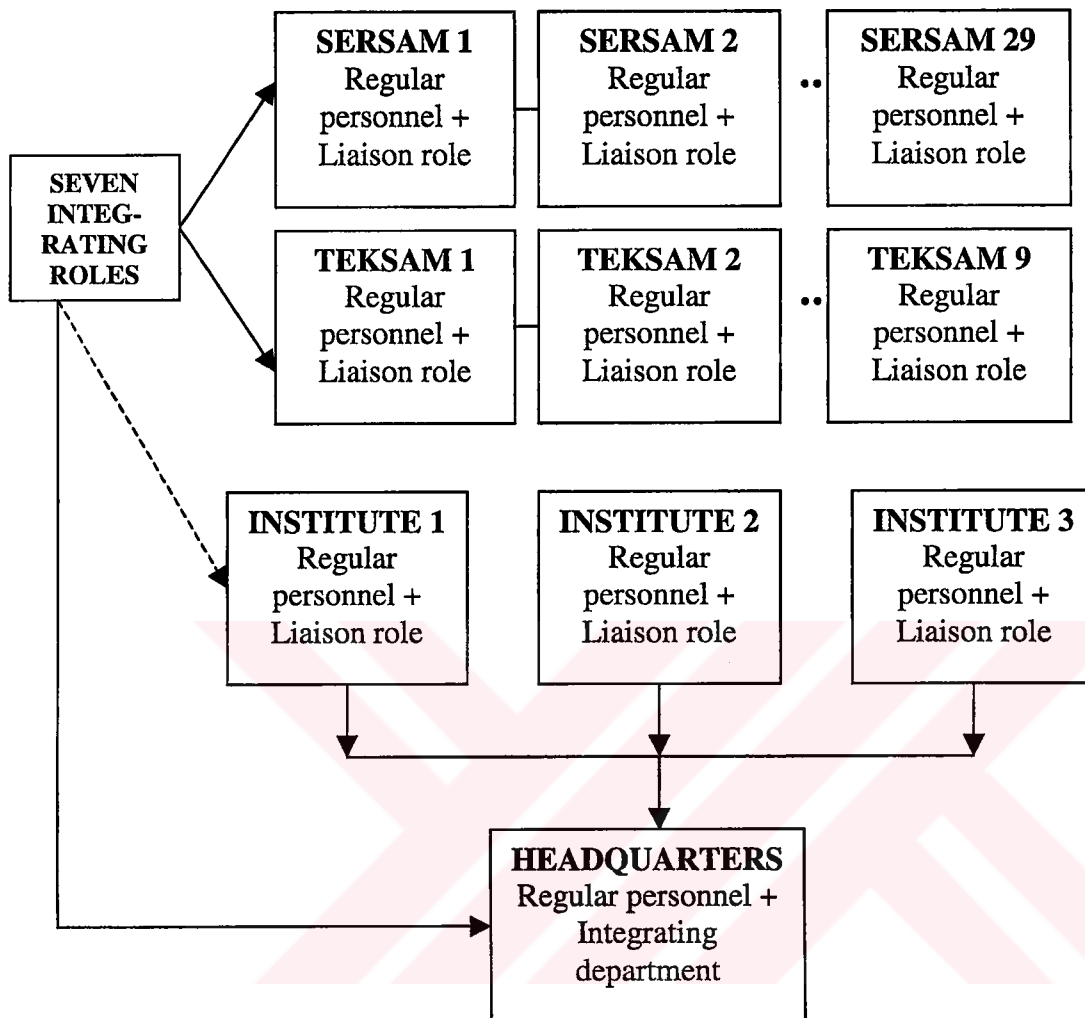


Figure 7.1. A suggested general model of integration in SAM.

The integrating roles and departments are established in this model specifically to improve communication, coordination, and integration. Within each subsystem component, only direct contact and the hierarchy of authority will be used to integrate activities. There is no need to teams, because integrating roles and departments will do their tasks more effectively.

Besides these, some ways of increasing integration effectiveness may include the following. This list is supported by taking into the account the questionnaire responses for question 23 in Part F.

- Information sharing through e-mail rather than documenting everything on paper. The documents that have to be prepared for the functioning of the quality system would be enough for documentation purposes.
- Decreasing the number of managers who have to approve a decision. This is especially important at the headquarters, since decisions should quickly pass from the approval to the implementation stage.
- Organizing regular meetings and sharing the information with lower-level employees.
- Training employees on how to use the integrative devices. This is especially important if integrating roles and departments are established. Employees should come to understand the importance of integration for SAM.
- Informing personnel about decisions made for a certain subsystem. This can also be achieved through Intranet applications.
- Organizing social events. People can attend to social gatherings and share information informally in addition to formal devices.
- The full utilization of the management information system. This will complement the integrative devices within and between SAM units.
- Lastly, encouraging projects undertaken by more than one unit. By this way, both processes will be carried out more effectively and integration will be achieved in an easier way.

7.6. Recommendations Regarding the Organizational Climate

The negative effects of high collectivism in SAM were the lack of professional management styles and the lack of effective participation of lower level employees within the decision making process. To minimize these effects, brainstorming sessions that are currently carried out within the quality system applications can be given more importance. During these sessions, individual opinions about problems, activities, and processes can be collected and reported to senior managers. Disagreements to current procedures or differences in opinions can then be recorded and analyzed by the integration department. Representatives from the institutes and the service centers can attend these sessions.

Regarding horizontality, feeling equal to the manager may increase motivation when it comes to decision-making. However, most of the important decisions are made at the headquarters, where horizontality is at its lowest. Horizontality at the headquarters can be increased to a level where employees feel safe to discuss their opinions. To do this, top-level managers can attend meetings and discussion groups more frequently so that employees can have the chance to raise their voice directly.

On the other hand, horizontality in the TEKSAMs and SERSAMs should be decreased because having intimate relationships with managers may decrease the efficiency brought by otherwise professional management practices. To do this, at least for some unimportant decisions, a top-down approach can be utilized more frequently to speed up operations.

7.7. Organizational Effectiveness

There are four major approaches to define and assess organizational effectiveness (Cameron, 1987). The first approach defines effectiveness in terms of how well an organization accomplishes its goals. A second approach is the system resource approach, under which the organization's effectiveness is judged on the extent to which it acquires needed resources. A third approach focuses on the internal processes and operations of the organization. The fourth approach to effectiveness is the strategic constituencies approach or the participant satisfaction model. This section will assess SAM's effectiveness in terms of whether it conforms to theory. The hypotheses proposed by different scholars mostly include organizational design arguments. Therefore, our approach to measuring organizational effectiveness resembles the third approach, or the internal processes and operations approach.

The recommendations were proposed according to the structural and cultural problems in SAM identified with questionnaire and interview results. How those recommendations are synthesized to produce SAM's effectiveness is discussed in this section.

Figure 7.2 summarizes the suggestions and how they are related to organizational effectiveness.

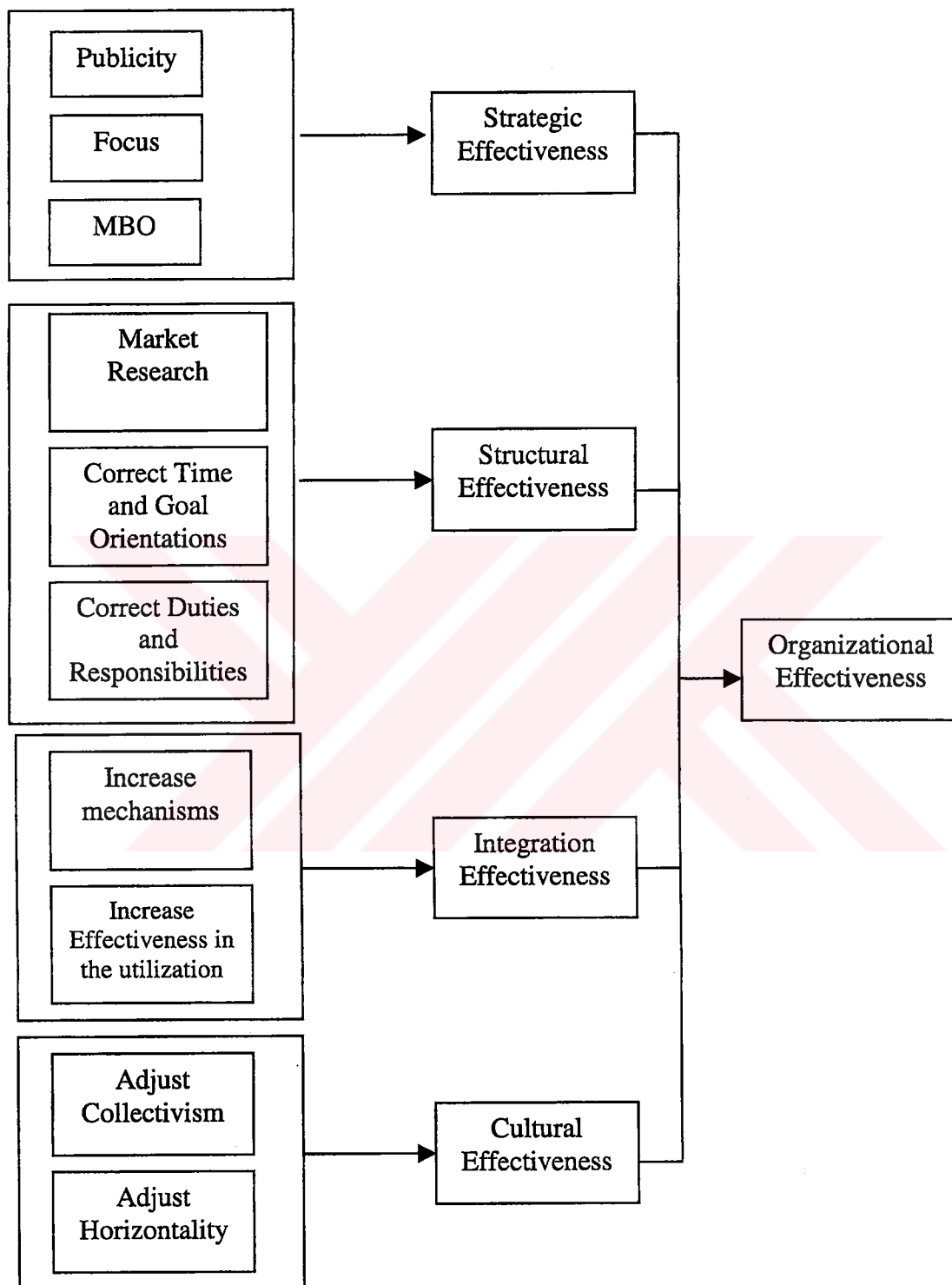


Figure 7.2. A general model of organizational effectiveness in SAM.

Strategies are predictive of organizational performance (Huber et al., 1993). Increasing publicity activities, decreasing the service domain, and employing an MBO method of performance evaluation are likely to increase strategic effectiveness, and so organizational performance. To eliminate the presentation problem, publicity, or communicating the message through free news releases is a good idea. SAM cannot make advertisements since it is a semi-governmental, non-profit organization. Publicity can be carried out with good public relations management, good communication with the general public, and press relations. Strong public relations will encourage favorable reviews of services and lead to a better image (Rachman et al., 1993). Therefore, through publicity, SAM will increase the likelihood that its activities are known by the public and understood by the SMEs. The focus strategy, or concentrating on a smaller area of service, such as engineering will also affect performance positively since the organization can better serve the smaller target market or give the basic services on more favorable terms (Miller, 1998). The MBO method can solve the bureaucratic inflexibility problem and lead to organizational effectiveness because this technique stresses goal setting at all management levels and gives way to managers' personal objectives to mesh with the organization's goals (Rachman et al., 1993).

Structural effectiveness can be achieved through market research, correct time and goal orientations, and correct duties and responsibilities. Market research will lead to a thorough understanding of task environments. Correct time and goal orientations will also make the organization's subsystems focus on the activities they are intended to do. Determining activities and behaviors according to task environment characteristics will increase the activities' legitimacy. An adjustment to clarify the duties and responsibilities is also essential. By this way, SAM's subsystems, especially the institutes and the SERSAMs, can avoid duplication of resources, such as personnel and

equipment. Moreover, thorough specifying the organizational division of labor, some of the tasks that are ignored by all subsystems will be determined.

Increasing integration can be attained by utilizing liaison roles in the service centers and the institutes, seven integrating roles in different regions, and one integrating department at the headquarters. Increasing integration effectiveness can be done through better utilizing the recommended mechanisms. If task environment uncertainties are determined correctly, the differentiation and hence need for integration may increase. Coordination and integration are very important tools in achieving harmonized efforts, which lead to effectiveness and which every manager has to ensure in an organization (Fayol, 1949). Increasing effectiveness will facilitate the utilization of the suggested integration model through e-mail, information sharing, and social gatherings. Integration effectiveness should be regularly monitored since an organization should ensure that activities are coordinated and the right work gets done in the right way (Davis and Weckler, 1996).

Regarding cultural effectiveness, decreasing the negative effects of high collectivism and decreasing the negative effects of high horizontality are recommended. A lower level of collectivism will make it more likely that individual opinions are listened. As the saying implies, “the secret of getting others to do as you want them to do lies in your ability to penetrate and understand the hidden world of self-interest that each of us carries around within himself”⁷. Once a manager identifies the employees’ needs and shows them how the organization’s suggestion or proposal can meet those needs, the employees will accept the request and will support the manager because they see themselves as acting in their own interests, not the manager’s (Huczynski, 1996). Increasing horizontality at the headquarters and decreasing horizontality at the service centers will also lead to more effective operations. Increasing it at

⁷ Source unknown.

the headquarters will lead to participation in the decision-making process since decisions will not be made in a top-down approach. People want others to say or imply “I respect you, I think you are a worthwhile important human being” (Huczynski, 1996: 111). Employees will resist efforts at change that they see as alien (Harvey, 1990).

We can also associate all the suggestions with SAM’s strengths, weaknesses, opportunities, and threats. A SWOT analysis carried out by Önbilgin et al. (2001) in SAM’s Entrepreneurship Development Institute revealed some facts about SAM. For each of the suggestions made above, there is an associated organizational weakness in this SWOT analysis. These are summarized below:

- **Publicity:** Decreases the weakness in making SAM known and providing a consistent and continuous image.
- **Focus:** Decreases the weakness in correcting the image created by serving all types of SMEs in all sectors while in fact SAM was established to serve the manufacturing sector.
- **MBO:** Decreases the weakness in applying a useful performance evaluation system.
- **Market research:** Decreases the weakness in demonstrating effectiveness in programs that are carried out with other organizations in the environment.
- **Correct time and goal orientations:** Decreases the weakness in not working in accordance with overall goals and policies.
- **Correct duties and responsibilities:** Decreases the weakness in service centers’ inability in providing sufficient and specific services to SMEs.
- **Increase integration:** Decreases the weakness in attaining horizontal information.
- **Increase integration effectiveness:** Decreases the weakness in obtaining coherence between functions.
- **Adjust collectivism:** Decreases the weakness in fully utilizing the expert opinion of experts and expert assistants who are professional in their areas.

- **Adjust horizontality:** Decreases the weakness in creating a work environment in which everyone works according to his/her needs and expectations.

However, bureaucratic organizations have long been considered resistant to change (Connor and Lake, 1988). Bureaucracies develop formalized policies and the process of developing those rules is also formalized, so changes in the way activities are conducted take a great deal of time and effort. An organization that operates under a large number of specific rules will have difficulty changing. The belief is that when organizational changes lead to improved performance, improved performance would lead to organizational change, and that even earlier levels of organizational performance can affect the frequency of organizational change (Huber et al., 1993).

7.8. Limitations of the Research and Future Research Areas

This research attempted to find a fit between an organization's structure and its environment and a fit between its structure and culture. The study identified several fits and several mismatches in the structure and culture of SAM. However, there is no survey analysis with regards to SMEs and/or organizations SAM interacts with. Data that is up to date and that specifically addresses the activities with SAM would be quite helpful in correctly determining task environment uncertainties. Moreover, differences among definitions of SMEs in different countries were disregarded. Although it would be a good strategy to look at those differences and incorporate them into the analyses, it is rather difficult to arrive at different conclusions that come out from those differences.

The concepts of structure and design are closely related and are often used interchangeably (Hodge et al., 1996). However, structure may not only be configured by a designer but may also emerge from enduring interactions

among people (Pennings, 1992). It can be described as the overall mechanism in the organization that impacts the flow of information, the process of decision-making, and the delineation of responsibility (Morris, 1997). Some authors view structure as an essentially dynamic and evolving form (Bate, Khan, and Pye, 2000; Varoğlu, 1992). Structure, in this sense, is not the same as design: The design is merely the bare bones framework on which a more organic, emergent social structure develops as people interact, argue, fall out, come together and otherwise manage their day-to-day situation. Following Ranson, Hinings, and Greenwood (1980), we can define the real working structure of an organization as both social and functional, a structure in construction. In this study, however, design and structure will be regarded as the same.

Still another limitation is about the sample. SAM currently has one headquarters and three institutes in Ankara, and about thirty-eight service centers in different places around Turkey. However, the questionnaire was distributed almost all employees in the headquarters and in all three institutes, but was distributed to only some employees in nine different service centers outside Ankara. An important limitation of this research is that not all the subsystem components are included in the questionnaire. Although a sample of 111 people may be considered enough for a synopsis of SAM structure, if all SERSAMs and TEKSAMs were included a full description would be achieved.

There is no information with regards to requisite and current integration levels between each pair of subsystems. We only have data about integration for each single subsystem and it is not known whether the data is about intra-unit or inter-unit integration and with which subsystem. The reason for the lack of pairwise integration data is because the subsystems were not known before the interviews and interviews were conducted simultaneously with questionnaire.

A future research area may be statistically testing Lawrence and Lorsch's six hypotheses. In addition to Burns and Stalker and Lawrence and Lorsch, other contingency theorists, such as Galbraith, who concentrates on new design strategies and who studies other interesting concepts, such as professionalization, can be studied.

Still another research area might be studying the technology of SAM, how it takes inputs and transforms them into output for SMEs. Departmental technologies can be important elements of SAM success. In this regard, Thompson's, Perrow's, or Woodward's models, also parts of the contingency theory can be utilized.

Still another research area may relate the structural and cultural features to a more objective criterion of SAM's success. For instance, the ideal structure and/or culture may be found by linking the organizational features to SME growth and development. However, almost all SAM managers stated they suffer from the lack of specifying a measurable, objective criterion for SAM's success. SMEs' success cannot be determined easily and correctly at the moment.

Otley (1980) suggests that studies in organizational theory should move further to more complex expressions of the contingency framework. Future research could use contingency variables and link them to organizational strategies and performance. Otley (1980) also suggests that many of the issues regarding the development of accounting systems and the relationship with the organization's different environments were political rather than technical. Therefore, such issues as the political systems, top manager changes and its effects on the organization, and the employees' social and cultural manifestations on work habits can be studied in more detail.

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APPENDICES

APPENDIX A

SAM ÖRGÜTSEL ANALİZ ANKETİ

Bu anket SAM'in çevresi, yapısı ve kültürü arasındaki ilişkileri incelemek üzere hazırlanmıştır. Anketin sonuçları Orta Doğu Teknik Üniversitesi İşletme Bölümünde yapılmakta olan bir yüksek lisans tezi için kullanılacaktır. Bilgiler gizli tutulacak, hiçbir nedenle başka kişilere verilmeyecek ve sonuçlar kişisel değil, ortalama değerler olarak sunulacaktır. Lütfen soruları cevaplandırırken olması gerekeni değil, kurumunuzun mevcut durumunu ele alınız. Cevabını kesin olarak bilmediğiniz sorulara yaklaşık cevaplar verebilirsiniz.

A – KİŞİSEL BİLGİLER

1. Süreç grubunuz/biriminiz:
2. Unvanınız:
3. En son mezun olduğunuz okul ve diploma dereceniz:
4. Toplam iş tecrübeniz: yıl / ay
5. SAM'deki iş tecrübeniz: yıl / ay
6. Yazılı bir iş sözleşmem vardır. Evet Hayır

B – İŞ ORTAMI ÖZELLİKLERİ

1. Lütfen bu kısımdaki sorular için **işinizi etkileyen ya da işinizin sonuçlarından etkilenen** kişi, kurum veya faktörleri önem derecesine göre 1'den 5'e kadar sıralayınız. **En önemli olana 5; daha az önemli olanlara sırasıyla 4, 3, 2; ve en önemsiz olana 1 puan** veriniz. Listede yer alan faktörler arasında, sizin için geçerli olmayanları boş bırakınız. Söylemek istediğiniz ancak listede yer almayan faktörleri, son satırlardaki boşluklara ekleyiniz ve verdiğiniz sıralama puanını belirtiniz.

- _____ Sanayi ve Ticaret Bakanlığı
- _____ Devlet Planlama Teşkilatı
- _____ Diğer resmi kurum ve/veya kuruluşlar
- _____ Sanayi ve ticaret odaları
- _____ Sivil toplum örgütleri
- _____ Büyük ölçekli özel şirket ve/veya kuruluşlar
- _____ KOBİ'ler
- _____ Diğer SAM birimleri (SERSAM'ler, TEKSAM'ler, vb.)
- _____
- _____
- _____
- _____

Aşağıdaki soruları cevaplandırırken size en uygun gelen seçeneği daire içine alınız.	Kesinlikle katılmıyorum	Katılmıyorum	Ne katılıyorum ne katılmıyorum	Katılıyorum	Kesinlikle katılıyorum
2. İşimle ilgili olarak hangi kişi ve/veya kurumlarla etkileşim halinde olduğum belirlidir.	1	2	3	4	5
3. İşimle ilgili olarak etkileşim halinde olduğum kişi ve kurumlar ve/veya bunların özellikleri zaman içinde değişir.	1	2	3	4	5
4. Burada çalışanlar her gün aynı işi aynı şekilde yaparlar.	1	2	3	4	5
5. Burada çalışanların sevdiği şeylerden birisi de işlerindeki çeşitliliktir.	1	2	3	4	5
6. Hemen hemen tüm işlerimde her gün bazı yenilikler meydana gelir.	1	2	3	4	5
7. Her gün daha önce yapmadığım farklı bir işim olur.	1	2	3	4	5
8. İşimi yaparken yeni şeyler öğrenebilirim.	1	2	3	4	5
9. İşimi yaparken tüm bilgi ve becerilerimi kullanırım.	1	2	3	4	5
10. Birimimde çalışan diğer kişilere kıyasla daha karmaşık işler yaparım.	1	2	3	4	5

	Hiçbir zaman	Nadiren	Bazen	Haftada birden az	Haftada birkaç
11. İş tanımımda yer almayan farklı ve zor işler yapmam istenebilir.	1	2	3	4	5

C – GÖREV ÖZELLİKLERİ

Aşağıdaki soruları cevaplandırırken size en uygun gelen seçeneği daire içine alınız.	Kesinlikle katılmıyorum	Katılmıyorum	Ne katılıyorum ne katılmıyorum	Katılıyorum	Kesinlikle katılıyorum
1. İş tanımım SAM'deki diğer kişilerin iş tanımlarından farklıdır.	1	2	3	4	5
2. Yapmam gerekenler ayrıntılı bir biçimde belirlenmiş durumdadır.	1	2	3	4	5
3. Çalışanların üstlendiği roller tam olarak tanımlanmıştır.	1	2	3	4	5
4. İş tanımım büyük ölçüde sabittir. (Ancak terfi ettiğimde değişikliğe uğrar.)	1	2	3	4	5
5. Yaptığım işler belirli ve/veya standarttır.	1	2	3	4	5
6. Yeni koşullar karşısında yapılması gerekenler önceden belirlenmiştir.	1	2	3	4	5
7. Çalışılan birimlerde değişme ve/veya esneklik yoktur.	1	2	3	4	5

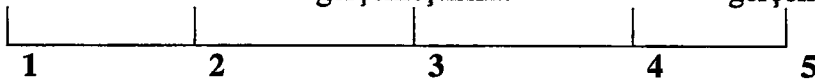
Aşağıdaki ölçekte 1, 3 ve 5 puanın karşılığı olanlar tanımlar verilmiştir. 1. ve 3. tanımlar arasında kalan durumlar için 2; 3. ve 5. tanım arasında kalan durumlar için 4 puan veriniz. Lütfen uygun olan seçeneğin altında yer alan puanı daire içine alınız.

8.

Yaptığım işlerin denetimi sadece örgütün yazılı olmayan kurallarına göre gerçekleştirilir.

Yaptığım işlerin denetimi hem yazılı kurallar çerçevesinde hem de örgütün yazılı olmayan kurallarına göre gerçekleştirilir.

Yaptığım işlerin denetimi sadece yazılı kurallar çerçevesinde gerçekleştirilir.

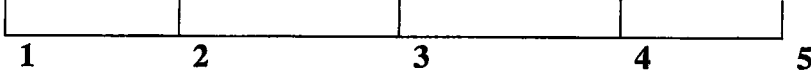


9.

İşimi yapabilmem için gereken bilgiyi sadece amirlerimden elde edebilirim.

İşimi yapabilmem için gereken bilgiyi hem amirlerimden hem de diğer kişi ve kaynaklardan elde ederim.

İşimi yapabilmem için gereken bilgiyi sadece diğer kişi ve kaynaklardan elde edebilirim.

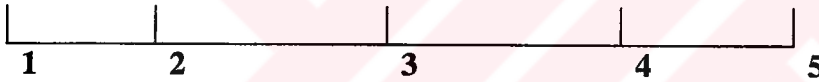


10.

İşimde sadece ast ve üstlerimle iletişim kurarım.

İşimde hem ast ve üstlerimle hem de çeşitli birim ve seviyelerdeki kişilerle iletişim kurarım.

İşimde sadece çeşitli birim ve seviyelerdeki kişilerle iletişim kurarım.

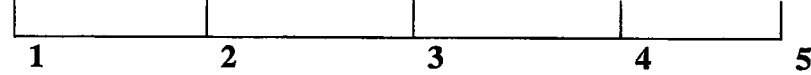


11.

Topluma faydalı olabilecek genel içerikli çalışmalar yapmam önemlidir.

Hem kuruma hem de topluma faydalı olabilecek çalışmalar yapmam önemlidir.

Sadece kurum için faydalı olabilecek çalışmalar yapmam önemlidir.



D – BİÇİMSELLİK VE ZAMAN YAKLAŞIMLARI

Aşağıdaki soruları cevaplandırırken size en uygun gelen seçeneği daire içine alınız.	Kesinlikle katılmıyorum	Katılmıyorum	Ne katılıyorum ne katılmıyorum	Katılıyorum	Kesinlikle katılıyorum
1. İşimle ilgili bütün kurallar amirlerim tarafından yazılı olarak belirlenmiştir.	1	2	3	4	5
2. İşimi nasıl yapacağım kurallar dahilinde belirlenmiştir.	1	2	3	4	5
3. İşimle ilgili kuralları gösteren bir yönetmelik vardır.	1	2	3	4	5
4. İş tanımım belirlidir.	1	2	3	4	5
5. Çoğu kararların alınabilmesi için yönetimden yazılı onay alınması gerekir.	1	2	3	4	5
6. Çalışanlar sözlü iletişimden çok yazışma yoluyla iletişim kurarlar.	1	2	3	4	5
7. Üst düzey toplantıların gündemi yazılı olarak belirlenmektedir.	1	2	3	4	5
8. Önemli toplantılarda tutanak tutulmaktadır.	1	2	3	4	5
9. Birçok iş için form doldurmam ya da yazılı doküman hazırlamam gerekir.	1	2	3	4	5
10. Çalışanlara yapacakları işler yazılı olarak bildirilir.	1	2	3	4	5
11. Kurumumuzda birçok iş için tam olarak kaydedilmiş kurallar vardır.	1	2	3	4	5
12. Aldığım kararlar kurallara uygunluk açısından yakından izlenir.	1	2	3	4	5
13. Çoğu iş için izlenecek yolu belirleyen yönetmelikler vardır.	1	2	3	4	5
14. Çoğu iş için yazılı iş tanımı mevcuttur.	1	2	3	4	5
15. Herkesin yapacağı iş tanımlı ve belirlidir.	1	2	3	4	5

16. Aşağıdaki soruyu cevaplandırırken 3 tane yüzde (%) belirtmeniz istenmektedir. Bu yüzde puanlarının toplamı 100 olmalıdır. Her bir yüzdelik puan, sizin o satırda belirtilen süreyi kapsayan işleri yapma ağırlığınızı göstermektedir.

Sonuçları 1 ay veya daha kısa süre sonunda ortaya çıkan işler için,	vaktimin %....'ini harcıyorum.
Sonuçları 1 ay – 1 yıl arasında ortaya çıkan işler için,	vaktimin %....'ini harcıyorum.
Sonuçları 1 yıl – 5 yıl arasında ortaya çıkan işler için,	vaktimin %....'ini harcıyorum.

Toplam %100

E – AMAC YAKLASIMI

Aşağıda yaptığınız işleri kapsadığı düşünülen bir liste verilmiştir. Bu listede yer alan işlerden en sık yaptıklarınıza 5, en az sıklıkla yaptıklarınıza 1, ve aradaki dereceler için 2, 3 ve 4 puan veriniz.					
	Hiçbir zaman	Nadiren	Ara sıra	Sık sık	Her zaman
1. Yapılan işlerin maliyetini çıkarmak ve takip etmek	1	2	3	4	5
2. Yapılan işlerin KOBİ'ler ve/veya toplum üzerindeki etkisini araştırmak	1	2	3	4	5
3. Yapılan iş ve araştırmaların yayınına sağlamak	1	2	3	4	5
4. Hizmet verilirken karşılaşılabilecek operasyonel sorunları tesbit ve takip etmek	1	2	3	4	5
5. Yapılan iş ve araştırmaların ulusal bilime katkı sağlamasına çalışmak	1	2	3	4	5
6. Yeni planlanan işlerin gerçekleştirilmesi için KOBİ'lere tanıtım yapmak	1	2	3	4	5
7. Yeni hizmet fikirlerinin hayata geçirilmesi için bilimsel çalışmalar yapmak	1	2	3	4	5
8. Hizmet için gereken yer, ekipman gibi kaynakların teminini sağlamak	1	2	3	4	5
9. Yeni hizmet fikirlerinin mevcut hizmetlere etkisi ve/veya tanıtımı açısından ortaya çıkabilecek sorunları belirlemek	1	2	3	4	5

	Hiçbir zaman	Nadiren	Ara sıra	Sık sık	Her zaman
10. Hizmetlerin zamanında ve tam yerine ulaşmasını engelleyen sorunları belirlemek	1	2	3	4	5
11. Hizmetin hedef kitleye ulaşmasını sağlayacak yolları belirlemek	1	2	3	4	5
12. Yeni hizmet fikirlerinin uygulanması için gereken kaynağı belirlemek ve/veya hazırlıklar yapmak	1	2	3	4	5
13. Hizmet için ihtiyaca uygun kaynak ve fiyat saptamak	1	2	3	4	5
14. Hizmetlerde ve birim içi işlerde kalite uygulamalarını takip etmek	1	2	3	4	5
15. İşlerin daha etkili ve verimli bir şekilde sürdürülebilmesi için bilimsel çalışma ve analiz yapmak	1	2	3	4	5
16. Hizmet verilmesinde ortaya çıkabilecek teknik sorunları araştırmak	1	2	3	4	5
17. SAM'de KOBİ'lerin faydalanabileceği yeni çalışma alanları yaratmak	1	2	3	4	5
18. Kurum-içi kişi ve birimler arasındaki koordinasyon ve kontrolü sağlamak	1	2	3	4	5
19. Araştırma yaparak çalışma alanıyla ilgili yeni bilgi oluşturmak	1	2	3	4	5
20. KOBİ'lerin kalkınmasına yönelik yer temin etmek ve araçları sunmak	1	2	3	4	5
21. KOBİ'lere yönelik hizmetlerdeki potansiyel sorunları belirleyerek çözümüne ilişkin yollar aramak	1	2	3	4	5

F – BÜTÜNLESME MEKANİZMALARI

Aşağıdaki soruları cevaplandırırken size en uygun gelen seçeneği daire içine alınız.	Kesinlikle katılmıyorum	Katılmıyorum	Ne katılıyorum ne katılmıyorum	Katılıyorum	Kesinlikle katılıyorum
1. Yaptığım iş kurumdaki diğer işlere göre daha çok koordinasyon gerektirir.	1	2	3	4	5
2. İşimi tamamlayabilmem için kurum-içi ve kurum-dışı kişi ve/veya birimlerle sürekli bilgi alışverişinde bulunmam gerekir.	1	2	3	4	5
3. Kurumumuzda herkesin uyması gereken çok sayıda ortak kural vardır.	1	2	3	4	5
4. Çeşitli birimlerden çalışanlar ve amirlerle sık sık biraraya gelerek kurumumuzun durumu ve gidişatı hakkında görüş alışverişinde bulunuruz.	1	2	3	4	5
5. Kurumumuzda birimlerarası iletişim ve koordinasyon her zaman sağlanır.	1	2	3	4	5
6. Birimimize personel alımı kararlarında görüşüm alınır.	1	2	3	4	5
7. Profesyonel personelin terfi edilmesi kararlarında görüşüm alınır.	1	2	3	4	5
8. Yeni kurumsal kararların alınması ile ilgili olarak görüşüm alınır.	1	2	3	4	5
9. Yeni programların hayata geçirilmesi ile ilgili olarak görüşüm alınır.	1	2	3	4	5
10. Bir karar amir(ler)im tarafından onaylanmadıkça fazla ilerleme kaydedemem.	1	2	3	4	5
11. Kendi kararlarını verme eğiliminde olan birisi burada desteklenmez.	1	2	3	4	5
12. Küçük sayılabilecek işler için bile son karar amir(ler)ime aittir.	1	2	3	4	5
13. Hemen hemen herşeyi yapmadan önce amirime sormam gerekir.	1	2	3	4	5
14. Her kararımın amirim tarafından onaylanması gerekir.	1	2	3	4	5
15. Kurum içi koordinasyon sağlama yolları yeterlidir.	1	2	3	4	5
16. Kurum içi koordinasyonu sağlamak için mevcut yollar çalışanlar tarafından etkili olarak kullanılmaktadır.	1	2	3	4	5

	Kesinlikle katılmıyorum	Katılmıyorum	Ne katılıyorum ne katılmıyorum	Katılıyorum	Kesinlikle katılıyorum
17. Birimimizin diğer kişi ve kurumlarla bağlantı kurması için gerekli mekanizmalar mevcuttur.	1	2	3	4	5
18. Kendimi bir iş grubuna ait hissediyorum.	1	2	3	4	5
19. Birim mensuplarıyla iş ilişkisi yürütmem kolaydır.	1	2	3	4	5
20. Birim mensuplarıyla koordineli bir şekilde çalışmam kolaydır.	1	2	3	4	5
21. Birimlerarası proje bazlı çalışmalar rahat bir şekilde yürütülür.	1	2	3	4	5

22. Aşağıda diğer kişi ya da birimlerle birlikte gerçekleştirilmesi gereken işleri yaparken kullanılacak yöntem/mekanizmalar yer almaktadır. Lütfen en çok kullandığınız yönetime 5; daha az kullandıklarınıza 4, 3 ve 2; en az kullandığınız yönetime 1 puan vererek sıralayınız.

- _____ Üstlerin astları koordine etmesi
- _____ Doğrudan iletişim (telefon, birebir görüşme, faks, e-posta, vb.)
- _____ Belli çalışanların zaman zaman diğer birimlere bilgi vermesi
- _____ Bir defaya mahsus veya kısa süreli işler için oluşturulan birimlerarası geçici komiteler
- _____ Uzun dönemli çalışmalar için oluşturulan birimlerarası kalıcı ekipler

23. Koordinasyonu daha yeterli ve/veya etkili bir biçimde gerçekleştirmek için başka yöntemler de olmalı mıdır? Bu yöntemler neler olabilir?

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G – BİREYLERARASI EĞİLİM

Bugüne kadar birlikte çalıştığınız tüm iş arkadaşlarınızı düşününüz. Bu kişilerin içinde en az anlaşılabildiğiniz, geçinmesi en zor olduğunu düşündüğünüz ve birlikte bir görevi en az başarıyla tamamlayabileceğiniz kişiyi seçiniz. Bu kişi geçmişte birlikte çalıştığınız ya da halen birlikte çalışmakta olduğunuz birisi olabilir. Eğer bu şekilde nitelendirebileceğiniz biri yoksa, geçimi en zor olacak bir kişiyi kafanızda canlandırınız. Aşağıdaki sorulara bu kişiyi düşünerek yanıt veriniz. Sizce bu kişi aşağıdaki özelliklerden hangisine ne derecede sahip (ya da sahip olabilir)? Lütfen bu kişinin bazı özelliklerinin iyi olabileceğini, fakat sizin bu kişiyle iş konusunda anlaşamadığınızı düşünerek yanıt veriniz.

Sevimli	1	2	3	4	5	6	7	8	Sevimsiz
Dostça	1	2	3	4	5	6	7	8	Dostça olmayan
Dışlayan	1	2	3	4	5	6	7	8	Benimseyen
Gergin	1	2	3	4	5	6	7	8	Rahat
Mesafeli	1	2	3	4	5	6	7	8	Yakın
Soğuk	1	2	3	4	5	6	7	8	Sıcak
Destekleyici	1	2	3	4	5	6	7	8	Düşmanca
Sıkıcı	1	2	3	4	5	6	7	8	İlginç
Tartışmacı	1	2	3	4	5	6	7	8	Uyumlu
Neşesiz	1	2	3	4	5	6	7	8	Neşeli
İçten, samimi	1	2	3	4	5	6	7	8	Temkinli
Arkadan konuşan	1	2	3	4	5	6	7	8	Sadık
Güvenilmez	1	2	3	4	5	6	7	8	Güvenilir
Düşünceli	1	2	3	4	5	6	7	8	Düşüncesiz
Kötü,hoşa gitmeyen	1	2	3	4	5	6	7	8	İyi, hoşa giden
Tatlı, hoş	1	2	3	4	5	6	7	8	Huysuz, ters
İçten pazarlıklı	1	2	3	4	5	6	7	8	Samimi
Nazik	1	2	3	4	5	6	7	8	Kaba

H - KURULUSUNUZUN ORTAMI

Lütfen aşağıdaki sorular için kuruluşunuzun olması gereken ortamını DEĞİL, MEVCUT ORTAMINI düşününüz. Soruları hem kişisel tecrübelerinize hem de gözlemlediğiniz ya da işittiğiniz şeylere göre cevaplayınız. Bu sorularda “çalışanlar” ile kasıt siz, çalışma arkadaşlarınız ve sizinle aynı düzeyde çalışan kişilerdir. Aynı şekilde “amir” ile kastımız sizin amiriniz, o düzeydeki diğer insanlar ve daha üst yöneticilerdir.

Bu kurumda ;	Kesinlikle katılmıyorum	Katılmıyorum	Ne katılıyorum ne katılmıyorum	Katılıyorum	Kesinlikle katılıyorum
1. Toplantılarda amirler konuşur, çalışanlar dinler.	1	2	3	4	5
2. Çalışanlar kişisel amaçlarına ulaşmakla ilgilenirler.	1	2	3	4	5
3. Çalışanlar yeni başlayan elemanların uyum sağlaması için gayret sarfederler.	1	2	3	4	5
4. Çalışanlar başarılı olduğunda genellikle amirlere pay çıkartılır.	1	2	3	4	5
5. İnsanlar bağımsız çalışmayı tercih ederler.	1	2	3	4	5
6. Çalışanlar iş arkadaşlarıyla görüşebilmek için işe gitmeyi dört gözle beklerler.	1	2	3	4	5
7. Her kademedeki çalışanlar iyi fikirleri olduğu zaman takdir edilirler.	1	2	3	4	5
8. Otoritenin yukarıdan aşağı işlediği açıktır.	1	2	3	4	5
9. Çalışanlar kendi iş ve sorumluluklarına öncelik verirler.	1	2	3	4	5
10. Çalışanlar çoğu zaman iş dışında da arkadaşlırlar.	1	2	3	4	5
11. Amirler çalışanlara kendileriyle eşit gibi davranırlar.	1	2	3	4	5
12. Çalışanlar iş dışında da görüşürler.	1	2	3	4	5
13. Bireyler kendilerini kollarırlar.	1	2	3	4	5
14. Çalışanların çoğu amirlerinden yardım istemeleri gerektiğinde tedirgin olurlar.	1	2	3	4	5
15. Çalışanlarla amirlerin iş dışı günlük konularda sohbet etmeleri olağandır.	1	2	3	4	5
16. Bu kuruluştakiler takım çalışmalarında iyi çalışırlar.	1	2	3	4	5

Bu kurumda ;	Kesinlikle katılmıyorum	Katılmıyorum	Ne katılıyorum ne katılmıyorum	Katılıyorum	Kesinlikle katılıyorum
17. Çoğu çalışan amirinin otoritesini sorgulamaktan rahatsız olur.	1	2	3	4	5
18. Çalışanlar sık sık birbirlerinin işlerine yardım ederler.	1	2	3	4	5
19. Çalışanlar yalnızca kendi işleriyle meşgul olurlar.	1	2	3	4	5
20. Çalışma arkadaşlarımız ailenizden biri gibidirler.	1	2	3	4	5
21. Amirler ve yöneticilerin özel park yerleri gibi ayrıcalıkları vardır.	1	2	3	4	5
22. Çalışanlar amirlerine rahatlıkla ilk isimleriyle hitap ederler.	1	2	3	4	5
23. İş dışı sosyal faaliyetler düzenlenir.	1	2	3	4	5
24. Çalışanlar başarıları için kişisel olarak takdir toplamaya çalışırlar.	1	2	3	4	5
25. Personel politikalarında çalışanların ailevi ihtiyaçları da gözetilir (kreş, çocuk sağlık yardımı, esnek saat uygulaması, vb.).	1	2	3	4	5
26. Çalışanlar önemli kuruluş haberleri hakkında bilgilendirilirler.	1	2	3	4	5
27. Çalışanlar hem işle ilgili hem özel konuları iş arkadaşlarıyla konuşmaktan çekinmezler.	1	2	3	4	5
28. Amirlere, çalışanlara tanınmayan ayrıcalıklar tanınır.	1	2	3	4	5
29. Güçlü bir işbirliği ruhu vardır.	1	2	3	4	5
30. Deneyime statüden daha fazla değer verilir.	1	2	3	4	5
31. Yetkinin kimde olduğu bellidir.	1	2	3	4	5
32. Çalışanlar çoğu zaman işlerini bir deneme-yanılma süreciyle öğrenirler.	1	2	3	4	5
33. Yemek molaları çalışma arkadaşlarının sosyalleşme vakti olarak görülür.	1	2	3	4	5
34. Amirler önemli kararlar alınması gerektiğinde çalışanlara fikir sorar.	1	2	3	4	5
35. Çalışanlar diğer çalışanlara özel ayatlarıyla ilgili sorular sormanın uygun olmadığını düşünürler.	1	2	3	4	5
36. Çalışanlar için gerektiğinde iş arkadaşlarından yardım istemek kolaydır.	1	2	3	4	5

B u k u r u m d a ;	Kesinlikle katılmıyorum	Katılmıyorum	Ne katılıyorum ne katılmıyorum	Katılıyorum	Kesinlikle katılıyorum
37. Çalışanlar ve amirler yemekleri aynı masada yan yana yerler.	1	2	3	4	5
38. Amirlerin kararları sorgulanmaz.	1	2	3	4	5
39. Çalışma arkadaşlarım benim iyiliğimi düşünürler.	1	2	3	4	5
40. Çalışanlar herkesin önünde amirleriyle fikir ayrılığına düşmekten çekinmezler.	1	2	3	4	5
41. Amirlerin asları için fazla vakti yoktur.	1	2	3	4	5
42. Amirler karar alırken çalışanların ihtiyaçlarını göz önünde tutarlar.	1	2	3	4	5
43. Amirler çalışanları onları doğrudan etkileyecek konularda bilgilendirirler.	1	2	3	4	5

Anketle ilgili olarak eklemek istediğiniz düşünceler:

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Zamanınız ve ilginiz için teşekkür eder, çalışmalarınızda başarılar dilerim. Bu anketin sonuçları değerlendirildikten sonra SAM Başkanlığı'na bildirilecektir.

Sorularınız için:

Araştırma Görevlisi BERNA TARI

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(THE ENGLISH VERSION OF THE QUESTIONNAIRE)

SAM ORGANIZATIONAL ANALYSIS QUESTIONNAIRE

This questionnaire has been prepared to investigate the relationships among SAM's environment, structure, and culture. The results will be used for a graduate study thesis being prepared in Middle East Technical University. All the information will be kept confidential and the results will be presented in totals, not in terms of individual responses. Please take into account "what is", rather than "what should be.

A – PERSONAL INFORMATION

1. Process group/department:
2. Status:
3. Last school graduated and degree:
4. Total work experience: years
5. Work experience in SAM: years
6. I have a written employment contract. Yes No

B – TASK ENVIRONMENT CHARACTERISTICS

1. Please rank the organizations or factors that exist in your environment, which affect or are affected by your tasks from 1 to 5 in terms of importance. Please give 5 points to the item that is the most important; give 4, 3, and 2 points to those items that are less important; and give 1 point to the item that is the least important. Leave the factors as unmarked that do not apply to you. If there are items that you want to state but that do not appear on the list, add them on the blank lines provided at the end.

- _____ Ministry of Industry and Trade
- _____ State Planning Institute
- _____ Other official organizations
- _____ Industry and trade chambers
- _____ Nongovernmental organizations
- _____ Large scale enterprises
- _____ SMEs
- _____ Other SAM units (eg. SERSAMs, TEKSAMs)
- _____
- _____
- _____

Please circle the score that is most suitable for the statement given.	I strongly disagree	I disagree	I neither agree nor disagree	I agree	I strongly agree
2. The individuals and/or organizations that I interact due to my job cannot be determined easily.	1	2	3	4	5
3. The individuals and/or organizations that I interact due to my job and their characteristics change over time.	1	2	3	4	5
4. People here do the same job in the same way every day.	1	2	3	4	5
5. One thing people like around here is the variety of work.	1	2	3	4	5
6. Most jobs have something new happening every day.	1	2	3	4	5
7. There is something different to do every day.	1	2	3	4	5
8. I learn new things in my work.	1	2	3	4	5
9. I use all my knowledge and skills in my work.	1	2	3	4	5
10. A must make very complicated decisions in his/her work, B only has to make very simple decisions.	1	2	3	4	5

	Never	Seldom	Sometimes	Less than once a week	More than once a week
11. I receive tasks that are extraordinary and particularly difficult.	1	2	3	4	5

C – TASK CHARACTERISTICS

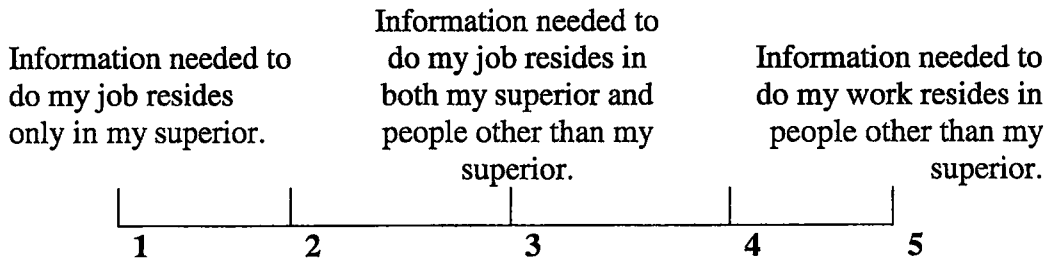
Please circle the score that is most suitable for the statement given.	I strongly disagree	I disagree	I neither agree nor disagree	I agree	I strongly agree
1. My job definition is quite different from other job definitions.	1	2	3	4	5
2. My duties are presented in every detail.	1	2	3	4	5
3. Employee roles are strictly defined.	1	2	3	4	5
4. My job definition is fixed and it changes only after promotion.	1	2	3	4	5
5. My tasks are clear and standard.	1	2	3	4	5
6. Things to be done in case of changes are already defined.	1	2	3	4	5
7. There is no change or flexibility in working groups.	1	2	3	4	5

There are definitions for the scores 1,3, and 5. Please give 2 points for statements between 1 and 3, and give 4 points for statements between 3 and 5.

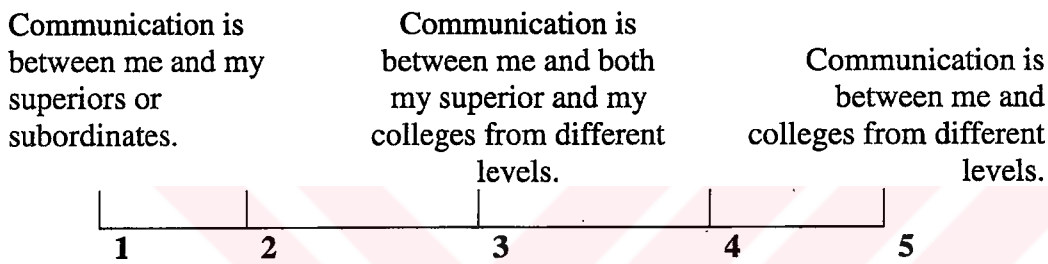
8.

Control of my work is carried out by unwritten organizational rules only.	Control of my work is carried out by both written rules and unwritten organizational rules.	Control of my work is carried out by written rules only.

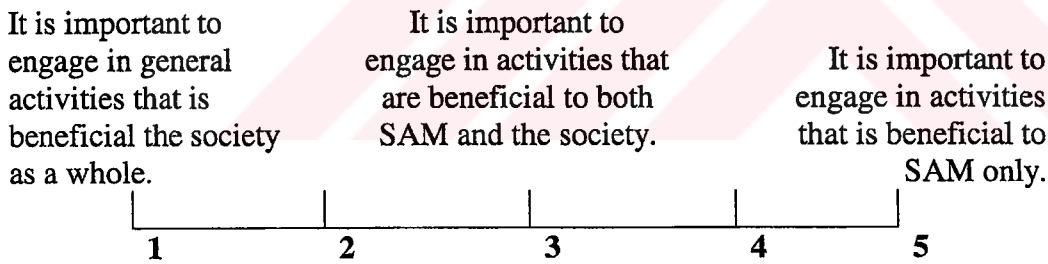
9.



10.



11.



D – FORMALIZATION AND TIME ORIENTATIONS

Please circle the score that is most suitable for the statement given.	I strongly disagree	I disagree	I neither agree nor disagree	I agree	I strongly agree
1. All the rules related to my work are defined by my superior in written form.	1	2	3	4	5
2. How I do my job is specified by written rules.	1	2	3	4	5
3. I have a handbook showing rules about my job.	1	2	3	4	5
4. My job definition is evident.	1	2	3	4	5
5. I need a written document showing my superior(s)' approval before I can start doing a task.	1	2	3	4	5
6. People communicate more through written documents or forms.	1	2	3	4	5
7. Senior meetings are taken into agenda.	1	2	3	4	5
8. Important meetings are written down.	1	2	3	4	5
9. I need to fill a form or write a document for most tasks.	1	2	3	4	5
10. People who are assigned to a task are informed through written documents.	1	2	3	4	5
11. For most tasks, there are well-developed rules and policies.	1	2	3	4	5
12. My decisions are closely monitored to ensure that rules and policies are followed.	1	2	3	4	5
13. For most situations, there are manuals that define the course of action to be taken.	1	2	3	4	5
14. For most jobs, there are written job descriptions.	1	2	3	4	5
15. Everyone has a well-defined and specific job to do.	1	2	3	4	5

16. You are asked to write down three percentages (%) for this question. These percentages should total to 100. Each percentage score shows your tendency to do work whose duration is that much.

For tasks whose results are seen in 1 month or less, I use % of my time
 For tasks whose results are seen in 1 month to 1 year, I use % of my time
 For tasks whose results are seen in 1 year to 5 years, I use % of my time
Total % 100

E – GOAL ORIENTATION

This is a list showing types of possible activities that you engage in. Please put “X” to those items that you do most frequently.					
	Never	Rarely	Sometimes	Often	Always
1. Calculating and tracking the costs of activities	1	2	3	4	5
2. Investigating the effects of services on SMEs and on the society	1	2	3	4	5
3. Ensuring that the researches and job results are published	1	2	3	4	5
4. Determining and tracking the possible operational problems of services provided to SMEs	1	2	3	4	5
5. Trying to make activities sustain the national scientific knowledge	1	2	3	4	5
6. Making presentations in order to carry out planned activities	1	2	3	4	5
7. Engaging in scientific activities to make new service ideas happen	1	2	3	4	5
8. Ensuring that there is sufficient place and equipment for services	1	2	3	4	5
9. Trying to figure out the effects of new service ideas on current services and the problems related to publicity	1	2	3	4	5
10. Figuring out the problems that prevent services to be on time and in the right place	1	2	3	4	5
11. Estimating the technical problems that can happen while giving a service	1	2	3	4	5

This is a list showing types of possible activities that you engage in. Please put "X" to those items that you do most frequently.	Never	Rarely	Sometimes	Often	Always
12. Figuring out ways that make services reach out the target market	1	2	3	4	5
13. Determining and planning for the required resources for new service ideas	1	2	3	4	5
14. Determining the required resource and price for services	1	2	3	4	5
15. Tracking quality practices for services and departmental activities	1	2	3	4	5
16. Engaging in scientific practices and analyses to continue to work more efficiently and effectively	1	2	3	4	5
17. Creating new service areas in SAM that SMEs can benefit	1	2	3	4	5
18. Ensuring control and coordination between and among individuals and groups within the organization	1	2	3	4	5
19. Creating new information about my job area through search activities	1	2	3	4	5
20. Providing place and equipment and giving the required medium to make SMEs prosper	1	2	3	4	5
21. Estimating the possible problems about SME services and figuring out ways of overcoming them	1	2	3	4	5

F – INTEGRATION CHARACTERISTICS

Please circle the score that is most suitable for the statement given.	I strongly disagree	I disagree	I neither agree nor disagree	I agree	I strongly agree
1. My job requires less coordination than other jobs.	1	2	3	4	5
2. I need to exchange information with other groups to do my job.	1	2	3	4	5
3. There are many common rules that everyone has to obey in my organization.	1	2	3	4	5
4. We frequently come together with personnel from other departments in order to discuss the organization's strategic situation and direction.	1	2	3	4	5
5. There is always interdepartmental coordination and communication in our organization.	1	2	3	4	5
6. I participate in decisions to hire new staff.	1	2	3	4	5
7. I participate in decisions on the promotion of any of the professional staff.	1	2	3	4	5
8. I participate in decisions on the adoption of new policies.	1	2	3	4	5
9. I participate in the decisions on the adoption of new programs.	1	2	3	4	5
10. There can be little action taken until a supervisor approves a decision.	1	2	3	4	5
11. A person who wants to make his own decisions would be quickly discouraged here.	1	2	3	4	5
12. Even small matters have to be referred to someone higher up for a final answer.	1	2	3	4	5
13. I have to ask my boss before I do almost anything.	1	2	3	4	5
14. Any decision I make has to have my boss's approval.	1	2	3	4	5
15. The coordinative mechanisms are sufficient within the organization.	1	2	3	4	5
16. The existing coordinative mechanisms are effectively used by personnel.	1	2	3	4	5
17. There are sufficient mechanisms for our group to make connections with other individuals and organizations.	1	2	3	4	5

Please circle the score that is most suitable for the statement given.	I strongly disagree	I disagree	I neither agree nor disagree	I agree	I strongly agree
18. I felt myself part of a work group.	1	2	3	4	5
19. Maintaining working relationships with group members is easy.	1	2	3	4	5
20. Coordinating with group members is easy.	1	2	3	4	5
21. Interdepartmental joint projects are smoothly done.	1	2	3	4	5

22. The possible methods or mechanisms that can be used to do jobs with other individuals or groups are listed below. Please rank them according to the frequency of usage by giving scores 1 to 5, with 5 points given to the method used most.

- _____ Superiors coordinating subordinates
- _____ Direct communication (such as face-to-face, telephone)
- _____ Giving information to other groups by specific individual(s)
- _____ Interdepartmental temporary committees for one-time or short-term tasks
- _____ Interdepartmental permanent teams for long-term tasks

23. Do you think there should be other mechanisms to make coordination more sufficient and/or effective? If so, what are those mechanisms?

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G - INTERPERSONAL ORIENTATION

Think of all the people with whom you have ever worked, and then think of the person with whom you could work least well in getting a job done. He or she may be someone with whom you work now or with whom you have worked in the past. If there is not such a person, imagine one and answer the questions accordingly. How much does this person have the following qualities? Please keep in mind that this person may have good qualities but you just cannot work well with him/her.

Pleasant	1	2	3	4	5	6	7	8	Unpleasant
Friendly	1	2	3	4	5	6	7	8	Unfriendly
Rejecting	1	2	3	4	5	6	7	8	Accepting
Tense	1	2	3	4	5	6	7	8	Relaxed
Distant	1	2	3	4	5	6	7	8	Close
Cold	1	2	3	4	5	6	7	8	Warm
Supportive	1	2	3	4	5	6	7	8	Hostile
Boring	1	2	3	4	5	6	7	8	Interesting
Quarrelsome	1	2	3	4	5	6	7	8	Harmonious
Gloomy	1	2	3	4	5	6	7	8	Cheerful
Open	1	2	3	4	5	6	7	8	Guarded
Backbiting	1	2	3	4	5	6	7	8	Loyal
Untrustworthy	1	2	3	4	5	6	7	8	Trustworthy
Considerate	1	2	3	4	5	6	7	8	Inconsiderate
Nasty	1	2	3	4	5	6	7	8	Nice
Agreeable	1	2	3	4	5	6	7	8	Disagreeable
Insincere	1	2	3	4	5	6	7	8	Sincere
Kind	1	2	3	4	5	6	7	8	Unkind

H – ORGANIZATIONAL CLIMATE

Please consider your organization's current climate, rather than the climate that you think should exist. Answer the questions by both your own experiences and what you observe and hear. "Employees" mean your colleges at the same level in the hierarchy. Similarly, "supervisors" mean higher-level managers.

In this organization ;	I strongly disagree	I disagree	I neither agree nor disagree	I agree	I strongly agree
1. During discussions supervisors talk, workers listen	1	2	3	4	5
2. Workers concerned with achieving personal goals	1	2	3	4	5
3. Workers strive to help new employees fit in	1	2	3	4	5
4. Supervisors are rewarded for subordinates' successes	1	2	3	4	5
5. People in this company prefer to work independently	1	2	3	4	5
6. Employees here look forward to going to work so they can see their coworkers	1	2	3	4	5
7. Employees at all levels of the organization are recognized when they have good ideas	1	2	3	4	5
8. In this company, it is clear that authority flows from the top down	1	2	3	4	5
9. Workers are primarily concerned with their own jobs and responsibilities	1	2	3	4	5
10. Workers are often friends outside of work	1	2	3	4	5
11. Supervisors treat workers as equals	1	2	3	4	5
12. Employees in this company socialize with each other outside of work	1	2	3	4	5
13. Workers here look out for themselves	1	2	3	4	5
14. Most workers feel nervous when they need their supervisors' help	1	2	3	4	5
15. It is common for supervisors and workers to have casual conversations	1	2	3	4	5
16. Workers in this organization work well together in teams	1	2	3	4	5

In this organization ;	I strongly disagree	I disagree	I neither agree nor disagree	I agree	5
17. Most workers would feel uncomfortable questioning their supervisor's authority	1	2	3	4	5
18. Workers frequently help each other with their work	1	2	3	4	5
19. Employees like to stick to their own job	1	2	3	4	5
20. Coworkers in this company are like members of your family	1	2	3	4	5
21. Supervisors and managers have privileges like parking spaces	1	2	3	4	5
22. Employees may call their supervisor by the first name	1	2	3	4	5
23. This organization sponsors social events outside of work	1	2	3	4	5
24. Workers try to get individual recognition for their accomplishments	1	2	3	4	5
25. Management strives to make this a family-friendly place to work	1	2	3	4	5
26. Workers are kept informed about important company news	1	2	3	4	5
27. People feel free to discuss both work-related and personal concerns with their coworkers	1	2	3	4	5
28. Supervisors are given special privileges that workers do not get	1	2	3	4	5
29. There is a strong spirit of cooperation here	1	2	3	4	5
30. Experience is valued more than status in this organization	1	2	3	4	5
31. In this organization, it is easy to tell who is in charge	1	2	3	4	5
32. Workers often learn about their jobs through the process of trial and error	1	2	3	4	5
33. Mealtimes are seen as a time to socialize with one's coworkers	1	2	3	4	5
34. Supervisors ask for input from workers when important decisions have to be made	1	2	3	4	5
35. Employees here do not believe it is appropriate to ask other employees about their personal lives	1	2	3	4	5

In this organization ;	I strongly disagree	I disagree	I neither agree nor disagree	I agree
36. It is easy for workers in this organization to ask their coworkers for help when they need it	1	2	3	4 5
37. Workers and supervisors eat meals side by side at the same tables	1	2	3	4 5
38. Decisions by supervisors are not questioned	1	2	3	4 5
39. My coworkers care about my well-being	1	2	3	4 5
40. Workers feel free to disagree with their supervisors in public	1	2	3	4 5
41. Supervisors have little time for their subordinates	1	2	3	4 5
42. Supervisors consider the needs of employees when making decisions	1	2	3	4 5
43. Supervisors keep workers informed about matters that directly affect them	1	2	3	4 5

Anything you might want to add:

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Thank you for your time and efforts. The results of this questionnaire will be given to SAM Presidency.

For questions:

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APPENDIX B

INTERVIEW QUESTIONS

The first five questions measure the uncertainty level in SAM's general environment with the purpose of determining the degree of environmental uncertainty.

The points gathered from the five questions will be summed and averaged to obtain an overall point for environmental uncertainty. Environmental uncertainty is measured by using questions used by Dickson and Weaver (1997).

Please indicate your level of agreement for the questions provided below:

	I strongly disagree	I disagree	I neither agree nor disagree	I agree	
I-1. There are frequent strategic changes due to changes in the organization's target market and/or other organizations that are interacted. (SAM'in hedef kitlesinde ve/veya etkileşim halinde olduğu kurum ve kuruluşlarda meydana gelen değişikliklerden dolayı sık sık stratejik değişiklikler yapılır.)	1	2	3	4	5
I-2. The services should be changed frequently according to new situations and through time. (SAM'ce sunulan hizmetlerin zamana ve/veya koşullara göre sık sık değiştirilmesi gerekir.)	1	2	3	4	5
I-3. The possible changes about the organizations with which SAM has interactions cannot be predicted in advance. (SAM'in etkileşim halinde olduğu kurum ve kuruluşlarda olabilecek değişiklikler önceden tahmin edilemez.)	1	2	3	4	5
I-4. The possible changes about the target market cannot be predicted in advance. (SAM'in hedef kitlesinde olabilecek değişiklikler önceden tahmin edilemez.)	1	2	3	4	5
I-5. The methods of services change over time. (Verilen hizmetlerin yöntemleri zaman içerisinde değişikliğe uğrar.)	1	2	3	4	5

Other questions asked to senior managers during interviews are:

What is the nature of your relations with the following factors and do they represent uncertainty?

I-6. SMEs?

I-7. Large firms and associations?

I-8. Banks and financial institutions?

I-9. Government and public organizations?

I-10. Nongovernmental organizations?

I-11. General economic and societal forces?

I-12. What are the other elements that should be included in the general environment of SAM?

There is one question asking for the level and effectiveness of integration at SAM.

I-13. What are the integration mechanisms used between and among groups? Are they enough? Effective?

Two questions are asked to link the organizational discussion to organizational effectiveness:

I-14. What are the most important organizational problems here? (in order to find areas where problems are linked to or caused by structural and/or cultural situations.)

I-15. What are the critical success factors of SAM?

Lastly, the subsystems are found by asking the following question:

I-16. What are the different subsystems in SAM structure?

APPENDIX C

INFORMATION FROM SECONDARY AND ORGANIZATIONAL SOURCES

Job definitions, personnel information (such as proportion of technical personnel), and organizational handbooks (such as quality handbook) are used to supplement any analyses in this thesis.

S-1. Environmental complexity: Mean number of establishments, mean number of employees, regional dispersion in industrial production, regional dispersion in employment, and percent of workers not covered by a collective bargaining agreement.

This piece of information is required to find the level of general environment complexity (Jarley, Fiorito, Delaney, 1997: 860), which will be used in determining the level of environmental uncertainty since complex environments can also be considered as uncertain (Duncan, 1972).

Questions 2 to 7 are taken from Lawrence and Lorsch (1967: 17) in order to find the level of formalization. Each choice represents one point from low to high.

S-2. Span of control

The table below shows the number of people each supervisor is responsible for.

Table AppC.1. Span of control in SAM.

	Total Span of Control	Average Span of Control
Presidency		
1 President	3	3
3 President Assistants	25	8,33
3 Process Executives	56	18,67
6 Managers	52	8,67
Presidency Average Span of Control		10,46
Entrepreneurship Institute		
1 Manager	19	19
Regional Development Institute		
1 Manager	28	28
Market Research and Export Development Institute		
1 Manager	13	13
Institutes Average Span of Control		20
SERSAMs		
28 SERSAM Managers	240	8,57
SERSAMs Average Span of Control		8,57
TEKSAMs		
8 TEKSAM Managers	57	7,13
TEKSAMs Average Span of Control		7,13
TOTAL Average Span of Control For 52 Managers	493	9,48

If the average span of control is 11-10 people, the score is 1; 9-8 people, the score is 2; 7-6 people, the score is 3, and 5-3 people, the score is 4. The average span of control is found to be close to 9 people, indicating a moderately formalized structure (Lawrence and Lorsch, 1967: 17), with a score of 2.

S-3. Number of levels to a shared supervisor

If there are 7 levels, the score is 1; 8-9 levels, the score is 2; 10-11 levels, the score is 3; 12 levels, the score is 4. The number of levels to a shared supervisor is smaller than 7 in SAM, indicating a low level of formalization according to Lawrence and Lorsch (1967: 17), with a score of 1.

S-4. Kurumunuzda yazılı kurallarla ilgili nasıl bir uygulama vardır?

- (a) Yazılı kurallar yoktur. (1 point)
- (b) Basit ve rutin işler için belirlenmiş biraz ayrıntılı yazılı kurallar vardır. (2 points)
- (c) Bazı basit ve rutin işler için belirlenmiş kapsamlı yazılı kurallar vardır. (3 points)
- (d) Bütün işler için belirlenmiş çok ayrıntılı yazılı kurallar vardır. (4 points)

Answer: There are rules for each task but with low level of details. This choice is closest to a position between b and c, with a score of 2.5.

S-5. Birimsel performans değerlendirme sonuçlarını ne sıklıkta elde edersiniz?

- (a) Ayda birden az (1 point)
- (b) Ayda bir (2 points)
- (c) Haftada bir (3 points)
- (d) Her gün (4 points)

Answer: The performance evaluation results are distributed to the personnel once a year. Therefore, the answer is a, with a score of 1.

S-6. Performans değerlendirme sonuçları hangi şekilde sunulur? Lütfen tüm performans değerlendirme sonuçlarını düşünüp genel olarak geçerli olan cevabı işaretleyiniz.

- (a) Genel sözlü sonuçlar (1 point)
- (b) Genel yazılı sonuçlar (2 points)
- (c) Daha spesifik istatistiksel sonuçlar (3 points)
- (d) Çok detaylı istatistiksel sonuçlar (4 points)

Answer: The results are distributed in a written format with a low level of detail. Therefore, the answer is b, with a score of 2.

S-7. Birimsel performans kriterlerinizle ilgili olarak hangisi daha uygundur?

- (a) Birimimizde uygulanmakta olan bir performans değerlendirme sistemi yoktur. (1 point)
- (b) Birimimizde uygulanmakta olan bir performans değerlendirme sistemi vardır; ancak belirli ve sabit kriterler yoktur. (2 points)
- (c) Birimimizde uygulanmakta olan bir performans değerlendirme sistemi vardır; ancak başarılarımızı ölçen kriter sayısı 5'ten azdır. (3 points)
- (d) Birimimizde uygulanmakta olan bir performans değerlendirme sistemi vardır ve başarılarımızı ölçen kriter sayısı 5'ten fazladır. (4 points)

Answer: The performance evaluation of the employees are done according to specified criteria. However, the performance evaluation of a certain department or group is not done carried out according to prespecified criteria. Therefore, the answer is b, with a score of 2.

S-8. Extent of integrating roles and/or integrating departments, if any.

This information is needed to supplement the information taken from F22, which is about the integrative mechanisms in SAM. The answer is that there are no formal integrating roles or integrating departments.

APPENDIX D

OPERATIONALIZATION OF CONCEPTS

The questionnaire contains questions in different forms. Some of the questions are taken from original studies, some others are drawn from the relevant literature, and still others are newly constructed using existing knowledge. When the question is marked with a star (*) are taken from the original sources. Just their wording have been modified. For instance, when there is a need to know whether tasks are broken down or common, the question is asked directly. However, when there is a need to know, for instance, the level of formalization in the organization, scales and measurements that are proven to be valid and reliable by previous scholars are used.

The following discussion summarizes which question is used to measure which concept. Letters "A", "B", "C", "D", "E", "F", "G", and "H" indicate that the question was asked in that part of the questionnaire (Appendix A); "T" indicates that the question was asked during interviews (Appendix B); "S" indicates that the information is taken directly from secondary and/or organizational sources (Appendix C).

Table AppD.1. Operationalization of concepts.

Needed Information	Associated Question(s) and Source(s)
General environmental uncertainty	S1 (Jarley, Fiorito, Delaney, 1997: 860) I1 + I2 + I3 + I4 + I5 (Dickson and Weaver, 1997) I6 * + I7 * + I8 * + I9 * + I10 * + I11 * + I12 *
Tasks: broken down or common	C1 * + C2 * C3 (Schemel, 1997: 8)
Tasks: defined strictly or redefined continuously	C4 * + C5 * C6 (Daft, 2001: 214)
Roles and means: defined or general	C7 (Schemel, 1997: 8)
Control: contract or community of interest	C8 *
Information: chief executive or anywhere	C9 *
Communication: vertical or both vertical and horizontal	C10 *
Knowledge: internal or external	C11 *
Task environment uncertainty	B1 * ⁸ B2 * + B3 * B4 (Robbins, 1990: 183; Dewar et al., 1980: 122; Withey et al., 1983: 59; Hage and Aiken, 1969: 368) B5 + B6 + B7 (Hage and Aiken, 1969: 368) B8 + B9 + B10 + B11 (Frese, Kring, Soose, and Zempel, 1996: 62)

⁸ The uncertainty levels were analyzed and rated following discussions with Cemile Alptekin, Expert Assistant, Public Relations Department.

Figure AppD.1. (cont)

Level of formalization	<p><i>Standardization:</i> D1 (Hackman and Oldham, 1980: 278) D2 (Bedeian and Zammuto, 1991: 129, 130)</p> <p><i>Formalization:</i> D3 + D4 + D5 + D6 + D7 + D8 + D9 + D10 (Pugh, Hickson, Hinings, and Turner, 1968: 100-102). D11 + D12 + D13 + D14 + D15 (Nohria and Gulati, 1996: 1255). S2 + S3 + S4 + S5 + S6 + S7 (Lawrence and Lorsch, 1967: 17)</p>
Interpersonal orientation	G1 (Fiedler, 1976: 8)
Time orientation	D16 (Lawrence and Lorsch, 1967: 20)
Goal orientation	E1 - E21 (Lawrence and Lorsch, 1986: 258; Lorsch and Morse, 1974: 167)
Level of integration	<p>F1 * + F2 *</p> <p>F3 (Dougherty, 2001: 627) F4 (Westley, 1990) F5 *</p> <p><i>Centralization – participation in decision making:</i> F6 + F7 + F8 + F9 (Hage and Aiken, 1967: 78; Morgan, 1989: 365).</p> <p><i>Centralization – hierarchy of authority:</i> F10 + F11 + F12 + F13 + F14 (Hage and Aiken, 1967: 78, 79). I13 * S8 *</p>
Effectiveness of integration	<p>F15 * + F16 * + F17 * + F23 *</p> <p>F18 + F19 + F20 + F21 (Kraut, Rice, Cool, and Fish, 1998: 443). F22 (Jones, 2001: 42) I13 *</p>
Organizational climate	H1 through H43 (Robert and Wasti, in print).
Organizational effectiveness	I14 * + I15 *

Below is an explanation for some of the questions in parts B, D, E, F, and G of the questionnaire:

B4 – B11: The relationship between task environment uncertainty and task complexity or routineness has been stated by many scholars. For example, Robbins (1990) asserts that if a task is highly variable (and so nonroutine), then we can expect a large number of exceptions. Task environment uncertainty is also characterized by the number of exceptions. Therefore, while measuring task complexity, we are also measuring the level of task environment uncertainty. Besides Robbins, Dewar et al. (1980) also states that an organization which has an extensive and complex involvement with many aspects of each customer's case, which represents the task environment, is said to have complex tasks. Therefore, one of the sources of task complexity is the task environment itself, where the linkage between tasks and task environments is established. Similarly, Hage and Aiken (1969) maintain that a routine organization is likely to be concerned with stability and avoid innovations. Therefore, organizational goals are also effective in determining the level of task complexity. If we accept that organizational goals are affected by the organization's environment, that means we can use task complexity as an "indicator".

D1 – D16: The first 16 questions in Part D measure the level of formalization in the organization. Since formalization is the use of rules and job codification (degree of work standardization) in an organization (Hage and Aiken, 1967: 79), we can use the degree of *written* standardization as the degree of formalization. The first two questions measure the degree of standardization in SAM. The rest of the Likert-scale questions measure formalization directly.

E1 – E21: Each item in Part E represents whether that goal is related to the technical-economic subsystem, market subsystem, and scientific subsystem. Technical-economic goals are investigated in questions 1, 4, 8, 10, 14, 18, and 21. Market goals are investigated in questions 2, 6, 9, 11, 13, 17, and 20. Scientific goals are investigated in questions 3, 5, 7, 12, 15, 16, and 19.

F1 and F2: The first two questions in Part F are prepared by the researcher to measure the level of required integration, or “requisite integration” as it is called by March and Simon (1958). Requisite integration was also found after determining whether very differentiated subgroups exist within SAM.

F6 – F14: Since the hierarchy of authority is one way of ensuring integration (Lawrence and Lorsch, 1969), and since centralization is the most important indicators of hierarchy of authority, the level of centralization is used to see the level of integration along with other questions. The level of centralization was also used as a separate organizational variable in analyses.

F22: This question integrates the mechanisms of integration. Some of the mechanisms were studied through observation and interviews [liaison roles and integrating departments (S8)], but others, which cannot be observed, were directly asked to the respondents.

H1 – H43: Questions that measure the level of collectivism are 3, 6, 10, 12, 16, 18, 20, 25, 27, 29, 36, and 39. Questions that measure the level of horizontality are 7, 11, 15, 22, 23, 26, 30, 33, 34, 37, 40, 42, and 43. The other questions that measure individuality and verticality were excluded due to the reliability problems discussed in the methodology chapter.

APPENDIX E

FACTOR AND RELIABILITY ANALYSES FOR ORGANIZATIONAL CLIMATE QUESTIONS

Rotated Factor Matrix ^a

	Factor	
	1	2
CULT.H3	,612	9,0E-02
CULT.H6	,520	,151
CULT.H10	,483	,134
CULT.H12	,310	,230
CULT.H16	,605	,319
CULT.H18	,698	,167
CULT.H20	,653	,247
CULT.H23	,165	,468
CULT.H25	,430	,251
CULT.H27	,440	,156
CULT.H29	,659	,387
CULT.H33	,303	,315
CULT.H36	,666	,174
CULT.H39	,505	,308
CULT.H7	,313	,553
CULT.H11	,175	,621
CULT.H15	,123	,331
CULT.H22	4,0E-02	,281
CULT.H26	,370	,426
CULT.H30	,326	,513
CULT.H34	,186	,581
CULT.H37	,221	,480
CULT.H40	,228	,525
CULT.H42	,146	,740
CULT.H43	,267	,688

Extraction Method: Maximum Likelihood.
 Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Reliability Analysis for Collectivism Questions

N of Cases = 99,0

N of Items = 12

Alpha = ,8664

Reliability Analysis for Horizontality Questions

N of Cases = 101,0

N of Items = 13

Alpha = ,8550

Reliability Analysis for Individuality Questions (not included)

N of Cases = 102,0

N of Items = 10

Alpha = ,6876

Reliability Analysis for Verticality Questions (not included)

N of Cases = 106,0

N of Items = 8

Alpha = ,3911

APPENDIX F

SMALL AND MEDIUM SIZE ENTERPRISES

This appendix is discussed in two parts: SMEs in the world and SMEs in Turkey.

SMEs IN THE WORLD

SMEs are defined differently in different countries. Below is a list of some of those definitions (TMMOB, 1999: 48-55):

The United States: There is no official definition for small or medium enterprises. Generally speaking, enterprises that employ up to 100 people are considered to be small; enterprises that employ up to 1,000 people are considered to be medium-sized enterprises.

Germany: There is no written definition for SMEs. Moreover, general definitions for SMEs differ for each sector. The definition in the manufacturing sector states that enterprises with 1 to 49 employees are small and enterprises with 50 to 499 employees are medium enterprises.

Belgium: Without an official description, small and medium-sized enterprises are regarded to be those that employ 50 or less people.

Denmark: Small firms employ 6 to 20 people and medium-sized firms employ 21 to 75 people. However, this information is not written in official documents.

France: According to unofficial documents, small-sized enterprises employ less than 50 people; medium-sized enterprises employ 50 to 500 people.

The Netherlands: The unofficial references state that small enterprises are those firms that employ less than 10 people.

The United Kingdom: There is not an official definition for SMEs in England. SMEs are considered to be the firms with less than 200 employees.

Italy: Unofficially, SMEs are those firms with at most 500 employees.

The European Union: According to the EU's latest definition for SMEs in 1996 (Yorganci, 1999), enterprises with 50 or less employees are considered to be small, and enterprises that employ between 50 and 250 employees are considered to be medium firms.

Japan: In the industrial sectors of the country, SMEs are firms with less than 300 employees.

South Korea: SMEs have less than 300 employees.

According to these different definitions for SMEs, we can state that small firms are defined within the contextual circumstances. The highest figure for a small firm is 100 in the U.S. The highest figure for a medium firm is 1,000 in the U.S. The highest figure for an SME is 500 in Italy.

It would be incorrect to say that SMEs play the same role as large-scale enterprises (LSEs) in a national economy. Although small firms may sometimes have an advantage in the initial phase of development of a new product or process, subsequent development may be most effectively undertaken by acquisition or integration of the smaller organization within a larger firm (Barber, Metcalfe, and Porteous, 1992: 15).

Although large firms tend to receive most attention both in the public eye and in economics, small firms are the typical enterprise form and play a major role in the economic fabric of a society in terms of employment creation and innovation. Many of today's large enterprises were once small enterprises and

they have become large and powerful through good management (Szonyi, 1991). The two most important advantages of SMEs are their closeness to customers and their flexibility (Akgemci, 2001). SMEs' characteristics and attitudes are very distinctive in nature and they have their unique advantages and disadvantages.

Taymaz (1997) explains the main characteristics and the vitality of SMEs with two (contradictory) factors:

On the one hand, small firms can compete with large firms, or complement their activities, on the basis of specialized competence in certain market niches. In this sense, small firms that have a more flexible structure can easily adapt themselves to a changing environment and market demand and continuously change the environment through innovative activities. This type of conceptualization highlights the dynamism of small firms. On the other hand, small firms become competitive and survive on the basis of low costs enjoyed in informal, disorganized markets. They may be less productive, but they can reduce their production costs utilizing their under-paid workers and, in many cases, owners and unpaid family members (Taymaz, 1997: 51).

Therefore, general attributes of SMEs are as follows (TMMOB, 1999):

Owner-Manager:

- The entrepreneur, manager, and owner are generally the same person, who usually identifies himself/herself with the company and acts accordingly.
- The success or failure of the firm directly affects the family members both materially and personally. Generally speaking, family members often engage in company affairs.
- As the company grows in size, the owner-manager starts to concentrate his/her efforts on the managerial issues.

- The relationships are more socially-oriented, rather than task-oriented.

Management:

- Due to enterprise ownership rules, the SME is managed by the owner and represents continuity. The costs and risks of the firm belong to the owner-manager. It is also cited that the nature of the relationship between the manager and the employees necessitate that the manager be a role model for his/her employees.
- Decision-making is almost completely centralized by the owner-manager. The powerful position of the owner-manager may lead to subjective or irrational decisions. However, self-interests and power struggles are rarely seen in SMEs since the owner-manager is one person.
- The owner-manager is in a position that he/she can make decisions easily, i.e. as he/she wants. This also results in flexibility.
- Plans are more short- or medium-term, rather than long-term.

Finance:

- There is generally no separate finance or accounting department.
- SMEs are at a disadvantage with regards to finding credit.
- When an institution thinks about giving credit to an SME, it will consider the owner-manager's personal guarantees rather than the financial position and performance of the firm.
- Owner-manager generally stops himself/herself from taking credit since in the case of financial bankruptcy, he/she will be responsible.

Marketing:

- There is generally no separate marketing department.
- It is argued that SMEs have less marketing-oriented activities and benefit less from marketing tools.

- As there is no market research, plans are not done according to market research findings.
- SMEs are less able to make exports and expand into foreign markets.
- Sales channels are not complex and/or expensive compared to large enterprises.
- In the past, the market for SMEs' products and/or services was only a limited area near the firm. Thanks to advances in information and communication technologies, the market can now be the whole world.
- A single small- or medium-sized firm can typically only hold a small percent of the total market.
- Flexibility provides SMEs with the ability to respond to different and changing customer requests.

Purchasing:

- Order volume for materials is small. This also leads us to conclude that SMEs are less able to benefit from discounts from bulk purchases and the costs are higher.
- The materials to be purchased may differ from time to time, according to customer requests.

Production:

- Most SMEs' production systems are labor, rather than capital-intensive.
- SMEs generally produce products in small-batch systems and according to single orders.
- Specialization and division of labor are seen in lesser degrees.
- While large enterprises have advantages in terms of price and quality, SMEs have advantages in terms of customization and timely delivery.
- Production systems in SMEs are more flexible.
- SMEs are better able to innovate and modify products and services since they are more specialized in certain areas. However, since innovation

requires a concentrated effort toward research and development, SMEs may find it hard to commercialize those products.

Human Resources:

- Due to the labor-intensive nature of small business, the human factor carries more importance than in large enterprises.
- Due to financial problems, small and medium-sized enterprises find it difficult to hire trained personnel for their finance, marketing, accounting, and human resources departments, if any.
- The owner-manager and other personnel can work together and the manager can control work activities face-to-face in small firms.
- Due to the above-cited characteristics, unions are less prevalent in SMEs than in large firms.
- Salaries are lower in SMEs while job satisfaction is higher.

The characteristics of SMEs which may give them advantages over giant corporations, can be stated as follows (Alkibay et al., 1999; Fröhlich, Hawranek, Lettmayr and Picher, 1994; OECD, 1995):

- Since it is easier for SME managers to observe the market conditions, intra-firm production processes, and organizational strategy and policy, the decision-making process is faster and more flexible.
- More time and resources devoted on a customer basis can make SMEs more effective. In fact, they may serve niche markets and even individuals, and so attain substantial profits in return.
- SMEs offer a more diversified range of products and create employment with lower investment costs.
- SMEs contribute to regional development more than big companies since they are better able to give prompt answers to environmental challenges and concentrate on smaller areas.

- SMEs support and complement the work of big corporations and hence contribute to national economic development.
- Information filtration, coordination, control, and communication processes are easier within small organizations since they face a smaller area of business in terms of markets and employ a smaller number of employees.
- Due to the smaller number of employees, SME managers can give more emphasis to human factors, such as motivation, encouragement of individual initiative, and personnel policies and practices.

SMEs also face numerous problems that may include the following (Ouh, 1995):

- Access to financial and capital markets is rather limited since the financial institutions require proven performance and guaranteed assets as a collateral against the risk of the small firm's failure.
- Attracting highly talented and experienced workers is difficult since such employees generally want to work for big corporations giving higher salaries.
- Employees may find themselves in a difficult situation when trying to improve processes and make their small companies grow, so it is highly probable that they will work overtime and exert much more effort than their counterparts in big companies.
- A small firm has a lower probability of getting big orders, with which it could improve its operations and gain access to bigger and more profitable customers.
- Establishing a long-term, strong relationship with suppliers is more difficult since the suppliers prefer working with companies with more standard procedures.
- The probability that an external threat will affect the organization negatively is higher since a big company has more resources and more opportunities to deal with the problem. However, the reverse may be true:

A large-scale enterprise (LSE) may face more negative “ripple effects”, indicating that a negative event may create more negative consequences since it affects a larger area of domain. Another possibility is that an LSE may be stuck into what it is doing already and may have to cope with “inertia”.

SMEs IN TURKEY

Although the characteristics of small-scale industries are universal (Big, 1966), SMEs in Turkey show special characteristics. In Turkey, there are over 1 million enterprises employing about 3.6 million people. SMEs account for 99.8% of these enterprises and 82% of the employment (Arıcan, 1999: 20). The evaluation of SMEs depending upon number of enterprises, employment and value-added basis has shown that they are of great importance in economic and social aspects for Turkey. A general nationwide evaluation revealed the fact that SMEs occupy a vital place in the economic and social life of Turkey (SAM, 2002a):

- SMEs account for 99.5% of all manufacturing industrial enterprises.
- SMEs have a 61.1% share within total employment in the manufacturing industry.
- SMEs create 27.3% of total value-added.

In order to present a better picture about the role of SMEs in Turkey, Figure AppF.1 depicts changes in the number and percentage of SMEs between years 1994 and 1997.

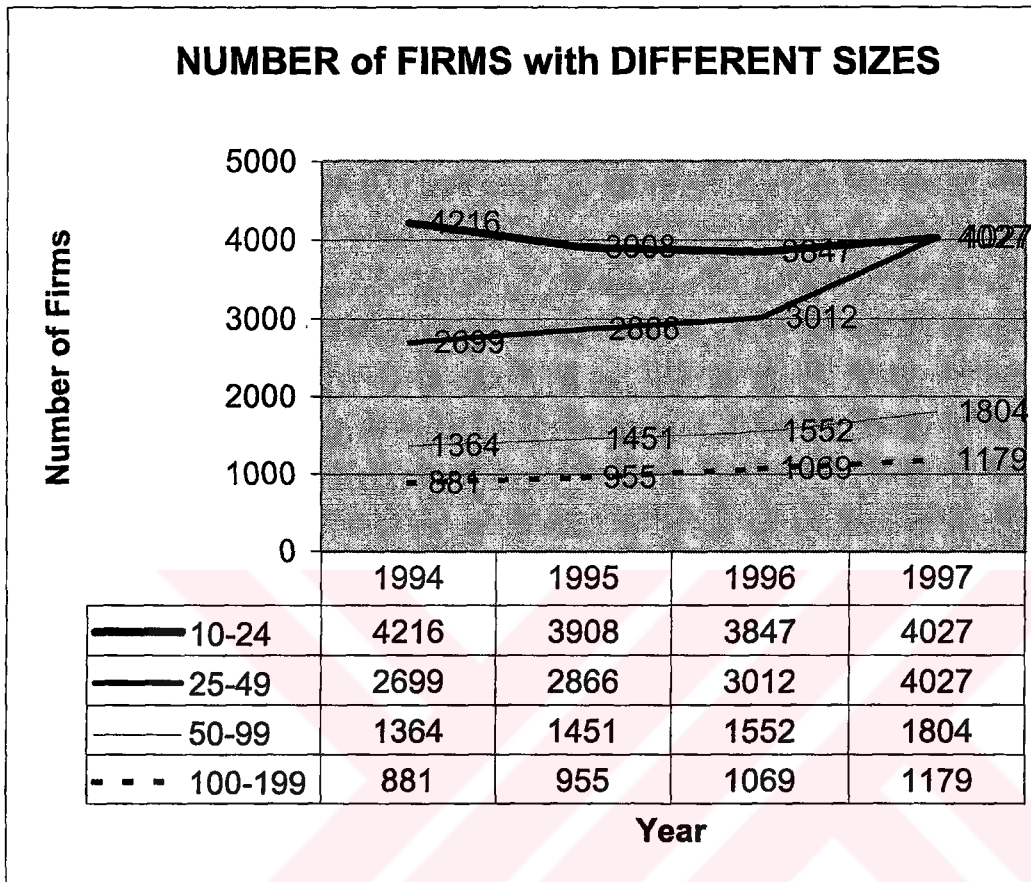


Figure AppF.1. Number of firms according to number of employees (TSE, 2000: 57-58).

The picture reveals that the number of firms having 50-99 and 100-199 employees (considered as medium enterprises) has not changed dramatically over these four years. The number of small enterprises, on the other hand, has fluctuated over the same period. Especially firms having 25-49 employees have increased in number from 1996 to 1997.

Figure AppF.2 below compares the firms in terms of their number and value added for the year 1997.

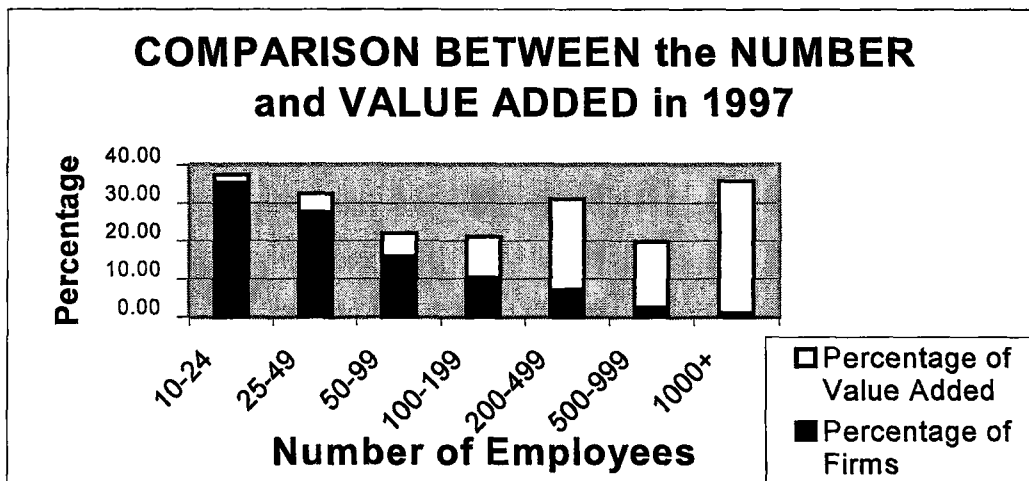


Figure AppF.2. Percentage of value-added and firms according to size (TSE, 2000: 57-58).

The above figure shows that even though the number of small enterprises is higher than the number of large enterprises, their value-added was lower in 1997. By the same token, a very small number of large enterprises contributed much more in 1997. This reverse relationship is observed least in firms having 200-499 employees, which may also be considered as large enterprises.

Using the above information (Alkibay et al., 1999) and other studies (Taymaz, 1997), Turkish SMEs have the following features:

➔ **Labor Force:** SMEs are generally conceived as owner-run establishments usually employing family labor. There is a wage disparity between large and small firms since large enterprises tend to pay higher wages and have longer terms of employment. There is not a significant difference between SMEs and large enterprises in terms of the proportion of technical personnel (engineers and technicians). Therefore, the findings show that the labor force in terms of administrative and technical personnel cannot explain the wage differential

between SMEs and LSEs. Almost half of the SMEs that were surveyed reported that they have no training facilities. Most of the SMEs which do not train their employees are in the service sector.

→ **Production Structure:** LSEs in the private sector tend to have a higher value added / output ratio than SMEs, and the difference has increased over time and has become statistically significant in 1989 and 1992. SMEs tend to work only one shift per day. The reliance on second- and third-shift work in LSEs may be as a result of the need to use expensive machinery intensively. LSEs spend more on advertisement than SMEs in the private sector. More than half of the SMEs use small-batch production. About 82% of them do not use their capacity fully. Main causes of capacity underutilization are insufficient demand, financial problems, and insufficient human resources. 74% of them do not have any quality certification. 71% of them are found to be technologically insufficient.

→ **Technological Structure:** It is argued that SMEs achieve flexibility by implementing flexible work arrangements and employing general purpose, flexible machinery and skilled workers. SMEs utilize a significant amount of second-hand machinery because of financing problems. The creation of domestic machine building capabilities seems to be a priority for policy makers who would like to promote the SME sector. LSEs use capital intensive technologies more than SMEs since LSEs substitute capital for labor and since they want to achieve higher output levels.

→ **Marketing Facilities:** Although 78% of the SMEs concerned have marketing facilities, 89% of them do not have any separate marketing department. 89% serve the domestic market only. General factors affecting the price decision include cost, demand-supply relationship, competitors, and customers.

→ **Capital and Finance:** SMEs usually lack the necessary financial resources and they cannot gain access to low cost financing. Banks prefer to lend loans to established large firms that are considered to be less risky than SMEs. The “equity/assets ratio” was lower in small private establishments, but it jumped to an average value in 1992.

→ **Performance:** The level of productivity is much higher in LSEs than SMEs in the private sector. The results also confirm that the organized labor in LSEs is able to raise their wages, but LSEs are still able to increase their profits in spite of the wage boom. 89% of the SMEs have no export facilities at all. The major causes of not engaging in any export activity include satisfactory results from domestic markets, insufficient resources to export, and insufficient knowledge about foreign markets. The major sources of problems among Turkish SMEs that do export are regulations, financial problems, and marketing problems. 82% of the SMEs have no import activities at all. Causes of imports include inability to find certain products in the domestic market, inability to achieve quality standards, and problems concerning customer requests.

Additional Information on Turkish SMEs

1. Training Facilities

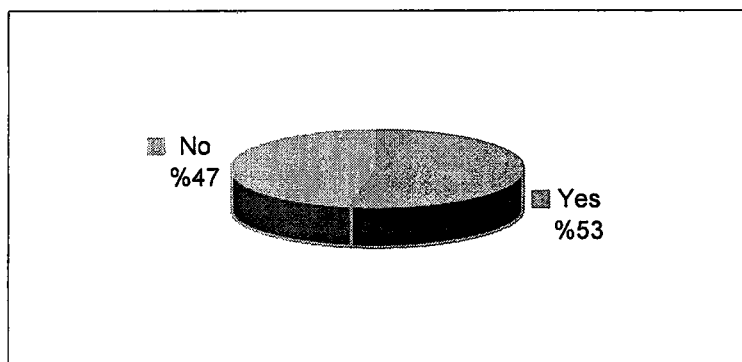


Figure AppF.3. Does the SME have any training facilities? (Alkibay et al., 1999: 35)

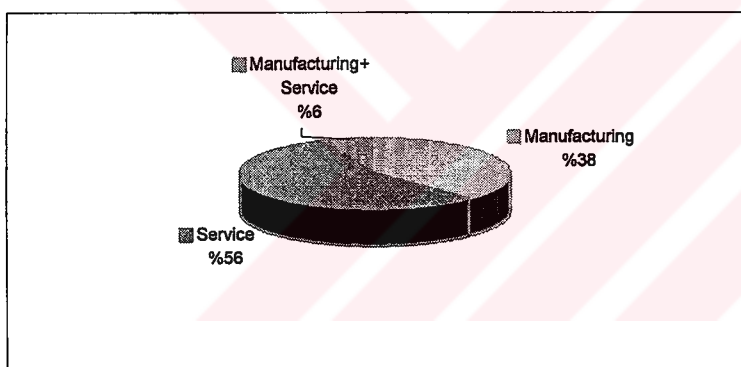


Figure AppF.4. Sectoral proportion of SMEs without training (Alkibay et al., 1999: 36)

2. Problems Facing SMEs

Table AppF.1. Problems areas of SMEs in terms of priority (Alkibay et al., 1999: 38)

	1st Priority	2nd Priority	3rd Priority	Total
Finance	1130	239	91	3959
Marketing	317	452	157	2012
Production	84	167	156	742
Personnel	239	355	220	1647
Quality	29	63	99	312
Technology	54	132	147	373
Management	11	22	38	115
R & D	33	62	126	349

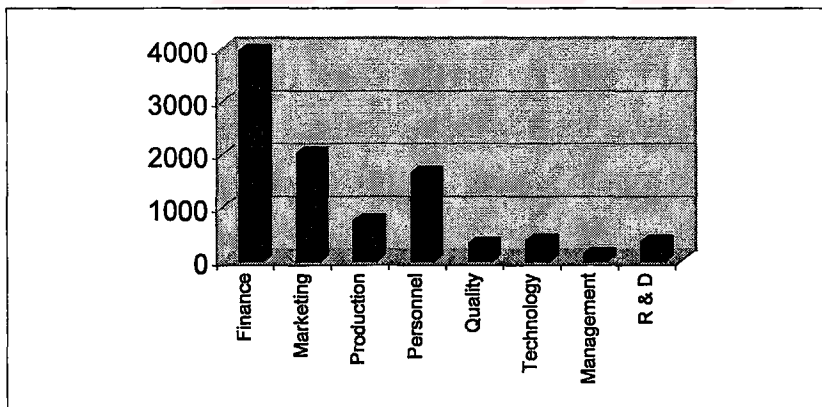


Figure AppF.5. Major Problems Areas of SMEs (Alkibay et al., 1999: 39)

3. Production Facilities

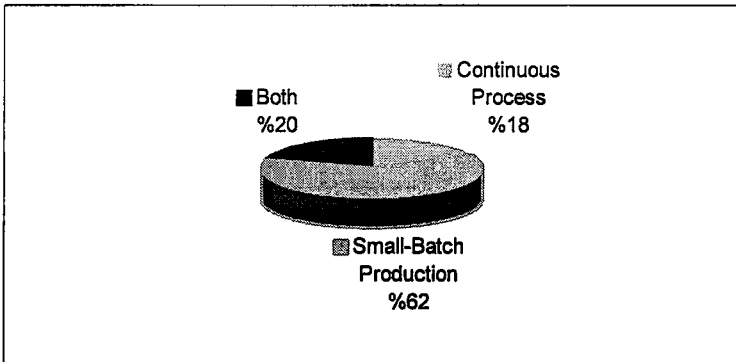


Figure AppF.6. Proportion of SMEs in terms of production systems (Alkibay et al., 1999: 46)

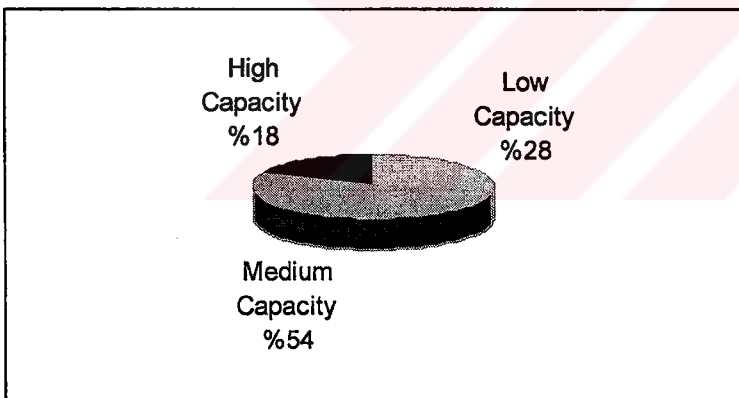


Figure AppF.7. Proportion of SMEs in terms of capacity utilization (Alkibay et al., 1999: 47)

Table AppF.2. Causes of low and medium capacity in SMEs (Alkibay et al., 1999: 52)

	1st Priority	2nd Priority	3rd Priority	Total
Insufficient Demand	989	1865	72	3411
Financial Problems	398	495	79	2263
Raw Material Shortage	32	82	87	347
Insufficient Human Resources	101	169	133	774
Poor Technology	41	112	155	502
Energy Problems	6	22	45	107
Regulatory Problems	36	54	74	290
Other	53	41	20	261

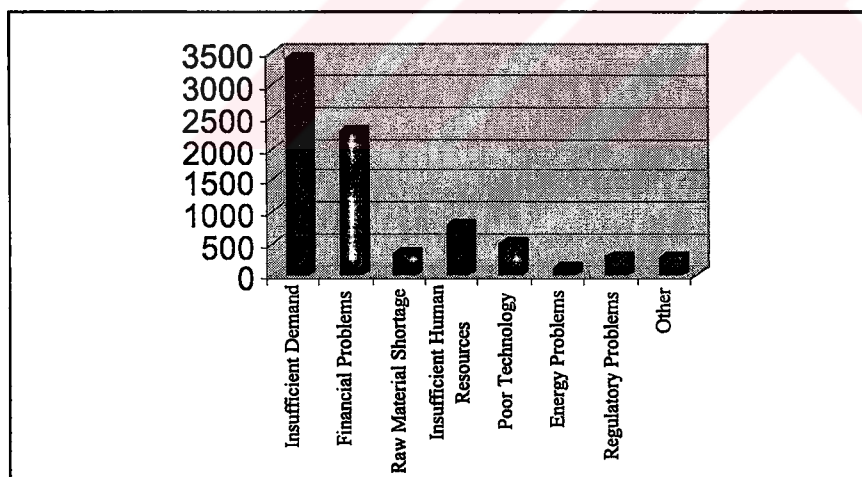


Figure AppF.8. Main causes of capacity underutilization (Alkibay et al., 1999: 52)

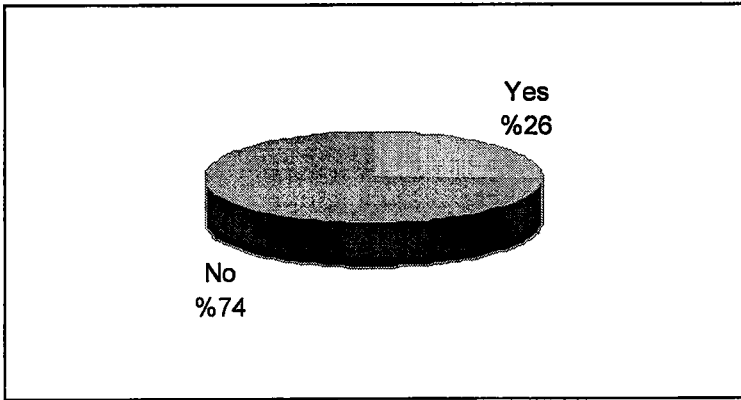


Figure AppF.9. Does the SME have quality certificate? (Alkibay et al., 1999: 55)

Table AppF.3. Technology development methods in SMEs and the proportion which does not employ the method (Alkibay et al., 1999: 56)

	Yes	No
Intra-firm R&D	539	1491
Domestic technology	1030	1000
Foreign technology	423	1607

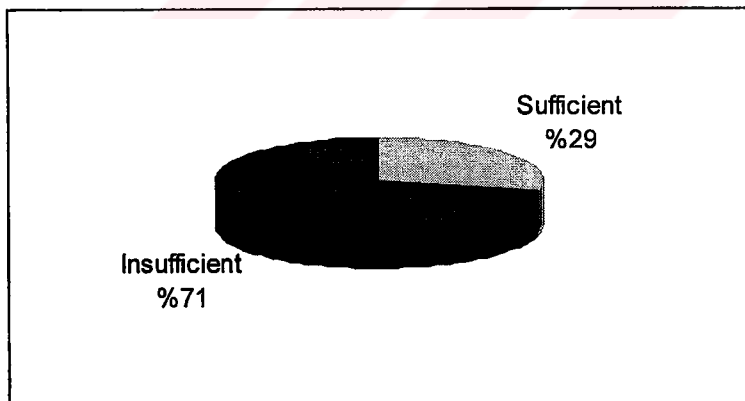


Figure AppF.10. Proportion of SMEs in terms of whether their technological stance is sufficient or not (Alkibay et al., 1999: 57)

4. Marketing Facilities

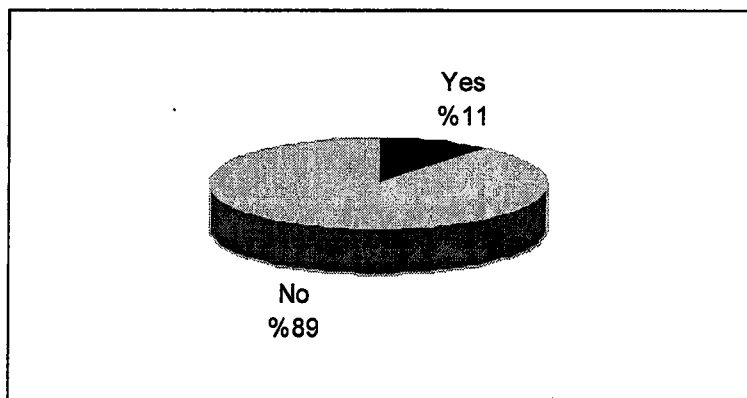


Figure AppF.11. Is there a separate marketing department? (Alkibay et al., 1999: 609)

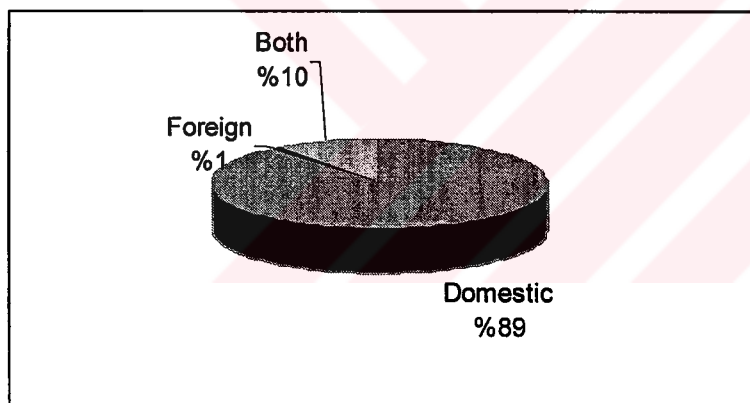


Figure AppF.12. Proportion of SMEs in terms of the markets they serve (Alkibay et al., 1999: 64)

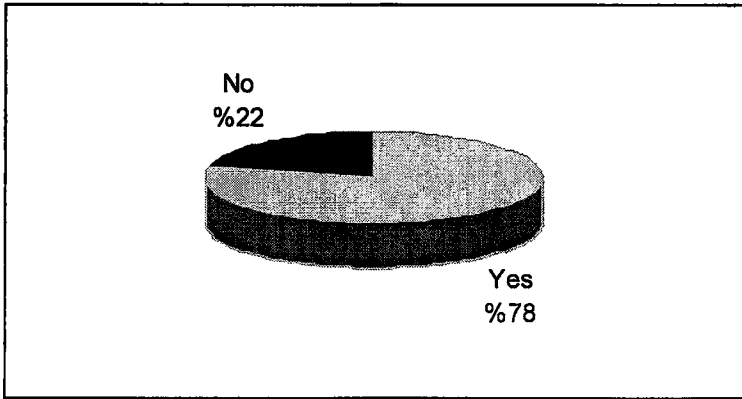


Figure AppF.13. Does the SME have marketing facilities? (Alkibay et al., 1999: 66)

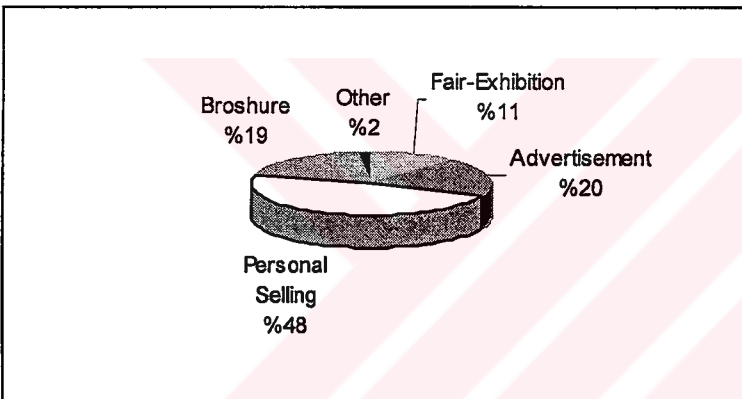


Figure AppF.14. Proportion of SMEs who engage in marketing facilities in terms of the type of marketing activity (Alkibay et al., 1999: 67)

Table AppF.4. Factors affecting the price decision of SMEs (Alkibay et al., 1999: 71)

	1st Priority	2nd Priority	3rd Priority	Total
Cost	1361	251	87	4672
Competitors	212	536	240	1948
Intermediaries	19	52	76	237
Regulations	47	85	95	406
Demand-Supply	244	480	350	2042
Customers	118	245	429	1273
Other	33	13	5	130

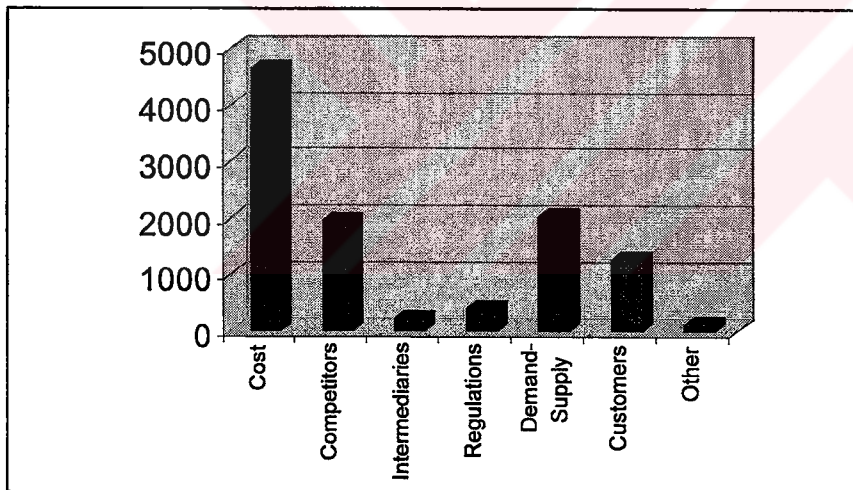


Figure AppF.15. General factors affecting price of SME products/services (Alkibay et al., 1999: 72)

5. Export Facilities

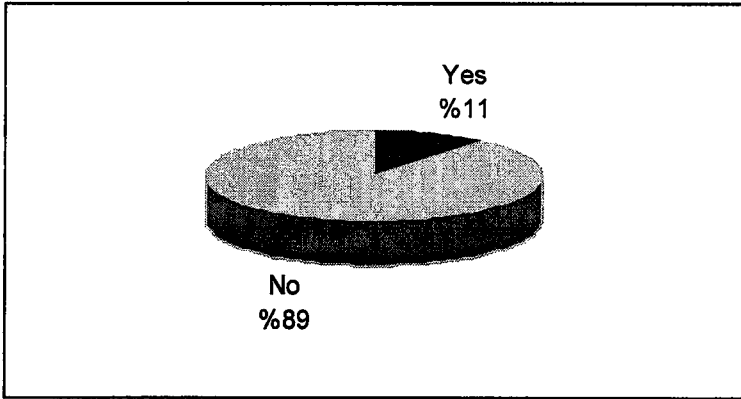


Figure AppF.16. Does the SME engage in export facilities? (Alkibay et al., 1999: 75)

Table AppF.5. Problems of SMEs encountered during export (Alkibay et al., 1999: 80)

	1st Priority	2nd Priority	3rd Priority	Total
Marketing	37	28	18	185
Financial	43	30	21	210
Regulatory	92	31	10	348
Raw Material	4	12	12	48
Quality	8	14	16	68
Language and culture differences	14	14	13	83

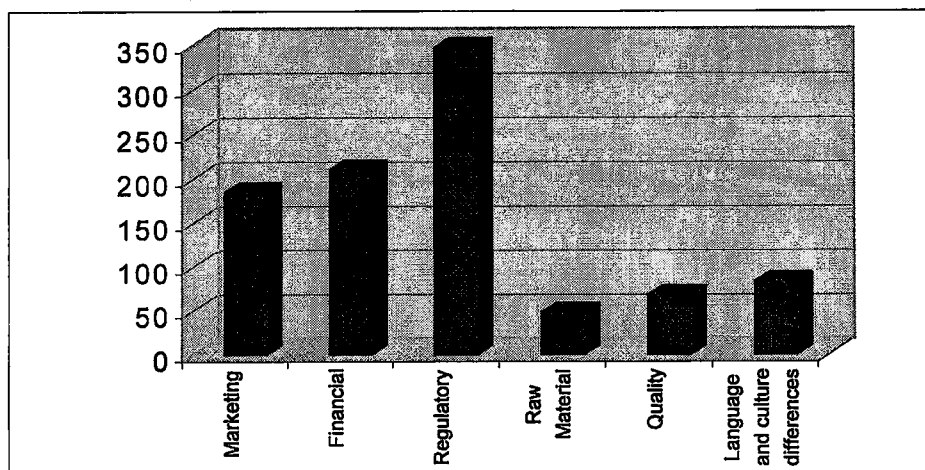


Figure AppF.17. Sources of problems encountered by SMEs during export (Alkibay et al., 1999: 81)

Table AppF.6. Major causes of not doing export activities (Alkibay et al., 1999: 84)

	1st Priority	2nd Priority	3rd Priority	Total
Satisfactory results from domestic markets (1)	532	86	56	1824
Insufficient resources (2)	436	182	77	1749
Difficulties in finding intermediary firms (3)	78	161	88	644
Language insufficiency (4)	32	96	76	364
Insufficient knowledge about foreign markets (5)	174	282	197	1283
Inability to introduce products with demanded quality and quantity (6)	56	67	97	399
Inability to introduce products with demanded price (7)	26	45	64	232
Other (8)	39	3	9	129

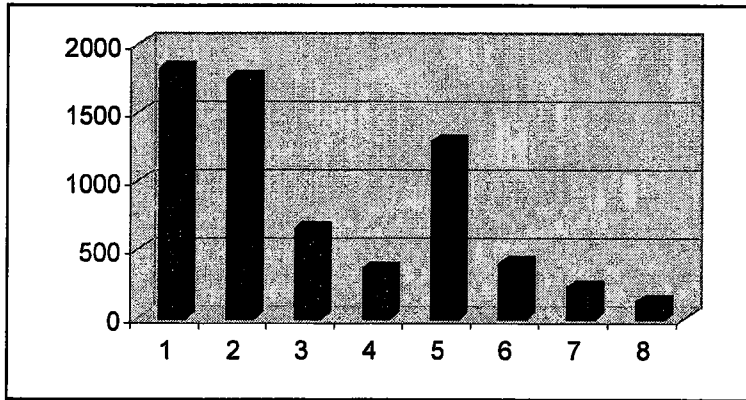


Figure AppF.18. Major causes of not doing export facilities (Alkibay et al., 1999: 85)

6. Import Facilities

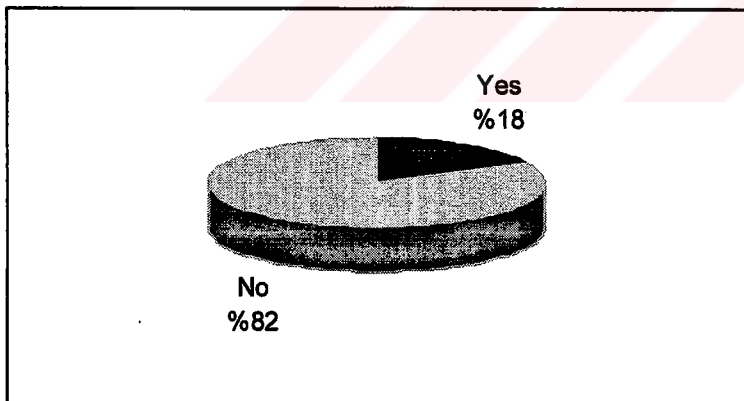


Figure AppF.19. Does the SME engage in import facilities? (Alkibay et al., 1999: 85)

Table AppF.7. Causes of Imports by SMEs (Alkibay et al., 1999: 88)

	1st Priority	2nd Priority	3rd Priority	Total
Products not available in the domestic market (1)	239	35	19	806
Low cost (2)	52	57	12	282
Appropriateness for quality standards (3)	58	109	52	444
Due to customer requests (4)	40	56	71	303
Other (5)	4	1	5	19

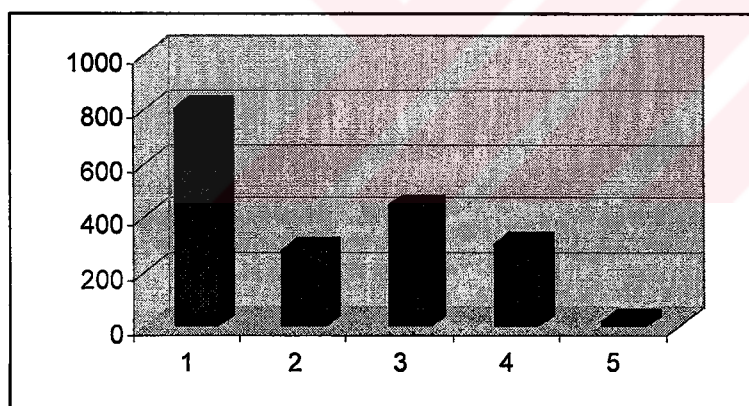


Figure AppF.20. Causes of imports by SMEs (Alkibay et al., 1999: 88)

7. SAM Services

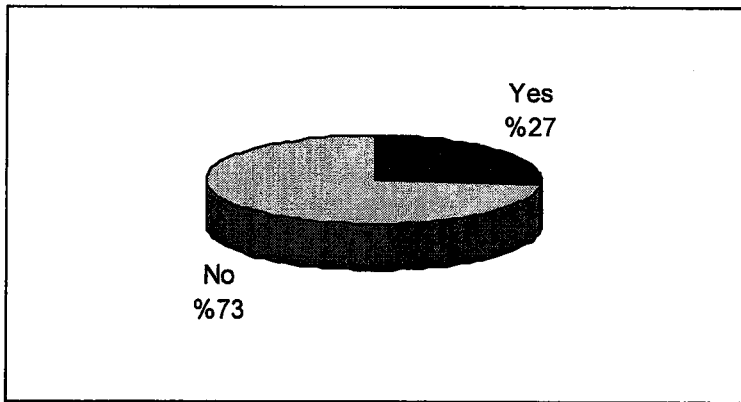


Figure AppF.21. Does the SME make use of SAM services? (Alkibay et al., 1999: 92)

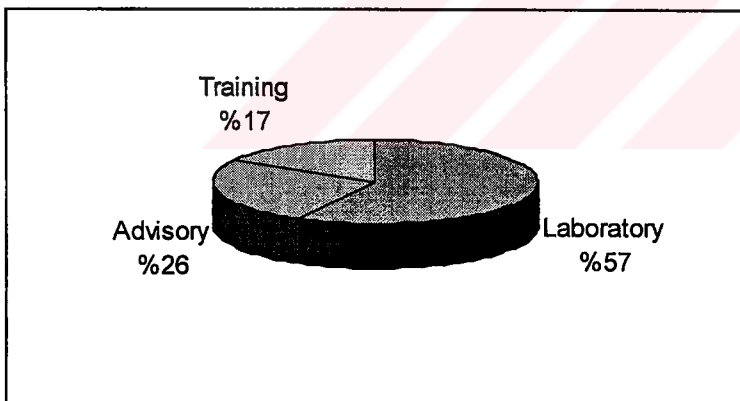


Figure AppF.22. Types of services employed (Alkibay et al., 1999: 93)

8. Government Aids

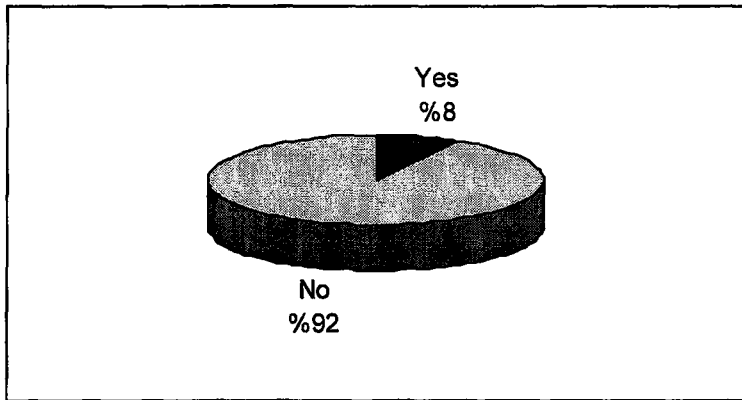


Figure AppF.23. Does the SME benefit from government aids? (Alkibay et al., 1999: 97)

Industrial Zones

While discussing SMEs, we should also discuss organized industrial regions and small industrial sites. Organized industrial regions are the places intentionally chosen, planned, and organized according to specific needs (TMMOB, 1999). They are established in order to industrialize selected regions, control and channel urbanization, and preserve the nature. SMEs are also provided with some tax exemptions in these regions. Small industrial sites are established in selected places with infra- and super-structure (TMMOB, 1999). The aim is to provide an organized place for production and repair activities. In addition to tax exemption, industrialists are also given investment support.

According to the definition accepted during the 6th Five-Year Development Plan studies, industrial zones are defined as follows:

The enterprises constructed in industrial zones are obligated to be placed inside of or very close to city centers, and start to demand from the city far more than the existing infra-structure can offer, by causing in time, scattered and unplanned development (Arıcan, 1999: 26). On the other hand, it is possible to divert the urban development in the desired way by controlling the development of industrial establishments and making use of their employment facilities.

The success of an industrial zone basically depends on below given statements:

- The local authorities and industrialists should involve in the realization of the industrial zone.
- Strict communication within the relevant Ministry and Managing Committees has to be created.
- Managing Committees should involve people who are engaged in technical and administrative documentation.
- The high economic potential of investment area, geographical location, transportation, and closeness to energy and communication networks should be taken as criteria.
- In order to prevent the speculations, a feasibility report regarding the investment should be prepared by entrepreneurs.
- Industrial Master plan has to be prepared for the whole country.

They are industrial zones organized so as to be allocated and operated for industry within certain standards. For this, a piece of land whose borders are approved is occupied within all the necessary infrastructure and social facilities, and then assigned to small and medium scaled industry, excluding heavy industry (Arıcan, 1999: 26).

The table below shows the number of industrial zones, the number of firms, and the total employment capacity.

Table AppF.7. Industrial zones launched (DPT, 2001: 243).

Year	Industrial Zones	Industrial Zones (cumulative)	Firms	Employment Capacity
1993	8	8	916	5,496
1994	11	19	2,751	16,506
1995	11	30	1,686	10,116
1996	16	46	5,421	32,526
1997	2	48	975	5,850
1998	3	51	408	2,448
1999	10	61	1,973	11,838
2000	13	74	1,929	11,570

The cumulative numbers show that the number of industrial zones increases each year. Therefore, industrial zones are important elements in SAM' environment.

APPENDIX G

SME DEVELOPMENT ORGANIZATIONS

This appendix is discussed in two parts: SME development organizations in the world and in Turkey.

SME DEVELOPMENT ORGANIZATIONS IN THE WORLD

There are several types of SME development organizations in the world. This appendix contains those types of organizations that show special characteristics. For instance, consultancy firms may also help SMEs, however, they are not included here.

Science Parks

According to the UK Science Park Association (UKSPA, 2001a), a science park is a business support and technology transfer initiative that:

- Encourages and supports the start-up, incubation and development of innovation led, high-growth, knowledge-based businesses,
- Provides an environment where larger and international businesses can develop specific and close interactions with a particular center of knowledge creation for their mutual benefit.

- Has formal and operational links with centers of knowledge creation such as universities, higher education institutes, and research organizations.

Science parks can be thought of as physical facilities that have appropriate infrastructure to allow research and development studies and analyses. They may include laboratories, computer networks, and other necessary material and equipment. There may be projects sponsored by a university or a research institute, which try to attract technology-related firms by means of favorable interactions with the sponsoring organization.

Technoparks

Technoparks are the most widespread among all SME development organizations (Çolakoğlu, 2000: 33). According to International Association of Science Parks' (IASP) definition (IASP, 2001), a technopark is a property-based initiative which:

- Has operational links with universities, research centers, and other institutions of higher education.
- Is designed to encourage the formation and growth of knowledge-based industries or high value-added tertiary firms, normally resident on site.
- Has a steady management team actively engaged in fostering the transfer of technology and business to tenant organizations.

Science parks and technoparks have many common characteristics such as laboratories, equipment, libraries, banks, and restaurants. The visible difference between a technopark and a science park is that the former concentrates on technological R&D and manufacturing R&D. A science park, on the other hand, focuses more on basic sciences and the application of knowledge into product development and the start-up of a business (Yoshizawa, Oyama, Yamamoto and Gonda, 1995: 38).

Incubator

Incubators can be defined as places that permit or encourage the formation and development of new firms and new ideas. An incubator is a facility that provides a range of business support and business services to support the creation and growth of start-up businesses (UKSPA, 2001b). These centers may be specific to a particular technology or general in nature, supporting businesses from a range of industrial sectors.

Other Organizations

Besides the above-cited types of SME development organizations, there are other types that give assistance by way of helping SMEs through managerial guidance and consultancy. Though they are seen less frequently, they still deserve some attention:

- ▲ ***Research Park:*** These organizations focus much more on fundamental (basic) research than other SME development organizations. In the research park, there may be R&D departments of new organizations in close relation with a neighboring university or a research foundation.
- ▲ ***Business Center:*** These organizations focus much more on business development applications and they do not require a link with an academic institution. Moreover, they do not need to give service on a mixture of functions; they may focus on only one area, such as manufacturing, sales, support, or professional service.
- ▲ ***Innovation Center:*** These organizations provide the optimal medium for the foundation and development of new high-tech firms. This aim is achieved by offering a series of services, linking those services to universities, and accumulating them within an “innovation web”. An innovation center tends to be a facility for nurturing smaller high-tech companies in the early stages of their development (UKSPA, 2001b).

SME DEVELOPMENT ORGANIZATIONS in TURKEY

The below list of SME development organizations is obtained from TMMOB (1999), Demir, (2000), and SAM (2002b):

/// Confederation of Turkish Craftsmen and Tradesmen, SME Service Center (TESK – Türkiye Esnaf ve Sanatkarlar Konfederasyonu, KOBİ Hizmet Merkezi)

The objective of the center is to provide SMEs with training and consultancy programs about new technologies, marketing, organization, management, communication methods, effective use of human resources, financial analysis, quality, and modernization (TMMOB, 1999). Besides pilot projects, several SME Service Center consultants are classified according to their knowledge and experience. The work areas include occupational training, regulations, social security, credit financing, tax, firm registers, marketing, work place, consultancy, and publications (TESK, 1993).

/// The Scientific and Technical Research Council of Turkey (TÜBİTAK – Türkiye Bilimsel ve Teknik Araştırma Kurumu)

TÜBİTAK is the subscriber of over 6,000 periodicals about medicine, engineering, social and human sciences, and art. There are also foreign publications obtained from outside sources. Moreover, there is an ongoing effort to establish a national database network which everyone can access. There is a European initiative, EUREKA, established in 1985, which attempts to establish connections between universities and industrial organizations in order to increase the power of European products, services, and processes. The pursuit of EUREKA-Turkey activities is undertaken by TÜBİTAK. Applications are processed by TİDEB (Technology Observation and Assessment Center - Teknoloji İzleme Değerlendirme Başkanlığı), established under TÜBİTAK (TİDEB, 2002). The projects undertaken by EUREKA

include the areas of energy, medicine, biotechnology, communication, information technologies, transportation, new materials, robotics and automation in production, lazars, and the environment. The national scientific and technological objectives have been specified as developing human resources, making necessary regulatory change and/or modifications, making information technologies widespread, and supporting research and development projects (BTYK, 2000).

/// SME Clubs (KOBİ Dernekleri)

The objectives include supporting practices that increase the importance and benefits of entrepreneurship, supporting educational activities by publishing books, periodicals, and brochures, increasing quality and efficiency in organizations while protecting employee rights, and increasing regional development, encouraging the members to establish joint ventures with foreign companies, disseminating information, developing projects that benefit SMEs and presenting them to qualified authorities, and directing investments to areas which increase the level of exports, provide foreign money, and create employment. (TMMOB, 1999).

/// Turkish Craftsmen and Tradesmen Social Security Foundation (Bağ-Kur - Esnaf ve Sanatkarlar ile Diğer Bağımsız Çalışanlar Sosyal Sigortalar Kurumu)

There are three social security institutions in Turkey. One of them, Bağ-Kur, is responsible for the social security of SMEs (TESK, 1993). As indicated by employees at Bağ-Kur, there is not a direct relationship between Bağ-Kur and SAM except for the procedural practices undertaken by SAM, as the employer, for its employee's life-time guarantees.

/// Job Training and Small Industry Development Foundation (MEKSA – Mesleki Eğitim ve Küçük Sanayi Destekleme Vakfı)

People who have completed their compulsory education (which is now eight years in Turkey) can apply to the “Apprenticeship Training Center” in order to learn the job they want. They usually sign a contract with the firm they want and come to the center once a week in order to learn the theoretical aspects of their job (Gücelioğlu, 1994). Being a non-profit, public interest foundation, MEKSA Foundation has been successful in gathering all the social partners involved in vocational training in the Executive Board (MEKSA, 2002).

/// Turkish Export Unions (İhracatçı Birlikleri)

Main activities include providing relevant information, information taken from economic and trade counselors, organizing trade visits from other countries, doing research and making analyses in foreign countries, training, transmitting trade problems to authorities, and organizing fairs and exhibitions (TMMOB, 1999). There are thirteen general secretariats of fifty-six export unions within twenty sectors in Turkey (DTM, 2002). They are located in İstanbul, İzmir, Bursa, Ankara, Mersin, Antalya, Gaziantep, Denizli, Erzurum, and Giresun.

/// Union of Chambers of Turkish Engineers and Architects (TMMOB – Türk Mühendis ve Mimar Odaları Birliği)

The goals of the groups forming the organization include (TMMOB, 1999):

- According to prevailing circumstances and within the limits of the current laws and regulations, grouping engineers and architects into professional categories and establishing an association for the same or similar groups,
- Conducting all necessary activities in order to solve common professional problems, helping and supporting people to perform their profession, making the profession develop through a path that is useful for the general public, protecting the professional discipline and ethic,

- Learning and applying all the related laws and regulations about the profession, taking the necessary action to change or develop these rules, and in line with an ongoing collaboration with the official authorities and institutions, making recommendations about professional interests.

/// **The Union of Chambers of Commerce, Industry, Maritime Trade and Commodity Exchanges of Turkey (TOBB – Türkiye Ticaret, Sanayi, Deniz Ticareti Odaları ve Borsaları Birliđi)**

The services include employment and cooperation networks, such as International Trade Association / System of Information Exchange among Chambers (ICC/IBCC-NET), information and data base retrieval services, library, compact disc and documents retrieval services, project and investment services, and foreign economic relationship council services. The “Small and Medium Enterprises Committee” (OKİK – Orta ve Küçük İşletmeler Kurulu), under the guidance of TOBB, deals directly with SME problems and solution strategies (TOBB, 1993).

/// **Economic Development Foundation (İKV – İktisadi Kalkınma Vakfı)**

The foundation is in charge of working for the establishment and perpetuation of economic groupings in line with international treaties (TMMOB, 1999). Main activities include giving related information and organizing collaboration and training programs. Moreover, there is a network project with the European Union Committee, which tries to provide SMEs with a network of personnel education and information dissemination.

/// **Credit Guarantee Fund (KGF – Kredi Garanti Fonu)**

Credit Warranty Fund’s main task is to be the guarantor of an SME, which cannot provide the security in necessary type and amount required by banks. This opportunity is offered to SMEs and young entrepreneurs. The SME should not employ more than 200 people in order to benefit from this opportunity.

According to 1999 statistics (TMMOB, 1999: 159), the upper limit for the guarantee is 400,000 DM, as long as this amount does not exceed 80% of the total credit. In return, the KGF asks for 2-4% (per annum) of the guarantee provided to the SME or entrepreneur.

/// Turkish Society for Quality (KalDer – Kalite Derneği)

The objectives of KalDer include increasing the level of specialization and knowledge about quality, learning and sharing best practices, gaining competitive advantage on a country basis, making organizations conscious about social responsibility, and contributing to the harmony and institutional solidarity in business affairs (TMMOB, 1999). Areas of activities and studies are mainly training, publications, quality awards, quality seminars and congresses, knowledge about international affairs and developments, teamwork, reengineering, metrology, calibration, environmental awareness, quality cost, benchmarking, and information exchanges.

/// National Productivity Center (MPM - Milli Produktivite Merkezi)

MPM is a public foundation, which tries to (TMMOB, 1999):

- Direct the national economy according to efficiency principles,
- Search for ways to improve efficiency,
- Prepare action plans that put those ways into practice,
- Establish a knowledge base about modern and scientific techniques that improve efficiency,
- Support and enlarge the knowledge base over time,
- Conduct promotional activities in order to present and make people use that knowledge base,
- Make all the above activities accessible and widespread across the country.

Major activity is consultancy over a range of areas including productivity, general management, production management, financial management, marketing management, and human resources management. In addition, there are training facilities and publications.

/// **Export Promotion Center (İGEME-İhracatı Geliştirme Etüd Merkezi)**

İGEME helps SMEs in many areas, including research and development, training, industrial information, marketing, international relations, and publications. Its R&D facilities are open to Turkish importers in foreign countries and domestic exporters in Turkey (TMMOB, 1999). Foreign market research facilities in close relations with foreign organizations such as JETRO in Japan and CBI in the Netherlands represent the core of İGEME's activities. Other activities include investigating domestic, international, and global developments and conducting country analyses. Another priority for İGEME is providing Turkish exporters with fast, sufficient, and correct industrial information. Exporters are also provided with opportunities to establish direct contacts with foreign companies and institutions so that they can be introduced to other countries. İGEME also has an International Trade Center (İTC), where information about international affairs can be obtained. There are several publications concerning SMEs and their trade facilities both in Turkey and abroad. Examples include,

- İGEME-SME Export Advise Line,
- İGEME Foreign Trade Bulletin,
- Export and Import Commandment,
- Export Practical Knowledge,
- Product/Market Research,
- Country Reports,
- Trade with Turkey,
- Guidebooks and catalogs,
- Other promotional publications.

/// Turkish Foundation for Small and Medium Business (TOSYÖV – Türkiye Küçük ve Orta Ölçekli İşletmeler, Serbest Meslek Mensupları ve Yöneticileri Vakfı)

The objective is to help SMEs in many respects by directing, informing, specifying and solving specific problems, and supporting their development through publicity. Services are mainly in the form of consultancy, publications, seminars, and “Credit Guarantee Fund” services (TMMOB, 1999).



APPENDIX H

GOVERNMENTAL BODIES IN SAM'S GENERAL ENVIRONMENT

This appendix includes information about the governmental bodies operating in Turkey that may directly or indirectly affect SAM activities. Some of the organizations are not pure governmental bodies, but still have connections with the government. Their relationships with SAM are determined based on secondary sources, interviews, and information gathered from these organizations themselves.

/// **Turkish Ministry of Industry and Trade (Sanayi ve Ticaret Bakanlığı)**

Among the duties of the Turkish Ministry of Industry and Trade include planning the industrial sites according to regulations concerning construction, developing infrastructure for SME development sites, giving credits for costs of the infrastructure projects and 70% of the costs for the superstructure projects, controlling and auditing the construction areas, providing all SMEs with the information and expertise in needed areas, and making all the adjustments in laws and regulations necessary for the proper functioning of SMEs (Gücelioğlu, 1994). The relationship between SAM and the Ministry is obvious. SAM has been established by the Ministry and its operations are subject to consideration by that governmental body.

/// Undersecretariat of Foreign Trade (Dış Ticaret Müsteşarlığı)

SMEs are one of the two parties that will benefit from government aids (Demir, 2000). The objectives include helping SMEs in the following areas:

- ❖ ISO 9000 quality standards, ISO 14000 Environmental Management System documents, and the CE Sign,
- ❖ Finding and hiring qualified personnel,
- ❖ Training,
- ❖ Market research for foreign markets,
- ❖ International cooperation programs,
- ❖ Opening branches in foreign countries,
- ❖ Participating in fairs and exhibitions abroad,
- ❖ Research and development facilities.

These facilities are supplemental to SAM's facilities and this governmental body does not represent an uncertainty for SAM.

/// Undersecretariat of Treasury (Hazine Müsteşarlığı)

The bases of support include value-added tax, investment and credit financing, investment discounts, customs duty exemption, and other tax and fee exemption. The Undersecretariat of Turkish Treasury is constructed to play an active role and associate other institutions and the government concurrently in picking adequate policies and in implementing those policies (Hazine Müsteşarlığı, 2002). It has been stated that there are no relations between the Undersecretariat of Treasury and SAM, however, its policies and procedures may affect SAM activities indirectly.

/// State Planning Organization (DPT - Devlet Planlama Teşkilatı)

Among the most important goals of DPT are determining all the natural, human, and economic resources and opportunities, preparing annual development plans, coordinating ministries and public organizations' activities

related to economic, social, and cultural politics (DPT, 2002). For instance, it prepares regional or sectoral development programs which SAM has to consider.

/// **Turkish Standards Institute (TSE – Türk Standartları Enstitüsü)**

The duties of the TSE include:

- Preparing different types of standards,
- Reviewing and accepting other standards as Turkish standards,
- Publishing and announcing standards,
- Preparing standards or projects in case of a public or private request,
- Following foreign standards and other practices,
- Establishing contacts with universities and other scientific organizations,
- Conducting laboratory analyses and tests,
- Training employees for domestic needs about establishing and controlling standards,
- Encouraging producers to apply Turkish standards.

Turkish Standards Institute does not have any activities that are directly related to SAM.

/// **Ministry of National Education (Milli Eğitim Bakanlığı)**

The Ministry of National Education helps SMEs through providing three important types of training: Apprenticeship Training, Full- or Part-Time School Training, and Occupational Courses (TESK, 1993). These training facilities are complementary to SAM's education services provided by service centers.

/// **Ministry of Finance (Maliye Bakanlığı)**

The Ministry of Finance is responsible for helping the preparation of financial policy of Turkey, developing expenditure policies, and following governmental

financial accounts (Maliye Bakanlığı, 2002). It is related to SAM in the sense that it affects managerial and investment expenditures of SAM.

/// Central Bank of the Republic of Turkey (TCMB - Türkiye Cumhuriyet Merkez Bankası)

The primary objective of the Bank shall be to achieve and maintain price stability. The Bank shall determine its own discretion on monetary policy and it shall implement the monetary policy instruments that it is going to use in order to achieve and maintain stability (TCMB, 2002). It takes precautions to enhance the stability in the financial system and to take regulatory measures with respect to money and foreign exchange markets. It affects SAM, for instance, when it determines the interest rates to be charged in credit operations, which SMEs can take.

/// State Institute of Statistics (DİE – Devlet İstatistik Enstitüsü)

DİE's main responsibility is to collect, analyze, and publish statistics about Turkey's economic, social, and cultural activities and its demographic structure (DİE, 2002). SAM may work with and even need DİE in preparing some statistical information, in addition to uses of existing data.

/// Export Promotion Center of Turkey (İGEME – İhracatı Geliştirme Enstitüsü)

Today, one of the major indicators of the level of a society's development is to share what people receive from production and national income (İGEME, 2002). The most effective means to achieve an increase in this share is exports. İGEME, the only public organization in this field, was founded with the aim of developing and promoting Turkish exports. In line with this objective, İGEME acts as an intermediary in establishing business contacts between foreign importers and Turkish exporters. There is "SAM Market Research and Export

Promotion Institute” operating under SAM structure. Its activities are similar to İGEME, but it carries out facilities within a smaller domain.

/// Turkish International Cooperation Agency (TİKA - Türkiye İşbirliği ve Kalkınma Ajansı)

The main functions are to promote economic, technical, social, cultural, and educational programs, to contribute and coordinate the activities of public and private organizations involved in international cooperation at the conceptualization, planning, programming, negotiating, and implementing stages, and to specify areas and topics of technical cooperation in accordance with the needs, priorities, and development objectives of the recipient countries (TİKA, 2002). This organization does not restrict SAM services, rather, in some cases, help SAM carry out its activities.

/// Representation of the European Commission to Turkey (Avrupa Komisyonu Türkiye Temsilciliği)

In 1974, a Press and Information Office of the European Commission was opened in Ankara. This office was converted into the Representation of the European Commission to Turkey in 1987 (Avrupa Komisyonu, 2002). It is organized in four sections: Political Section, Press Section, Economic Section, and Administrative Section. Students are requested to direct their inquiries to one of the European Documentation Centers, one of which has been established in SAM.

/// The Secretariat General for European Union Affairs (Avrupa Birliği Genel Sekreterliği)

The Secretariat General for European Union Affairs performs activities about the coordination of foreign relations with the Turkish Ministry of Foreign Affairs and foreign countries (Avrupa Birliği Genel Sekreterliği, 2002). SAM may establish connections with this organization for its activities about EU.

/// Turkish Patent Institute (Türk Patent Enstitüsü)

The organization is mainly responsible for the establishment and protection of patents, with an aim of supporting Turkey's technological development, creating a free competitive market, and helping R&D facilities (Türk Patent Enstitüsü, 2002). It sets the standards for SMEs, too, which may affect SAM indirectly.



APPENDIX I

DIFFERENTIATION CATEGORIES AND SCORES ACCORDING TO LAWRENCE AND LORSCH

Absolute Values of the Individual Scores for Each Organizational Attribute

	Task Environment	Formalization	Interpersonal	Short-term	Medium-term	Long-term	Technical-economic	Market	Scientific
Headquarters	2,7417	3,1746	64,209	54,8125	28,5	17	2,6515	2,4466	2,4755
Institutes	2,6640	3,3278	71,75	56,1111	27,7778	16,1111	3,3537	2,9966	3,0748
SERSAMs	2,7114	3,6980	59,5455	59,6047	28,9767	10,2558	3,3466	3,1136	2,8950
TEKSAMs	2,7675	3,6143	68,40	60,5	28	10,5	3,4429	2,9286	2,6571

Differences between Pairs of Subsystems in terms of each Attribute x 1,000

	Task Environment	Formalization	Interpersonal	Short-term	Medium-term	Long-term	Technical-economic	Market	Scientific
HQ-Inst	777	1532	7541	12986	7222	8889	7022	5500	5993
HQ-KG	303	5234	46635	47922	4767	67442	6951	6670	4195
HQ-TK	258	4397	41910	56875	5000	65000	7914	4820	1816
Inst-KG	474	3702	122045	34936	11989	58553	71	1170	1798
Inst-TK	1035	2865	33500	43889	2222	56111	892	680	4177
KG-TK	561	837	88545	8953	9767	2442	963	1850	2379

Range of Differences and Quintiles

Task Environment Uncertainty: 258 – 1035

Quintile 1: 258 - 413

Quintile 2: 414 – 568

Quintile 3: 569 – 723

Quintile 4: 724 – 878

Quintile 5: 879 – 1035

Formalization: 837 – 5234

Quintile 1: 837 – 1716

Quintile 2: 1717 – 2595

Quintile 3: 2596 – 3474

Quintile 4: 3475 – 4353

Quintile 5: 4354 – 5234

Interpersonal Orientation: 7541 – 122045

Quintile 1: 7541 – 304442

Quintile 2: 30443 – 53343

Quintile 3: 53344 – 76244

Quintile 4: 76245 – 99145

Quintile 5: 99146 – 122045

Short-term Time Orientation: 8953 – 56875

Quintile 1: 8953 – 18537

Quintile 2: 18538 – 28121

Quintile 3: 28122 – 37705

Quintile 4: 37706 – 47289

Quintile 5: 47290 – 56875

Medium-term Time Orientation: 2222 – 11989

Quintile 1: 2222 – 4175

Quintile 2: 4176 – 6128

Quintile 3: 6129 – 8081

Quintile 4: 8082 – 10034

Quintile 5: 10035 – 11989

Long-term Time Orientation: 2442 – 67442

Quintile 1: 2442 – 15442

Quintile 2: 15443 – 28442

Quintile 3: 28443 – 41442

Quintile 4: 41443 – 54442

Quintile 5: 54443 – 67442

Technical-Economic Goal Orientation: 71 – 7914

Quintile 1: 71 – 1640

Quintile 2: 1641 – 3209

Quintile 3: 3210 – 4778

Quintile 4: 4779 – 6347

Quintile 5: 6348 – 7974

Market Goal Orientation: 680 – 6670

Quintile 1: 680 – 1878

Quintile 2: 1879 – 3076

Quintile 3: 3077 – 4274

Quintile 4: 4275 – 5472

Quintile 5: 5473 – 6670

Scientific Goal Orientation: 1798 – 5993

Quintile 1: 1798 – 2637

Quintile 2: 2638 – 3476

Quintile 3: 3477 – 4315

Quintile 4: 4316 – 5154

Quintile 5: 5155 – 5993

Differentiation Scores

	Task Environment Uncertainty	Formalization	Interpersonal	Short-term	Medium-term	Long-term	Technical-economic	Market	Scientific
HQ-Inst	4	1	1	1	3	1	5	5	5
HQ-KG	1	5	2	5	2	5	5	5	3
HQ-TK	1	5	2	5	2	5	5	4	1
Inst-KG	2	4	5	3	5	5	1	1	1
Inst-TK	5	3	2	4	4	5	1	4	3
KG-TK	2	1	4	1	4	1	1	1	1

Differentiation Scores Differences Significance Tests (SPSS)

Independent samples t-test, at 95% confidence level.

The Headquarters versus the Institutes

Independent Samples Test

	t-test for Equality of Means				
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
total task environment certainty	,646	50,0	,521	,0778	,1204
total formalization	-,895	42,5	,376	-,153	,1711
interpersonal orientation	-1,05	35,7	,301	-7,54	7,192
short-term time orientation	-,177	40,6	,860	-1,30	7,328
medium-term time orientation	,151	47,2	,881	,7222	4,781
long-term time orientation	,155	42,7	,877	,8889	5,720
technical-economic goal	-2,77	40,3	,009	-,702	,2540
market goal orientation	-2,14	44,9	,038	-,550	,2566
scientific goal orientation	-2,25	45,0	,029	-,599	,2664

The Headquarters versus the SERSAMs

Independent Samples Test

	t-test for Equality of Means				
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
total task environment certainty	,289	64,14	,773	,0303	,1049
total formalization	-3,78	71,72	,000	-,523	,1386
interpersonal orientation	,847	64,82	,400	4,661	5,501
short-term time orientation	-,794	60,40	,430	-4,79	6,037
medium-term time orientation	-,101	64,48	,920	-,477	4,699
long-term time orientation	1,577	41,59	,122	6,744	4,278
technical-economic goal	-3,68	64,16	,000	-,695	,1891
market goal orientation	-2,99	71,12	,004	-,667	,2234
scientific goal orientation	-1,85	68,64	,068	-,420	,2262

The Headquarters versus the TEKSAMs

Independent Samples Test

	Statistics				
	t-test for Equality of Means				
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
total task environment certainty	-,198	22,84	,845	-,026	,1305
total formalization	-2,11	15,31	,051	-,440	,2079
interpersonal orientation	-,758	29,42	,455	-4,19	5,533
short-term time orientation	-,737	22,05	,469	-5,69	7,714
medium-term time orientation	,084	20,81	,934	,5000	5,973
long-term time orientation	1,505	39,12	,140	6,500	4,320
technical-economic goal	-3,57	25,74	,001	-,791	,2219
market goal orientation	-1,61	17,97	,124	-,482	,2986
scientific goal orientation	-,725	26,77	,475	-,182	,2506

The Institutes versus the SERSAMs

Independent Samples Test

	t-test for Equality of Means				
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
total task environment certainty	-,442	43,67	,660	-,047	,1072
total formalization	-2,24	40,86	,031	-,370	,1655
interpersonal orientation	1,744	34,43	,090	12,20	6,998
short-term time orientation	-,534	32,16	,597	-3,49	6,537
medium-term time orientation	-,281	46,64	,780	-1,20	4,272
long-term time orientation	1,318	22,50	,201	5,855	4,444
technical-economic goal	,031	32,99	,976	,0072	,2340
market goal orientation	-,477	43,45	,636	-,117	,2453
scientific goal orientation	,722	41,12	,474	,1798	,2490

The Institutes versus the TEKSAMs

Independent Samples Test

	t-test for Equality of Means				
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
total task environment certainty	-,783	22,15	,442	-,104	,1323
total formalization	-1,26	19,52	,221	-,286	,2267
interpersonal orientation	,477	27,84	,637	3,350	7,024
short-term time orientation	-,541	22,16	,594	-4,39	8,112
medium-term time orientation	-,039	16,70	,969	-,222	5,643
long-term time orientation	1,251	22,24	,224	5,611	4,485
technical-economic goal	-,341	28,20	,736	-,089	,2613
market goal orientation	,216	20,14	,831	,0680	,3153
scientific goal orientation	1,539	26,74	,135	,4177	,2713

The SERSAMs versus the TEKSAMs

Independent Samples Test

	t-test for Equality of Means				
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
total task environment certainty	-,474	17,08	,642	-,056	,1185
total formalization	,412	14,21	,687	,0837	,2033
interpersonal orientation	-1,68	29,28	,104	-8,85	5,280
short-term time orientation	-,129	16,11	,899	-,895	6,968
medium-term time orientation	,175	16,87	,863	,9767	5,574
long-term time orientation	-,102	27,30	,919	-,244	2,386
technical-economic goal	-,484	19,09	,634	-,096	,1988
market goal orientation	,641	16,23	,531	,1850	,2888
scientific goal orientation	1,025	22,48	,316	,2379	,2321

