



## ORGANIZATIONAL CULTURE EFFECT ON INFORMATION SYSTEMS AND MARKETING PERFORMANCE IN FAMILY FIRMS<sup>1</sup>

### Aile Şirketlerinde Örgüt Kültürünün Yönetim Bilişim Sistemleri Başarımına ve Pazarlama Performansına Etkisi

**Ersin KARAMAN**

Atatürk University  
Faculty of Business and Administrative Sciences  
Department of Management Information Systems,  
Erzurum, Turkey, ersinkaraman@atauni.edu.tr

**Fatih YILDIRIM**

Erzurum Technical University  
Faculty of Business and Administrative Sciences  
Department of Business,  
Erzurum, Turkey, fatih.yildirim@erzurum.edu.tr

**Kadri Gökhan YILMAZ**

Gazi University  
Faculty of Business and Administrative Sciences  
Department of Marketing  
Ankara, Turkey, kgyilmaz@gazi.edu.tr

**Çalışmanın Türü: Araştırma**

#### **Abstract**

*This study investigates organizational culture effect on marketing performance and information systems for the family organizations. In this quantitative study, three questionnaires including, information success model, marketing performance and organizational culture are used for data acquisition from 30 family firms operating in Erzurum, Turkey. These firms have at least 15-years experiences and the second generations are heading the firms. All the firms included this study use at least a transaction processing systems. In statistical analysis, although one can see the trend that the organizational culture has also an advantage in market success and IS success, this effect does not reach to significance in the ANOVA. The reason of this may be the small sample size (i.e. there are only 6 companies in organizational culture category clan and adhocracy, 10 in market, and 8 in hierarchy). It may also be a result of companies' functioning in different sectors.*

**Keywords:** Information System Success, Organizational Culture, Marketing Performance, Family Firms, Firm Performance.

<sup>1</sup> This study has presented at International Conference on Interdisciplinary Studies which held in San Antonio, Texas, USA on April 2015.

### Öz

*Bu çalışma aile şirketlerinde örgüt kültürünün pazarlama performansı ve bilgi sistemleri başarımı üzerindeki etkisini araştırmaktadır. Bu niceliksel araştırmada, Erzurum'da faaliyet gösteren 30 aile firmasından veri toplanırken yönetim bilişim başarı modeli, pazarlama performansı ve örgüt kültürü olmak üzere üç soru formu kullanılmıştır. Bu firmalar en az 15 yıllık deneyime sahiptir ve ikinci nesiller tarafından yönetilmektedir. Bu çalışmaya dahil edilen tüm firmalar en az bir yönetim bilişim sistemi kullanmaktadır. İstatistiksel analizde, örgüt kültürünün pazar başarısında bir avantaja sahip olduğu yönündeki eğilimi görebilsek de, bu etki ANOVA'da anlamlı değildir. Bunun nedeni küçük örneklem boyutu olabilir (örgüt kültürü kategorisinde klan ve adhocracy kültürü 6 şirket vardır, ayrıca 10 tanesi pazar kültürü, hiyerarşik kültür ise 8'dir). Ayrıca şirketlerin farklı sektörlerde faaliyet göstermesi de bu sonuca neden olabilir.*

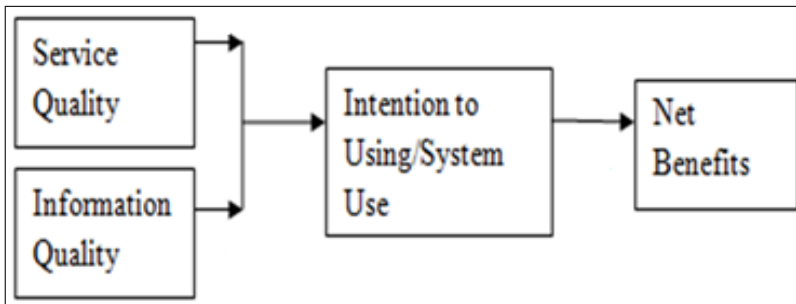
**Anahtar Kelimeler:** Bilgi Sistemi Başarısı, Örgüt Kültürü, Pazarlama Performansı, Aile şirketleri, Firma Performansı.

## 1. Introduction

How information systems contribute the business performance is one of the main questions for the management information systems discipline. However, the answer is not easy to explain unless the focused problem of organization is taken into account. This is because the fact that integration of information systems depends on many different factors such as organizational features, business scope etc. One of the important organizational features is culture. Although there are many studies on culture in different domains, organizational culture represents the usage of business processes (Mwaura et al., 1998). More comprehensive definitions of organizational culture were also proposed in literature (Wilkins, 1983; Pettigrew, 1979; İlhan, 2006; Daft, 2004). Despite the differences in these definitions, organizational culture have some common thread to all those. That is, changing over time, being shared, social, continuous, learnable, guiding and having history are the common characteristics of organizational culture (Tayep, 1998; Walton, 1988).

In order to measure and classify organizational culture, many different approaches have been proposed (Wiener, 1998; Robbins, 2003). In the study conducted by Cameron and Quin (1991), organizational culture is classified either as clan, adhocracy, market or as hierarchy. These four categories are also used in this study as organizational culture types. Organizations having clan culture give great importance on collaboration and have protectiveness characteristics. On the other hand, adhocracy oriented organizations are willing to take risks and wants to be different from their competitors. If an organization is market-wise, then efficiency, production and competitiveness are the focal points to get the job. In hierarchy-oriented organizations; plan, control, monitoring and audit are the key factors to achieve success.

In the digital age, one of the main attribute of organizations is their ability to utilize information systems on their business processes. This is important for the competitive advantages and effective decision making. However, organizations need to measure success of information systems to improve their utilizations. Information Systems Success Model is an approach to do so. These models not only measure individual impact of IS but also evaluate organizational aspects. IS Success model includes, system quality, service quality, information quality, user satisfaction, intention to use, usage, information quality and infrastructure quality (Delone and McLean, 2003). The relations among these components can be seen in Figure 1.



**Figure 1.** Information Systems Success Factors and Relations

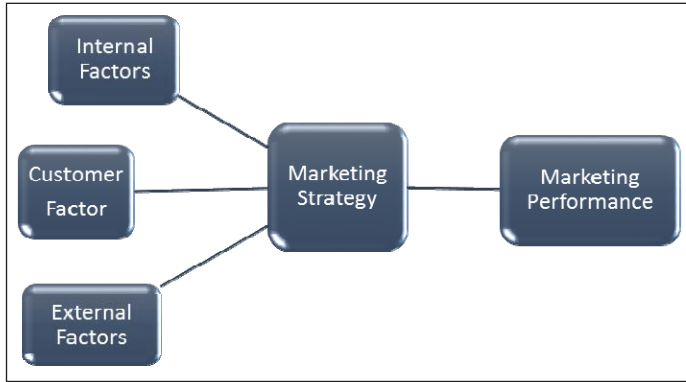
(Source: Wu and Wang, 2006: 730; Wang and Liao, 2008: 720-722)

When information systems are used in an integrated manner with all the business functions, overall success will be inevitable. It is also undoubtedly important for the marketing performance. But it should be also noted that it is not very easy to measure the marketing performance very clearly. There is a research gap in the literature about specifying factors on marketing performance. Marketing managers suffer from the lack of methodology about the measurement of marketing performance. This case also deemphasizes the marketing department against others. Therefore, the marketing function is under the pressure to measure marketing performance in terms of financial and quantitative contribution (Hacıoğlu, 2012).

Decisions in implementation and establish of marketing strategy process aims to maximize the marketing facilities. Since the marketing process starting from pre-production and continue to post-sale period, most of the activities in this period is related to the marketing.

Therefore, the marketing function performs its activities in a wide range. All activities that are carried out in order to determine the marketing strategy will also have a direct impact on the marketing performance.

According to Ferrell, Hartline and Lucas (2002), one of the essential analyses that should be carried out to determine the marketing strategy is the environmental analysis. This analysis plays an important role in achieving an efficient marketing strategy. A correctly determined strategy that is occurred by virtue of this analysis will also have a positive impact on the marketing performance. These factors that shape the marketing strategy can be classified as customers, internal and external factors (Figure 2). Internal factors (internal environmental factors) are the factors that are under the control of business and their direction can be freely changed. Organizational culture and structure are examined within this context. External factors can be defined as the level of competition, economic conditions, political environment, technological development and changes, legal and regulatory factors, and social and cultural dynamics. All these factors have an effect on the marketing strategy; therefore, they should be considered.



**Figure 2.** Factors Affect Marketing Performance

All these above mentioned factors, within the scope of the marketing performance, will have an impact on the number of customers, sales, the market share, the adaptation process on the demands and changes of costumers and the market, the level of customer satisfaction and the customer oriented strategies. In this context, marketing performance is tried to measure based on the study conducted by Karabağ (2008) which is also include marketing performance in addition to firm performance.

Even though there are some studies such as (Bharadwaj, Bharadwaj and Konsynski, 1999; Wu, Yeniyurt, Kim, and Cavusgil, 2006; Stone, Good and Baker-Eveleth, 2007) investigate effect of information systems on marketing performance, there area limited number of study to cope with the mediating role of IS for different cultures of organizations. In this study, it is aimed to investigate the mediating role of information

systems in marketing performance for the family organizations according to their organizational culture characteristics.

## **2. Methodology**

In order to investigate the mediating role of information systems on marketing performance according to organizational culture of family firms, a correlation study which is used to test correlation between two or more different phenomena or groups is designed.

### **2.1. Data Collection and Instrument**

Data collection process consists of three main steps; determining culture, measuring marketing performance and information systems success. To do so, three questionnaires from the literature are adapted. The instrument proposed by Cameron and Quin (1991) is adapted and used for organizational culture. In order to evaluate information success model, the study conducted by Delone and McLean (2003) is used as baseline. Marketing performance questionnaire is adapted from the study of Karabag (2008). Even though, Karabağ (2008) proposed 5 items for marketing performance, competitive and market performance items were adapted to measure marketing performance. These questionnaires are integrated to obtain the final version of questionnaire. Questions about demographic information are also included. For the language correction an expert reviewed the questionnaire. For the validity of the questionnaire, three experts from management information systems, management and organization, and marketing departments (different from the authors) evaluated the adapted questions.

### **2.2. Participants**

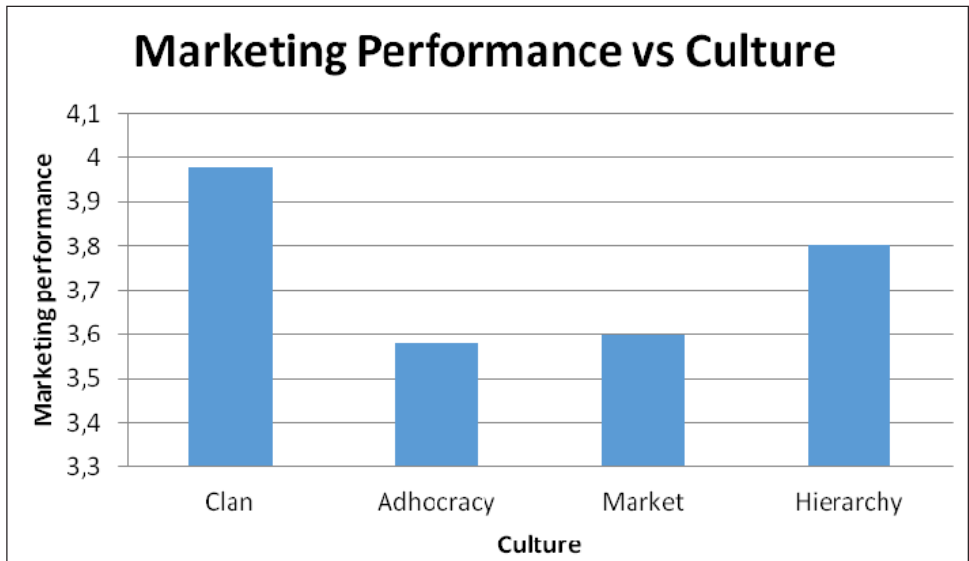
In order to investigate IS mediating role on the effect of organizational culture on marketing performance, 30 family firms registered to Erzurum (city in TURKEY) chamber of commerce have participated in this study. These family firms are determined on the basis of three criteria. One is that the firm should have at least 15-years experiences, and second is that the second generation should be heading the firm. Lastly, all firms use at least a transaction processing system. All firms were visited to acquire data by one of the authors. The questionnaires are filled by the managers. Detail demographic and experience information of the family firms is shown in Table 1.

**Table 1.** Age, Generation and Number of Employees

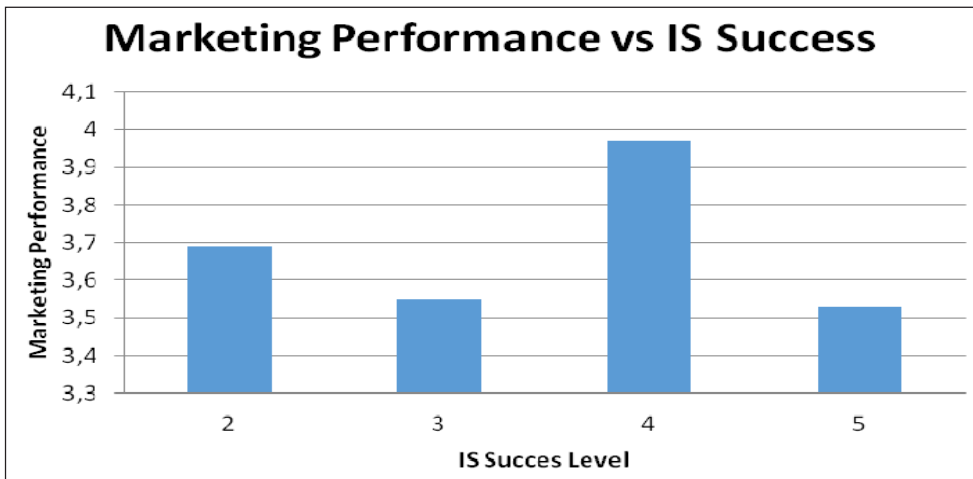
		N	%
Age of Company	15-30 years	13	43,3
	30-50 years	13	43,3
	50 years or more	4	13,4
Generation	Second	17	56,6
	Third	11	36,7
	Fourth or more	2	6,7
Number of Employees	1-10	16	21,3
	10-50	41	54,7
	50 or more	18	24

### 3. Results and Conclusions

In this part of this study, the data is analyzed using both correlation and ANOVA tests. Bivariate correlations among the firm age, heading generation, number of employees, organizational culture, IS success and marketing performance are tested. However, none of the correlations (except the trivial correlation of firm age and heading generation) reach to significance. Yet, for a closer examination of the separate and mutual effects of organizational culture and IS success on marketing performance, an ANOVA with organizational culture and IS performance as between-subjects variables on marketing performance is also conducted. The results of the ANOVA do not reveal any significant effect. However, there are several trends in the data (as shown in the following graphs) that are worth to inspect.

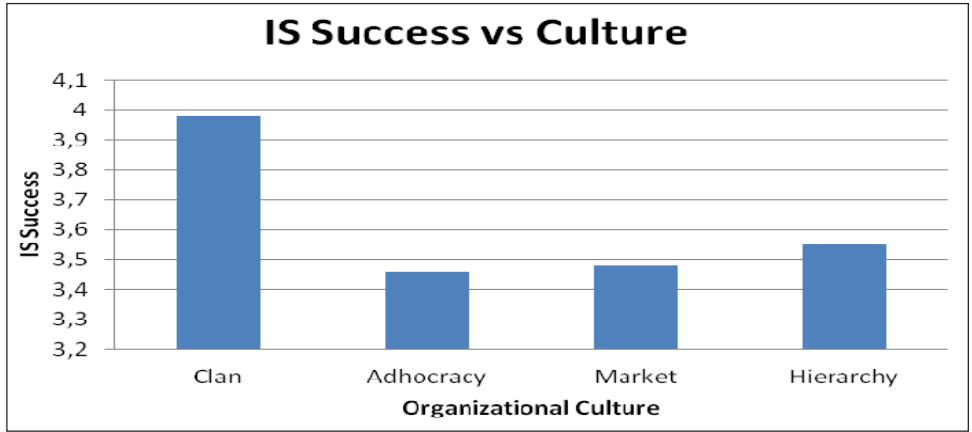
**Figure 3.** Relation between marketing performance and culture

As can be seen from Figure 3, clan culture family firms have the highest marketing performance. Also, hierarchy culture firms have a higher marketing performance than marketing culture firms, and marketing culture firms have a higher marketing performance than adhocracy culture firms. Unexpected success of clan culture firms may actually be a result of personal biases. That is, in these firms the questionnaire is filled by a manager who is also a member of the family. This suggests that a study that gathers the marketing performance information in more objective ways (avoiding at least personal biases) is required to reveal a more consistent relationship between culture and the marketing performance.



**Figure 4.** Relation Between Marketing Performance and IS Success

IS success data is ranked to 5 categories by rounding the IS success mean scores for each family firm. The graph shows that there is not a distinct relation between IS success and marketing performance. Nevertheless, the firms that are ranked as 4 in IS success have the highest marketing performance. This finding is not in line with the literature. One possible reason of this inconsistency is the small sample size.



**Figure 5.** Relation Between IS Success and Organizational Culture

The main objective of the present study is to examine the mediating role of information systems in the effect of organizational culture on marketing performance in family firms. Therefore, relationship between IS success and organizational culture is also crucial. Although there is no statistically significant relationship between IS success and organizational culture, the trend of this relationship is similar to the one between marketing performance and organizational culture (Figure 3 and Figure 5). This may imply that IS have supporting role on marketing performance through the organizational culture (Figure 6).



**Figure 6.** Relation of Culture, IS Success and Marketing Performance

To sum up, although one can see the trend that the organizational culture has an advantage in market success and IS success, this effect does not reach to significance



in the ANOVA. The reason of this may be the small sample size (i.e. there are only 6 companies in organizational culture category clan and adhocracy, 10 in market, and 8 in hierarchy). It may also be a result of companies' functioning in different sectors. Nevertheless, the visual representation of the data shows that there is a similarity between the effects of organizational culture and IS Success on marketing performance. However, in order to see this relation more clearly sample size should be increased. As a limitation of the study, there is the difficulty to find the family firms that satisfy all the constraint of the study, which are having at least operational level information systems, 15-years experience and the second generation heading the firm.

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