

LEARNING ORIENTATION AND MARKET INFORMATION PROCESSING:
EFFECTS ON MARKETING AND ORGANIZATIONAL OUTCOMES

HALE ÇALOĞLU

BOĞAZİÇİ UNIVERSITY

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Hale alođlu

Bođazii University
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DECLARATION OF ORIGINALITY

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ABSTRACT

Learning Orientation and Market Information Processing: Effects on Marketing and Organizational Outcomes

This study proposes a theoretical model, which relates learning orientation directly and also indirectly through market information processing and marketing effectiveness to organizational performance. A second study model, which explicitly recognizes the differential effects across these measures, is also developed. The significance of this study stems from its integrative approach to fragmented streams of literature, which analyze the links between learning orientation, market information processing, marketing effectiveness, new product success and financial performance. The two theoretical models are tested with data collected from 114 companies through structured questionnaires. The findings suggest three significant routes between learning orientation and financial performance. The first route indicates that learning orientation helps the firms to successfully process market information, effectively implement marketing activities for new market - driven product offerings, and thus achieve superior financial performance. The second significant route implies that a learning oriented firm can successfully introduce new market-driving products and achieve subsequent financial success without focusing on its markets. Finally, the third significant route hints that learning oriented firms do not only attain superior financial performance by introducing new products, but also by focusing on their current markets and effectively marketing their current product offerings.

ÖZET

Öğrenme Yönelimi ve Pazar Bilgisi İşlenmesi:

Pazarlama ve İşletme Performansı Üzerine Etkileri

Bu çalışma, öğrenme yönelimi ile işletme performansı arasında doğrudan ve ayrıca pazar bilgisi işleme ve pazarlama etkinliği aracılığıyla dolaylı olarak bir ilişki kurma amacı güden teorik bir model öne sürmektedir. Bahsi geçen bu ilişkinin temelinde yatan mekanizmaları derinlemesine ortaya koymak amacıyla işletme performansı değişkeni yeni ürün başarısı ve finansal performans olmak üzere iki boyuta ayrılarak, bu ölçütlerin ayrımsal etkilerini net bir şekilde ortaya koyan ikinci bir model geliştirilmiştir. Bu çalışma, literatürde öğrenme yönelimi, pazar bilgisi işlenmesi, pazarlama etkinliği, yeni ürün başarısı ve finansal performans arasındaki bağlantıları inceleyen farklı akımları biraraya getiren bir bakış açısı sunması bakımından önem taşımaktadır. Elde edilen bulgular öğrenme yönelimi ve finansal performans arasındaki üç önemli yola işaret etmektedir. İlk yola göre, şirketler öğrenme yönelimi yardımı ile pazar bilgisini başarı ile değerlendirmekte ve pazarın yönlendirmesi doğrultusunda piyasaya sürdükleri ürünler için etkin pazarlama yaparak, böylelikle üstün finansal performans elde etmektedirler. İkinci yola göre ise, öğrenmeye yönelimli şirketler pazara yön verecek ürünleri piyasaya sürüp, pazara yoğunlaşmaya gerek kalmadan finansal başarıya ulaşmaktadır. Son olarak, üçüncü yola göre öğrenmeye yönelimli şirketler üstün finansal performansla sadece piyasaya yeni ürünler sunarak değil, aynı zamanda mevcut pazarlar üzerinde yoğunlaşıp mevcut ürünlerinin etkin bir şekilde pazarlamasını yaparak ulaşabilmektedirler.

CURRICULUM VITAE

NAME: Hale Çaloğlu

DEGREES AWARDED

MBA, 1993, Pennsylvania State University

BA in Management, 1991, Boğaziçi University

AREAS OF SPECIAL INTEREST

Marketing in financial institutions, entrepreneurship, organizational learning, marketing in emerging markets.

PROFESSIONAL EXPERIENCE

Marketing Department Assistant Manager, Türk Ekonomi Bankası, Türkiye, 1999 - 2002

Marketing Department Assistant Manager, Körfezbank, Türkiye, 1998 - 1999

Account Officer, Oyakbank, Türkiye, 1994 - 1998

GRANTS

British Council grant for training in bank marketing at Loughborough University, England, March 1999.

Tuition waiver grant for MBA studies, exchange student at University of Manchester, 1992-1993

Türk Eğitim Vakfı, MBA Scholarship 1991-1993

PUBLICATIONS

Erdoğan, I., Çaloğlu, H., & Bodur, M. (2004).

International market entry and expansion strategies of Anadolu Efes A.Ş. *In Drivers of Global Business Success: Lessons from Emerging Markets*, Palgrave MacMillan, 168-181.

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To my dearest son: Can Alp aloęlu. You are my inspiration...

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ABBREVIATIONS

AM	Achieved Memory
AMOS	Analysis of Moment Structures
AVE	Average Variance Extracted
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CI	Competitive Intensity
CL	Commitment to Learning
CMINDF	Chi-square/Degrees of Freedom
CON	Constrained
CP	Customer Philosophy
CR	Composite Reliability
Df	Degrees of Freedom
FP	Financial Performance
GOF	Goodness of Fit
IA	Information Acquisition
ID	Information Dissemination
IMO	Integrated Marketing Organization
ITO	Turkish Chamber of Commerce
KMO-MSA	Kaiser-Meyer-Olkin Measure of Sampling Adequacy
LO	Learning Orientation
MARKOR	Marketing Orientation
ME	Marketing Effectiveness
MI	Modification Index

MIP	Marketing Information Processing
MLE	Maximum Likelihood Estimation
NPS	New Product Success
OM	Open Mindedness
OP	Organizational Performance
RMSEA	Root Mean Square Error of Approximation
SE	Standard Error
SEM	Structural Equation Modeling
SM	Sense-Making
SO	Strategic Orientation
SV	Shared Value
UNCON	Unconstrained

CHAPTER 1

INTRODUCTION

A value-based concept related to organizational learning, is the learning orientation of the organization. Baker and Sinkula (1999a) argued that learning orientation ‘is not the only complex resource which is difficult to imitate but learning leverages the use of all resources’. Previous research established a direct (e.g. Hanvanich, Sivakumar & Hult, 2006; Kharabsheh, Jarrar, & Simeonova, 2014) and indirect (e.g. Baker & Sinkula, 1999b; Hult & Ketchen 2001; Hult, Hurley & Knight 2004; Mavondo, Chimhanzi, & Stewart, 2005; Santos-Vijande, Sanzo-Perez, Alvarez-Gonzales, & Vazquez Casielles, 2005) positive relationship between learning orientation and organizational performance. However, the mediating factors, which may shed light on this relationship, have received less attention. The mechanisms through which learning orientation affects organizational performance require further analysis. The present study aims to contribute to the literature concerning this need.

This research is at the interface of streams of literature inquiring the relations between various combinations of learning orientation, market information processing activities, marketing effectiveness, organizational performance (i.e., new product success and financial performance). As an attempt to integrate the fragmented streams of literature, this study proposes a theoretical model. The theoretical model explores the mediating roles of market information processing activities and marketing effectiveness between learning orientation and organizational performance. Following Baker and Sinkula (1999a), this study conceptualizes organizational performance with a two-dimensional (i.e., new product success and financial performance) composite measure.

Most empirical studies in this stream of research have used aggregate performance measures. However, an aggregate measure of organizational performance may not reveal the complexity of the relation between learning orientation and organizational performance. Thus, a second model is proposed. The second model relates learning orientation directly and indirectly to both to financial performance and new product success. Disaggregating the organizational performance construct into its two dimensions enables us to clarify the mediating role of new product success in the link between learning orientation and financial performance.

The present study explores the issue in the context of a mixed sample of firms from both manufacturing and service industries in Turkey. A survey of four pages is administered to managers/owners of a sample of 114 companies in Istanbul. Both of the proposed models are tested by structural equation modeling methodology.

In the following paragraphs, the significance of the study as well as the significance of study constructs is briefly discussed.

1.1 Significance of the study

The two models proposed in this study aim to integrate the fragmented literatures on the links between learning orientation and organizational performance (e.g. Baker & Sinkula 1999a; 1999b; Kharabsheh et al., 2014; Yılmaz, Alpkan, & Ergun et al., 2005), learning orientation and new product success (e.g. Baker & Sinkula 1999a; Hurley, et al., 2004; Mavondo et al., 2005), learning orientation and market information processing activities (e.g., Sinkula, Baker, & Noordewier, 1997), learning orientation and marketing effectiveness (e.g. Mavondo et al., 2005), marketing effectiveness and organizational performance (e.g. Appiah-Adu, Fyall, &

Singh, 1999; 2001; Hooley & Lynch, 1985; Sin & Tse, 2000), new product success and financial performance (e.g. Baker & Sinkula, 2005) marketing effectiveness and new product success (e.g. Mavondo et al., 2005).

As Hurley and Hult (1998) pointed out, the works of Sinkula's (1994) and Slater, and Narver (1995) have been influential in introducing organizational learning construct to marketing. Hurley and Hult called for future studies, which adopts a process approach and inquires how firms learn, and adapt their performance. In a similar vein, Slater and Narver (1995) attempted to model the processes of new knowledge development in organizations and suggested that such models be developed and tested. Slater and Narver pointed out that future studies could shed light on the "process of learning, behavior change, and performance improvement" (p. 63). Based on the preceding arguments, this study aims to answer the following research questions:

- Which mediating mechanisms underlie the relation between learning orientation and organizational performance?
- Which mediating mechanisms underlie the relation between learning orientation and financial performance?
- Which of the independent and mediating variables has a greater impact on organizational performance?
- Which of the independent and mediating variables has a greater impact on financial performance?
- Does competitive intensity moderate these relationships?

Significance of this study stems from its integrative approach to prominent topics such as learning orientation, market-based information processes, new product success, marketing effectiveness and financial performance. All of these variables

have been elaborated and the interrelations between them have been empirically tested in different fragments of the literature. This study attempts to propose a broader nomological framework, which is based on the above mentioned and evidenced relationships.

1.2 Significance of learning orientation as the independent variable

Value based cultural orientation constructs such as market orientation, entrepreneurial orientation, innovation orientation, along with learning orientation have been extensively discussed in the literature (e.g. Hult, Snow, & Kandemir, 2003; Liu, Luo, & Shi 2003;). Authors all attested that these cultural orientations contribute to sustainable superior performance of organizations. Although all of the above-mentioned cultural orientations are all influential on organizational performance, the prominence of learning orientation among other value based cultural orientations has been emphasized in the literature. Dickson (1996, p. 104) stated that higher order learning is most fundamental competitive advantage. Hunt and Morgan (1996) maintained that learning is can create competitive advantage, as it is a complex in nature and hard to imitate. Other scholars have argued that a learning orientation is a necessary organizational resource to achieve a competitive advantage (e.g. Day, 1994). In line with such views, this study focuses on learning orientation as the independent variable.

1.3 Significance of market information processing as the mediating variable

Although, the organizational view of information processing is a potential contributor to the marketing literature, it has been underused (Moorman, 1995). One of the aims of this study is to address this deficiency. Moorman (1995) argued that

organizational culture is influential on the organizational processes to attain organizational outcomes. She also stated that previous research has failed to understand the cultural antecedents of organizational information processing in firms. Similarly, Menon and Varadajaran (1992) and Sinkula (1994) argued that organizational culture influences information processes. Other researchers (e.g. Slater & Narver 1995; Deshpande & Webster, 1989) have suggested the conduct of further research on the facilitating role of organizational learning processes in the relationship between organizational culture and organizational outcomes. Based on such arguments, this study focuses on market based organizational learning (Sinkula, 1994; Sinkula et al., 1997) and on the market related information processing activities (Homburg & Pflesser, 2000). Market information facilitates firms to develop the necessary responses to their markets. Sinkula (1994) argued, “a distinguishing factor of market-based organizational learning is to develop and particularly to maintain a basis of competitive advantage, and the organizations must develop higher-order knowledge” (p. 38).

Market information processing activities have been discussed in the literature streams related to market orientation (e.g. Kharabsheh et al., 2014; Kohli & Jaworski, 1990) and, market-based organizational learning (e.g. Ali, Peters, He & Lettice, 2010; Morgan & Turnell, 2003; Sinkula, 1994; Sinkula et al., 1997; Slater & Narver 1995). Inspired by such studies, this study examines the relationship between learning orientation and the organizational outcomes of marketing effectiveness organizational performance facilitated by market information processing activities.

Another contribution sought in this study is to adapt a measure of market information processing activities, which captures market-related knowledge producing and storage behaviors, and to empirically test its reliability and validity.

While doing that, this study tries to integrate organizational (e.g. Moorman & Miner, 1997), marketing (e.g. Kohli & Jaworski, 1990) and socio cognitive conceptualizations of information processing activities (e.g. Akgün, Lynn, & Reilly, 2002; Akgün, Gary, & John, 2003; Akgün, Lynn, & Yılmaz, 2006). The four dimensions of market information processing variable, namely, market information acquisition, market information dissemination, sense making and memory are adopted from the above-mentioned, streams of literature.

1.4 Significance of marketing effectiveness as a mediating variable

Marketing effectiveness is an important dimension of marketing performance (Khan & Myers, 2005; Morgan, Clarke, & Gooner, 2002). Several studies have conceptually discussed (e.g. Kotler, 1977; Kahn & Myers, 2005) and empirically tested (e.g. Alpay, Bodur, Yılmaz, Büyükbacı, 2012; Appiah-Adu et al., 1999; Appiah-Adu, et al., 2001; Connor & Tynan, 1999; Mavondo, 1999; Mavondo et al., 2005; Norburn, Birley & Dunn, 1988; Norburn, Birley, Dunn & Payne, 1990; Sin & Tse, 2000; Webster, 1995) marketing effectiveness construct.

Despite its importance, many firms do not achieve marketing effectiveness and this remains an area of significant weakness for them (Appiah-Adu et al., 1999). As such, this study seeks to contribute to the literature by analyzing the mediating role of marketing effectiveness in the relationship between learning orientate on and organizational performance.

1.5 Outline of the study

Following the introduction chapter, the second chapter discusses a literature review based on the conceptual and empirical studies about the constructs in this study. The

two research models and the hypotheses of the study are presented in Chapter 3. Chapter 4 is about the research design and the methodology as well as the operationalization of the variables. Chapter 5 presents the data analyses and statistical results (reliability analyses, exploratory and confirmatory factor analyses, correlation analyses, construct validity analyses, assessment of configural and metric invariance, hypothesis testing). Finally, conclusions, managerial and theoretical implications, limitations of the study as well as suggested future research, are presented in Chapter 6.

CHAPTER 2

LITERATURE REVIEW

With the aim of forming the theoretical background of the study, this chapter reviews the literature on the study constructs and the interrelationships between them. While presenting brief reviews of the main research streams, which inspired this study, the individual study constructs, namely; learning orientation, market information processing activities, marketing effectiveness, organizational performance and competitive intensity will also be explained in detail. Thus, the relations, which, lead to the formation of the two study models, will be clarified. Next, organizational learning literature is discussed.

2.1 Organizational learning

Huber (1991) has emphasized the importance and attractiveness of organizational learning. Organizational learning is prominent because, it is indispensable for organizational success. Huber (1991) has defined organizational learning as the acquisition, dissemination, interpretation, and storage of knowledge.

Mavondo et al., (2005) argued that, organizational learning is lately applied in marketing contexts such as market orientation, marketing management, strategic marketing and that, “this incorporation was fueled by the recognition that learning might be the next source of competitive advantage” (p. 1237).

Although there is an extensive literature in organizational learning (e.g. Argyris & Shön, 1978; Daft & Huber, 1987; Daft & Weick, 1984; Huber, 1991; Senge, 1990; Senge, 1992; Tobin, 1993), there is no consensus on the definition of organizational learning. Scholars have varying views of organizational learning.

Cyert and March (1963) argued that organizational learning is a process and that organizations learn through interaction with their environments. Argyris and Schön (1978) emphasized the significance of individuals for organizational learning. However, he also pointed out that individual learning is required but not enough for organizational learning. Senge (1990; 1992) emphasized the significance of shared mental models, and share organizational visions, as well as open-mindedness. Argyris and Schön (1978) suggested that organizational learning occurs only if change, which will lead to organizational effectiveness, takes place. Fiol and Lyles (1985) also emphasized the need for behavioral change for learning to occur, whereas, Friedlander (1983) argued that learning may not necessarily lead to visible changes in behavior but it may only lead to changes in understandings. Daft and Huber (1987) argued that the accumulation of knowledge is created and expanded through a learning process. Huber (1991) argued, “an entity learns if, through its processing of information, the range of its potential behaviors is changed” (p. 89). Garvin (1993) emphasized the importance of modifying an organization’s behavior to reflect new knowledge and insights. Finally, Sinkula (1994) defined organizational learning as “the means by which knowledge is preserved so that it can be used by individuals other than its progenitor” (p. 36).

Organizational learning literature distinguishes between different types of learning. Single loop learning (Argyris, 1977) or adaptive learning (Senge, 1990) sparks tactical alterations and continuous improvements in the firm, whereas double loop (Argyris, 1977) or generative learning (Senge, 1990) encourages innovative thinking. Authors have argued that adaptive learning facilitates incremental innovation, whereas, generative learning leads to breakthrough innovations. Most

learning in an organizational is argued to be adaptive learning, which does not change the organizational norms (Baker & Sinkula, 1999b).

Market-based organizational learning is one specific process within the broader framework of organizational learning (Sinkula et al., 1997). This study conceptualizes organizational learning from a market information processing perspective (e.g. Sinkula, 1994). In this regard, next the literature on market based organizational learning is presented.

2.2 Market-based organizational learning

Two studies by Sinkula (1994), Slater, and Narver (1995) have been influential to incorporating market-based organizational learning to marketing. According to Sinkula (1994) market-based organizational learning at the augmented level is about engaging in “resolving inconsistencies by adapting the norms themselves” (p. 39). Market related organizational learning differs from other types of organizational learning in several ways as Sinkula (1994) explained as the following:

First, it is a core competency pertaining to external foci and it is less visible than most internally focused organizational learning competencies ... Second, market-directed organizational learning results in the fundamental basis of competitive advantage ... Third, market-based organizational learning is distinct from other types of organizational learning in that the observation of others is essential ... Fourth, the market information that resides in organizational memory is typically more difficult to access ... Finally, market-based organizational learning is unique in that market-based information is more equivocal. (p. 37)

Drawing on organizational learning (e.g. Huber, 1991; Sinkula, 1994) and organizational culture (e.g. Deshpande & Webster, 1989) literatures, Slater and Narver (1995) proposed an organizational learning process framework, which linked

organizational culture and climate with organizational learning process and learning outcomes such as new product success, customer satisfaction, sales growth and profitability. Slater and Narver (1995) referred to information acquisition, intelligence dissemination and organizational responsiveness as intermediate learning outcomes.

Based on Slater and Narver's (1995) suggestion that frameworks, which model the processes through which organizations develop and use new knowledge for increased performance should be developed and tested, Sinkula et al. (1997) attempted for the first time to empirically test a framework that formally interrelates organizational values (i.e., learning orientation), market information-processing activities (i.e. information acquisition and dissemination), and organizational actions (i.e., marketing dynamism). They described their market-based organizational learning framework as "a starting point for prescribing an optimal organizational learning process, one that has the greatest capacity to identify and correct errors in theory in use, and that is most able to facilitate the transformation of an organization into a learning organization, in which learning is a core competency that can be used to gain and hold a competitive advantage" (p. 305). Their empirical findings suggested that learning orientation positively and directly influences market information generation and dissemination. Market information and dissemination, in return, directly influences marketing dynamism, which was conceptualized as a short-term learning and organizational outcome.

It is crucial to analyze how a company processes market information to comprehend how it achieves market-based learning. Therefore, market information acquisition, market information dissemination, sense making and achieved memory, which comprise the market information processing activities, are discussed next.

2.3 Market information processing activities

This study examines the nature of information processes as they occur at the organizational level. In line with Sinkula et al., (1997) this study focuses on market-based information processing activities, which are regarded as information-related behaviors that facilitate learning. Despite some subtle variations, authors (Day 1994; Huber 1991; Sinkula, 1994) have defined market information processing with the dimensions of information acquisition, information dissemination, interpretation and memory. Baker and Sinkula (1999b) argued that both formal and informal market information processing are needed to facilitate organizational learning. Similarly, Sinkula (1994) argued, “market information processing is a function of, what the organization has learned in terms of both facts about its relevant markets and its particular way of acquiring, distributing, interpreting, and storing information” (p. 37).

Marketing scholars have studied information processing activities in various contexts. For example, marketing scholars have analyzed information processing and utilization of the individual decision maker (Deshpande & Zaltman, 1982; Wilton & Myers, 1986). Marketing literature has also studied market information processes in the context of individual managers’ use of information (e.g. Deshpande & Zaltman, 1982; Menon & Varadarajan, 1992; Moorman, Deshpande & Zaltman 1993). Finally, market information processing has also been studied in the research of market orientation (e.g. Kohli & Jaworski, 1990; Kohli, Jaworski, & Kumar, 1993; Kumar, Subramanian, & Yauger, 1998). Kohli and Jaworski (1990) have conceptualized market orientation as involving a series of organizational information processes. Kohli and Jaworski refer to the need to generate, disseminate, and respond to information for achieving superior organizational outcomes. They suggested that

market intelligence includes information about customers, competitors and any other important exogenous factors. This conceptualization was empirically formalized in the marketing orientation (MARKOR) scale (Kohli, et al., 1993). MARKOR scale has three dimensions, namely, intelligence generation, intelligence dissemination, and responsiveness. Slater and Narver (1995) argued that “Jaworski and Kohli (1993) have facilitated research on organizational learning by developing measures of the effectiveness of information acquisition, intelligence dissemination, and organizational responsiveness stages of the learning process, which are themselves measures of intermediate learning outcomes” (p. 72).

As previously, discussed, information-processing activities have been generally conceptualized with four constructs, namely, information generation, dissemination, interpretation, and memory (Huber, 1991). The present study borrowed two dimensions of market information acquisition and information dissemination from the market information processing conceptualization of Kohli et al. (1993). Once the information is acquired and disseminated, it should be interpreted in a meaningful and useful way. The third dimension of market information processing construct is sense making, which is drawn from social cognition literature (Akgün et al., 2002; Galotti, 1989). Sense making dimension reflects whether the firm can make sense of the available information. Finally, the market information should be stored for future use in the organizational memory. Thus, the fourth and last dimension of market information processing is specified as achieved memory (Moorman & Miner, 1997). Next, the four dimensions of market information processing activities are explained in more detail.

2.3.1 Market information acquisition

Information acquisition enables the firm to keep updated about its customers and competitors. It has been defined as the gathering of internal and external information (i.e. customers, markets, technologies and competitors) (Moorman, 1995). Huber (1991) has defined information acquisition as “the process by which knowledge is obtained” (p. 91). Organizational learning literature conceptualizes information acquisition as collection of data from customers, competitors, and cross-functional teams etc. (Akgün et al., 2003; Huber, 1991).

As discussed by Huber (1991) information is acquired by both formal and informal activities. Organizations acquire information from external, as well as internal sources (Sinkula, 1994). Some examples of external sources are searching, employing consultants or new experts, grafting and collaborating with organizations (Dixon, 1992; Sinkula, 1994). Researchers (Dixon, 1992; Huber, 1991; Sinkula, 1994) have exemplified internal knowledge as congenital knowledge, experiential knowledge, and experimental knowledge.

2.3.2 Market information dissemination

Huber (1991) argued that “information distribution is a determinant of both the occurrence and breath of organizational learning” (p. 100). Argyris and Schön (1978) defined information dissemination as dispersing information throughout the organization so that it can reach all levels. According to Huber (1991), “information distribution is the process by which information from different sources is shared and thereby leads to new information or understanding” (p. 101). Information dissemination processes make individual insights and expertise accessible to others (Akgün et al., 2003; Purser, Pasmore, & Tenkasi, 1992). Researchers have stated that

information dissemination takes place throughout the organization both by formal and informal communication, (Huber, 1991). Other authors (i.e., Kohli & Jaworski 1990; Narver & Slater, 1990) consider market information dissemination as a crucial component of the information processes that enhance responsiveness of the firm.

2.3.3 Sense making

It is crucial to interpret information before a company can take relevant actions.

The significance of market information interpretation is extensively elaborated in the literature (e.g. Huber, 1991; Senge, 1990; Sinkula, 1994; Sinkula et al., 1997)

In both the knowledge-based and organizational information processing literatures, authors have posited that assigned meaning is more valuable than information (Daft & Weick, 1984; Grant, 1996). Information is important but translating information into knowledge provides the basis for better management (Hult, Ketchen, & Slater, 2004). Organizational sense making is a social process of developing a common or shared understanding by organizing information and ideas (Akgün et al., 2003; Dougherty, Borelli, Munir & O'Sullivan, 2000). Others have described sense making as the constructing, filtering, and framing of information (Huber, 1991; Weick, 1995). Moorman (1995) has operationalized sense making as coding, sorting, and organizing internal and external information collected by teams and individuals.

2.3.4 Organizational memory

Various definitions of organizational memory exist in the literature. Scholars have defined organizational memory as a process of storing information, (in hard or soft form) so that it can be used in the future (Huber, 1991; Sinkula, 1994). Corner, Knicki, and Keats (1994) depicted memory as a step between interpretation and

decision. Slater and Narver (1995) argued that organizational memory comprises of accumulated knowledge in the organization. Huber (1991) stressed the significance of organizational memory and the need for its systematic investigation.

Both hard (e.g., customer call reports) and soft information is stored in organizational memory (Feldman, 1986; Mintzberg, 1975). Literature also discusses that information is stored in human versus computer based organizational memory (Huber, 1991). In this vein, Sinkula (1994) argued that it is more difficult to retrieve market information from organizational memory and that “only recently, has information technology made it possible to store and retrieve details about marketing issues with the same level of efficiency that other functional areas of the firm have” (p. 37).

Sinkula et al. (1997) stressed the importance of organizational memory for achieving improvements in long-term market performance. They argued that the existence of an effective organizational memory would improve long-term learning of an organization.

Moorman and Miner (1997) emphasized that organizational memory should not be considered as the sum of the memories of the organizational members. Drawing on Moorman and Miner (1997) and Hult et al. (2004), this study focuses on achieved memory, which is defined as the amount of knowledge, experience, and familiarity with the marketing process.

Having discussed the scope and significance of market information processing activities, it is important to remember that certain values drive behavior (McClelland, 1985; Sinkula et al., 1997) and that learning orientation is a value that has impact on a firm’s market information processing behaviors. Authors (e.g. Slater & Narver, 1995; Yilmaz et al., 2005) have argued that learning orientation

encourages firms to attach importance to the acquisition, transfer, and utilization of knowledge. In this regard, learning orientation, which has been defined as “a set of organizational values that are related to the propensity of firms to create and use knowledge” (Hanvanich et al., 2006, p. 601), will be discussed next.

2.4 Learning orientation

Organizations attain knowledge through the organizational learning process (Huber, 1991), and knowledge is a strategic asset (Glazer, 1991). Central to the organization's learning orientation is the value it places on learning (Sinkula et al., 1997). The value attached to learning by the organization determines the organization's inclination towards a learning culture. In this study, learning orientation is conceptualized as a value based cultural orientation in the organizational context.

According to Argyris and Schön (1978) learning orientation is about proactively questioning their extant beliefs and practices. According to Baker and Sinkula, (1999b) learning orientation is an organizational characteristic that constantly challenges the assumptions of the organization about its environment. Calantone, Çavuşgil, & Zhao (2002) maintained that learning orientation leads to competitive advantage by generating and utilizing knowledge. Farrell, Oczkowski, and Kharabsheh (2008) have defined learning orientation as the organizational capability to acquire, disseminate and utilize knowledge.

Sinkula et al. (1997) provided the most popular conceptualization of learning orientation. They defined learning orientation as a set of organizational values, which influence the ability of an organization to create and use knowledge. The measure of learning orientation, developed by Sinkula et al. (1997), is widely adopted and

adapted in several studies (e.g. Baker & Sinkula, 1999a; Baker & Sinkula, 1999b; Kharabsheh et al., 2014; Mavondo et al., 2005). While developing the learning orientation scale, Sinkula et al. (1997) adapted the scale items of several scholars (e.g. Day 1991; 1992a; 1992b; Senge 1990; 1992; Tobin 1993; Slater and Narver 1994). The learning orientation scale of Sinkula et al. has three dimensions, namely, commitment to learning, open mindedness, and shared vision.

Commitment to learning has previously been elaborated in Senge's (1990) work of learning principles. Other authors have also discussed the importance of commitment to learning (Sackman, 1991; Sinkula et al., 1997; Tobin, 1993). As these authors argued, the value given to learning and the cultural devotion to learning facilitates the formation of a learning oriented climate in the organization.

Open mindedness at the organizational level is a major determinant of a learning environment. As organizations grow old, managers and employees may neglect to question the routines and procedures of the organization. Devotion to existing norms hinders unlearning and changing in the organization. As scholars (e.g. Day, 1994; Sinkula, 1994) argued organizations should constantly question the existing ways of doing business, established structures and long held beliefs so that learning can take place.

As Sinkula et al. (1997) explained, shared vision affects the direction of learning. On the other hand, commitment to learning and, open- mindedness affect the intensity of learning. A shared vision enables the organization to focus on shared missions and outcomes, thus facilitates the members of the organization to engage in learning in the same order. In companies without a shared vision, diverse thought worlds (Dougherty, 1992) are likely to exist.

The interrelations among learning orientation and other cultural orientations such as entrepreneurial orientation, market orientation, innovation orientation and their impact on organizational performance and competitiveness, has been investigated extensively in the literature. Next, these relationships are discussed in further detail.

2.5 Learning orientation, other cultural orientations and firm performance

Learning orientation has been mostly studied in the context of the relationship between cultural orientations and organizational performance. Scholars have attested that cultural capabilities are significant sources of sustained competitive advantage (Barney, 1986). This stems from the fact that the socially complex and causally ambiguous nature of cultural capabilities makes them hard to imitate (Yılmaz et al., 2005). Several researchers attested that cultural orientations enable organizations to have positional advantage, and thus, achieve sustainable superior performance (e.g. Gonzales & Gonzales, 2005; Hult, Ketchen, & Nichols, 2002; Hult et al., 2003; Liu et al., 2003; Slater & Narver, 1995).

In their conceptual article, Slater and Narver (1995) claimed that a market orientation strengthened by an entrepreneurial focus sets the cultural foundations for organizational learning. They also maintained that market orientation only improves performance if it is unified with learning orientation and that market orientation is inherently a learning orientation. Scholars argued that the combination of entrepreneurship, innovativeness, market orientation and organizational learning increase cultural competitiveness of the organization (e.g. Gonzales-Benito & Gonzales-Benito, 2005; Hult et al., 2002). In the same vein, Hult and Ketchen (2001) maintained that learning orientation, innovation and market orientation collectively

comprise a unique organizational resource. Their empirical findings confirmed that the convergence of market orientation, entrepreneurship, innovativeness, and organizational learning leads superior organizational performance.

Other empirical studies focused solely on the interrelations among learning orientation, marketing orientation, innovativeness and organizational outcomes (e.g., Baker & Sinkula, 1999a; 1999b; Hurley & Hult, 1998). For example, Hurley and Hult (1998) critiqued Slater and Narver (1995) as their model included entrepreneurship rather than innovation and argued that when compared with entrepreneurship, innovation is a broader concept, which covers the implementation of new ideas, products and processes. The study by Hurley and Hult attempted to have built on Slater and Narver's (1995) work by introducing innovativeness and innovative capacity as the mediators of the link between performance and learning and market orientations. Their empirical findings showed that cultures that emphasize learning and development are positively related to innovativeness.

In another empirical study, Baker and Sinkula (1999b) investigated the relationships among learning orientation, market orientation and organizational performance. Their findings suggested a direct link between learning orientation and new product success, as well as overall organizational performance. Additionally, their results showed that learning orientation also influences organizational performance by enhancing the quality of market-oriented behaviors of a firm. In a second study by Baker and Sinkula (1999a), the empirical findings showed that there is no direct link between market orientation and organizational performance, but rather, product innovation mediates the relationship between market orientation and organizational performance. They have also found that learning orientation directly and indirectly (i.e., through the mediation effect of product innovation) influences

organizational performance. Additionally, findings showed that learning orientation is preeminent over market orientation for its impact on organizational performance.

Calantone et al. (2002) also investigated the link between learning orientation and firm performance, as well as the mediating effect of innovativeness in this relationship. Their results suggested that learning orientation directly and indirectly (through innovativeness) affects firm performance (i.e., market share, new product success, overall performance).

Mavondo et al. (2005) argued that learning orientation is a much broader concept than market orientation. They even went on to claim that learning orientation incorporated marketing orientation. Their empirical findings indicated a positive and direct link between learning orientation and both financial performance and marketing effectiveness. Their study also showed that the positive link between learning orientation and product innovation is mediated by marketing orientation, and that the relation between learning orientation and marketing effectiveness is mediated by marketing orientation.

In a more recent study, Kharabsheh et al. (2014) empirically showed that learning orientation is the more significant influencer of organizational performance when compared to market orientation. Additionally their study evidenced a strong and positive relationship between learning organization and organizational performance.

As discussed in the preceding paragraphs, some studies (e.g., Baker & Sinkula 1999b; Kharabsheh et al., 2014; Mavondo et al., 2005) evidence the prominence of learning orientation over market orientation for its impact on organizational performance, whereas, other studies provide (e.g. Farrell, 2000; Farrell & Oczkowski 2002; Farrell et al., 2008; Santos-Vijande et al., 2005) contrary

evidence. For example, Farrell and Oczkowski (2002) argued that market orientation is more valuable than learning orientation to achieve superior organizational performance, as their research with Australian organizations, empirically showed that market orientation has a stronger impact on organizational performance than learning orientation does. The findings were replicated by a study of Farrell et al. (2008) who examined international joint ventures. Another study by Santos-Vijande et al. (2005) found that learning orientation has no direct effect on organizational performance. Instead, learning orientation only influences organizational performance through the mediating effect of marketing orientation.

As it can be implied from the literature review, the issue of whether learning orientation or marketing orientation is more influential on organizational performance remains controversial. However, it is undeniable that the literature is moving from comparing marketing orientation and learning orientation to how learning orientation influences market-based learning. In this respect, two complementary literature streams of market orientation and organizational learning are now coming together (Celuch, Kasouf, & Peruvemba, 2002).

The literature review above also reveals that the findings on the link between learning orientation and organizational performance are inconclusive. There are empirical studies which found a positive direct link between learning orientation and organizational performance (e.g. Baker & Sinkula, 1999a; 1999b; Calantone et al., 2002; Celuch et al., 2002; Farrell, 2000; Farrell & Oczkowski, 2002; Farrell et al., 2008; Kharabsheh et al., 2014; Mavondo et al., 2005), whereas other studies could not provide evidence of such a relationship (e.g. Santos-Vijande et al., 2005). Consequently, the relationship between learning orientation and organizational performance needs to be clarified by further evidence. In such an attempt, Yılmaz et

al. (2005) distinguished between performance components, related to qualitative organizational outcomes (i.e., innovativeness, quality improvements; employee satisfaction and commitment), and quantitative organizational outcomes (i.e., financial and market performance). Their findings revealed that while learning orientation positively influences both qualitative and quantitative performance, its impact on qualitative performance is stronger.

2.6 Marketing effectiveness

As firms are goal-oriented, they focus on the outcomes such as marketing effectiveness. Marketing effectiveness's strong link to several other important organizational outcomes, such as financial performance, market performance and new product success makes it significant. In this vein, Kahn & Myers (2005) have emphasized the importance of marketing effectiveness as a central dimension of organizational performance.

Authors have conceptually discussed marketing effectiveness (e.g. Kotler, 1977; Kahn & Myers, 2005; Morgan et al., 2002). Kotler (1977) underlined the distinction between marketing effectiveness and profitability. He argued that marketing culture strongly affects marketing effectiveness and subsequently marketing effectiveness positively influences financial outcomes. Kahn & Myers (2005) reviewed marketing effectiveness literature, proposed a marketing effectiveness framework, and offered prepositions to further develop the concept. Morgan et al. (2002) stressed the importance of measuring marketing performance and proposed an integrative framework of the stages of marketing performance process.

Other studies empirically tested the concept. Some empirical studies (e.g. Dunn, Norburn & Birley, 1994; Norburn et al., 1988; 1990; Sin & Tse, 2000; Webster, 1995) focused on how organizational culture influences marketing effectiveness. Webster (1995) empirically investigated the effect of marketing culture on marketing effectiveness in the services industry. Her findings evidenced the existence of a strong and positive link between these two variables. Another study, conducted by Sin and Tse (2000) evidenced the positive link between organizational cultural values and marketing effectiveness, which in return positively influences organizational performance. Similarly, Leisen, Lily and Winsor (2002) empirically investigated the relations between organizational culture and marketing effectiveness. Their findings also suggested a significant link between organizational culture and marketing effectiveness.

As Appiah-Adu et al. (1999) stated, many studies (e.g. Norburn et al., 1988; 1990; Ghosh, Schoch, Taylor, Kwan, & Sock Kim, 1994) examined ‘the similarities and differences in effective marketing practices in firms across different countries’. In such two studies, Norburn et al. (1988; 1990) empirically showed that the best predictor of marketing effectiveness is people and quality across four English speaking nations (i.e., United Kingdom, United States, Australia and New Zealand).

The relation between marketing effectiveness and various aspects of performance has also been a topic of interest for researchers. Several studies have been published on the empirical link between marketing effectiveness and organizational performance (e.g. Appiah-Adu et al., 1999; Appiah-Adu et al., 2001; Hooley & Lynch, 1985; Gül, 2009; Mavondo, 1999; Sin & Tse, 2000). For example, Hooley and Lynch (1985) have analyzed the marketing practices of best performing firms in United Kingdom and evidenced that marketing effectiveness is an important

factor differentiating superior organizations from their competitors. In a similar vein, Ghosh et al. (1994) conducted a comparative study of marketing practices among the better performers in Australia, New Zealand and Singapore. The results pointed to the importance of marketing effectiveness for successful firm performance in each country. Mavondo (1999) has conceptualized marketing effectiveness as the effectiveness of implementation (i.e., objective measures of sales growth, changes in market share, the number of successful products introduced). The results of his study empirically showed that marketing effectiveness is a significant contributor of financial and organizational performance. In the context of UK hotel industry, Appiah-Adu et al. (1999) found that three dimensions of marketing effectiveness (i.e., customer philosophy, marketing information and integrated marketing organization) are positively related to customer retention, customer satisfaction, financial performance (i.e., profit margin and market share). In a similar study in UK financial services, Appiah-Adu et al. (2001) empirically showed that a positive link between marketing effectiveness and business performance. Customer philosophy dimension of marketing effectiveness contributed the most in terms of variance explained in profitability, in their study. The study by Sin and Tse (2000) also explored the relation between marketing effectiveness and business performance. Company performance was measured by business profitability (i.e., profit, return on investment and cash flow) and market dominance (i.e., sales and market share). Results of the study evidenced that marketing effectiveness is related to profitability. Similar to the results of Appiah-Adu et al. (2001), findings of this study suggested that customer philosophy dimension was the strongest to be associated with business profitability. Contrary to previous findings in the literature, the results did not indicate any link between marketing effectiveness and market dominance. Sin and

Tse (2000) attributed this finding to the fact that Hong Kong firms, which are mostly small, do not have high market shares, despite performing successfully. Furthermore, their results evidenced the positive, direct link between organizational cultural values and company performance, as well as the mediating effect of marketing effectiveness in this relationship.

The relation between marketing effectiveness and organizational performance has also been studied in the Turkish context. For example, the findings of Gül (2009) also support the positive and direct relation between marketing effectiveness and firm performance. However, this relation only holds for the operational efficiency dimension of marketing effectiveness. She attributed this result to the fact that a structured marketing approach is not widespread in Turkish firms. Again, in the Turkish context, Alpay et al. (2012) examined the mediating role of marketing effectiveness in the relationship between innovativeness and performance. The results lead to the conclusion that product and strategic innovativeness enhance firm performance only through marketing effectiveness.

It is important to note that, the above mentioned, empirical studies have used different measures of marketing effectiveness. Despite its importance, its complex nature has made it difficult to measure the marketing effectiveness construct. As Webster (1995) argued, “due to the complexity of what is meant by marketing effectiveness, few attempts have been made to develop a measure of the construct” (p. 8). Nevertheless, several marketing effectiveness measures are developed (e.g. Alpay et al., 2012; Hooley & Lynch; 1985; Carson, 1990; Kotler, 1977) and adapted (e.g. Ghosh et al., 1994; Webster, 1995; Sin & Tse, 2000, Connor & Tynan, 1999) in the literature.

Among the marketing effectiveness measures, the operationalization of Kotler (1977) has been the most popular. The original measure of Kotler (1977) has five dimensions. Customer philosophy is the first dimension and it emphasizes the importance of analyzing the market, selecting the most appropriate market segments, offering superior value to the chosen segments (Kotler, 1977). The second dimension, namely, integrated marketing organization, is about the need for a marketing philosophy reflected in the organizational structure for effective marketing. The third dimension of adequate information emphasizes the information need of managers' for taking proper actions and allocating resources effectively in the related markets. The fourth dimension is about the strategic orientation of the organization. Kotler (1977) stated that an organization does not achieve effective marketing if it cannot design a profitable strategy out of customer philosophy, integrated organization, and market information. Finally, the operational efficiency dimension of marketing effectiveness means that marketing plans are not useful if they are not efficiently implemented at all levels of the organization.

Kotler's (1977) conceptualization of marketing effectiveness has been critiqued on several grounds. First, the scale did not exhibit the same latent structure across different studies in neither United States, where it originated, or across other nations. The scale has also been criticized as it incorporates a marketing efficiency dimension. Kahn and Myers (2005) argued that the scale "overlaps the apparently distinct constructs of efficiency and effectiveness by including efficiency as a component of effectiveness" (p. 459). Vorhies and Morgan's (2003) previous empirical finding that marketing effectiveness and marketing efficiency is negatively correlated reinforces this criticism. Meldrum (1996) commented on Kotler's approach to marketing effectiveness on the basis that it is content-based instead of

process oriented. Finally, Kotler's scale was critiqued to have little empirical validation (e.g. Connor & Tynan, 1999; Kahn & Myers, 2005). Despite such critics, Kotler's (1977) operationalization researchers is widely used and provided robust results in many studies (e.g. Sin & Tse, 2000; Webster 1995). Kotler (1977) has not explained the development process of this scale in his article. Instead, the items were conceptually discussed and listed. It is also important to note that, there is no consistency in factor solutions of marketing effectiveness scale in the literature. In the following paragraphs, studies, which adopted Kotler's (1977) scale, are further

Norburn et al. (1988; 1990) attempted to validate Kotler's scale across English speaking nations (i.e. United Kingdom, United States, Australia and New Zealand). In both of these empirical studies, factor analyses resulted in three factors instead of the five original factors. Moreover, these factors did not fall into Kotler's original categorizations. In addition, there was variation in the importance of factors of marketing effectiveness for each nation.

Webster (1995) attempted to perfect the Kotler's measure in services context. As a result, Webster's (1995) conceptualization differed in the second dimension, which appeared to be a combination of both customer philosophy and integrated marketing organization dimensions. Thus, she came up with four dimensions instead of five. Webster (1995) attributed this finding to the characteristics of services marketing. She maintained that a high degree of integration between marketing and other aspects of a service firm might be a prerequisite of a customer philosophy. The factor solutions of other three dimensions of marketing effectiveness (i.e., adequate marketing information, strategic orientation, and operational efficiency) were only slightly different from Kotler's original categorization.

Similarly, Sin and Tse (2000) also utilized a measure drawn from Kotler (1977). All of the original dimensions were adopted in their marketing effectiveness scale. However, results of the factor analysis lead to a two factors solution instead of an expected five factors. The first factor was mostly comprised of items of customer philosophy dimension, whereas the second factor was items from all of the remaining four dimensions of marketing effectiveness scale. Thus, this scale did not exhibit the same latent structure across different studies in neither United States, where it originated, or across other nations.

2.7 Organizational performance

Organizational performance is an important research subject in organizational science, strategic management and marketing literatures. As Marr and Schiuma (2003) pointed out, “business performance measurement is a fast evolving and diverse research field, which is on the agenda of both academicians and practitioners” (p. 680). Several authors have discussed organizational performance (e.g. Marr & Schiuma 2003; Venkataraman & Ramanujam, 1986; Walker & Ruekert, 1987). However, a broad discussion of organizational performance is beyond the scope of this study. Our discussion will be limited to the preferred performance measures in this stream of research.

The research stream (e.g. Narver & Slater, 1990; Baker & Sinkula, 1999a; 1999b) that, this study is based on, has followed Walker and Ruekert (1987) and used each of the three dimensions of effectiveness, efficiency and adaptability in measuring organizational performance. Walker and Ruekert (1987) defined these three dimensions of performance as follows:

1. Effectiveness is the success of a business' products and programs in relation to those of its competitors in the market. Effectiveness commonly is measured by such items sales growth in comparison with that of competitors or changes in market share.
2. Efficiency is the outcome of a business' programs in relation to the resources employed in implementing them. Common measures of efficiency are profitability as a percentage of sales and return on investment (ROI).
3. Adaptability is the business' success in responding over time to changing conditions and opportunities in the environment... the most common measures are the number of successful new product introductions in relation to those of competitors or the percentage of sales accounted for by products introduced within some recent time period. (p. 19)

According to Venkatraman and Ramanujam (1987), there are two major issues underlying the measurement of business performance. The first issue is the distinction between primary and secondary data sources. The primary data is provided by the respondent organization, whereas the secondary data is collected from other sources such as annual reports or industry expert reports. The second issue is the objectivity or subjectivity of the performance measures (Venkatraman & Ramanujam, 1987).

Venkatraman and Ramanujam (1986) also differentiated between financial and operational indicators. Financial measures are the accounting measures which report economic performance of the company, whereas operational measures are related to the operational success factors such as, customer satisfaction, market share or new product development (Santos-Vijande et al., 2005).

Most studies use a single dimension of organizational performance. This study aims to use 'multiple and varied organizational performance measures' (Baker & Sinkula, 1999a). Thus, this study measures organizational performance with the two dimensions of financial performance and new product success. Empirical studies on the relationship between new product success and profitability are rare (Baker & Sinkula, 2005). Successful new products do not always lead to increase in profits. As

Baker and Sinkula asserted, market share is an important mediator in the link between new product and profitability. The direction of causality in the new product success and profitability relationship is extensively discussed in the literature (c.f., Cainelli, Evangelista, & Savona, 2006).

2.8 Competitive intensity

Organizational environment is a multidimensional concept (Keats & Hitt, 1988; McArthur & Nystrom, 1991). Among several classifications of environment is the one important distinction is made between general and task environments. Bourgeois (1980) maintained that corporate strategies are carried out at the general environmental level, while the task environment is where the strategic business unit's strategies are carried out. It is important to note that the present study focuses on the competition in the general environment of the company.

As Vorhies (1998) stated that “an environment is considered turbulent when it produces many rapid changes” (p. 5). The empirical findings of Hrebiniak and Joyce (1985) showed that environmental variation influences strategy. Contingency theory argues that environment is a source of variation in performance and that management must interpret and react to changes in environment (Morgan & Hunt, 2002). Contingency literature proposes that the environment (Porter, 1980) influences firm strategy. Drawing on such views, competitive intensity forms the background against which the hypothesized relationships are tested in this study.

Miller (1988) argued that competitor challenges lead to adaptations in strategy of firms. As the competitive intensity increases, the sellers offer the customers a larger selection. As a result, the survival of a firm depends on its abilities to deal with the competition. Consequently, in a highly competitive

environment, a learning oriented company can better monitor the competitors' moves and promptly respond to such moves. A less competitive environment does not require a learning orientation as much. Thus, a learning orientation can more strongly influence organizational performance in a highly competitive environment.

In this chapter, literature on the study constructs of learning orientation, market information processing activities, marketing effectiveness, organizational performance and competitive intensity have been reviewed. In the next chapter, two theoretical frameworks are proposed and related hypotheses are presented, along with the justifying arguments. Finally, Table 1 summarizes some of important the empirical studies and their findings, which are related to this study.

Table 1. Summary of Findings in the Literature Related to the Study Constructs

Sources	Major Empirical Findings
Hooley and Lynch, 1985	Marketing effectiveness is a common characteristic of the superior performing firms in United Kingdom.
Norburn, Birley, Dunn and Payne, 1990	The best predictor of marketing effectiveness is corporate culture and this result is similar across four different nations (i.e., United kingdom, United states, Australia and New Zealand).
Webster, 1995	Marketing culture is positively and strongly influences marketing effectiveness.
Hurley and Hult, 1998	There exists a positive and significant relation between 'learning and development' and innovation
Vorhies, 1998	Information processing capabilities are positively related to marketing capabilities. Marketing capabilities development positively influences organizational effectiveness.
Appiah-Adu, Fyall and Singh, 1999	The three dimensions of marketing effectiveness (i.e., customer philosophy, marketing information and integrated marketing organization) are positively related to customer retention, customer satisfaction and financial performance in the context of UK hotel industry.
Baker and Sinkula, 1999a	The relation between learning orientation and financial performance is partially mediated by new product success. Learning orientation is preeminent over market orientation in its relation to organizational performance.
Baker and Sinkula, 1999b	There is a direct link between learning orientation and organizational performance. Learning orientation also indirectly influences organizational performance by enhancing the quality of market-oriented behaviors of a firm.

Table 1. continued

Sources	Major Empirical Findings
Mavondo, 1999	Marketing effectiveness is an important contributor of financial and organizational performance.
Farrell, 2000	Learning orientation positively influences organizational performance
Appiah-Adu, Fyall and Singh, 2001	There is a positive link between the four dimensions of marketing effectiveness (customer philosophy, marketing information and integrated marketing organization, operational efficiency) and business performance in the context of UK financial services.
Hult and Ketchen, 2001	Convergence of market orientation, entrepreneurship, innovativeness, and organizational learning leads to positional advantages, which leads to a positive influence on long-term performance.
Leisen, Lilly and Winsor, 2001	There is a positive significant link between organizational culture and marketing effectiveness.
Farrell and Oczkowski, 2002	Market orientation is a more influential strategy than learning orientation to achieve superior organizational performance
Calantone, Cavusgil, and Zhao, 2002	Learning orientation directly and indirectly (through the mediation effect of innovativeness) influences organizational performance.
Celuch, Kasouf, and Peruvemba, 2002	Firms with stronger learning orientations, also have stronger information systems and better marketing capabilities.
Vorhies and Morgan, 2003	There is a negative correlation between marketing effectiveness and marketing efficiency.
Hult, Hurley and Knight, 2004	The effectiveness of market, learning and entrepreneurial orientations partially influence performance through mediating effect of innovativeness.
Yılmaz, Alpkın, and Ergun, 2005	While learning orientation has a positive impact on both qualitative and quantitative performance, its impact on qualitative performance is stronger.
Mavondo, Chimhanzi and Stewart, 2005	There is an indirect link between learning orientation and product innovation and this relation is mediated by market orientation. The relation between learning orientation and marketing effectiveness is mediated by market orientation.
Santos-Vijande, Sanzo-Perez, and Alvarez Gonzalez, 2005	Learning orientation has no direct effect on organizational performance. Learning orientation influences organizational performance through the mediating effect of market orientation.
Hanvanich, Sivakumar, and Hult, 2006	In a highly turbulent environment, learning orientation and performance are found to be related. On the other hand, in low turbulence, organizational memory, as well as learning orientation becomes related to performance.
Alpay, Bodur, Yılmaz, and Büyükbacı, 2012	The relation between product innovativeness and firm performance is fully mediated by marketing effectiveness.
Kharabsheh, Jarrar and Simeneova, 2014	There is a direct and positive relationship between learning organization and organizational performance. Learning orientation is the more important influencer of organizational performance (compared to marketing orientation).

CHAPTER 3

RESEARCH MODELS AND HYPOTHESIS DEVELOPMENT

Based on the preceding literature review, this study proposes two related models. First, the two models are briefly described. Then, the literature supporting each hypothesis is discussed and the hypotheses are presented.

In line with conceptual and empirical studies (Deshpande & Webster, 1989; Sinkula, 1994; Sinkula et al., 1997, this study views organizations as cognitive enterprises and proposes an organizational cognitive framework as the study model. The first study model is named as the basic model. The basic model focuses on the effect of learning orientation on organizational performance. Development of the basic model is inspired by a study of Sinkula et.al, (1997). The framework of Sinkula et al. (1997) inquired the effect on learning orientation on market information generation and dissemination, both of which, in return leads to an increase in marketing dynamism. Figure 1 presents the basic model.

Different from the work of Sinkula et al., our basic model considered four constituencies – learning orientation, marketing information processing, marketing effectiveness and organizational performance. It is proposed that learning orientation is directly and positively associated with organizational performance. The basic model focuses on the mediating factors in the above mentioned, relationship. Therefore, as illustrated in Figure 1, market information processing and marketing effectiveness are considered as mediators of the relationship between learning orientation and organizational performance. Specifically, learning orientation is expected to have a positive influence on market information processing activities

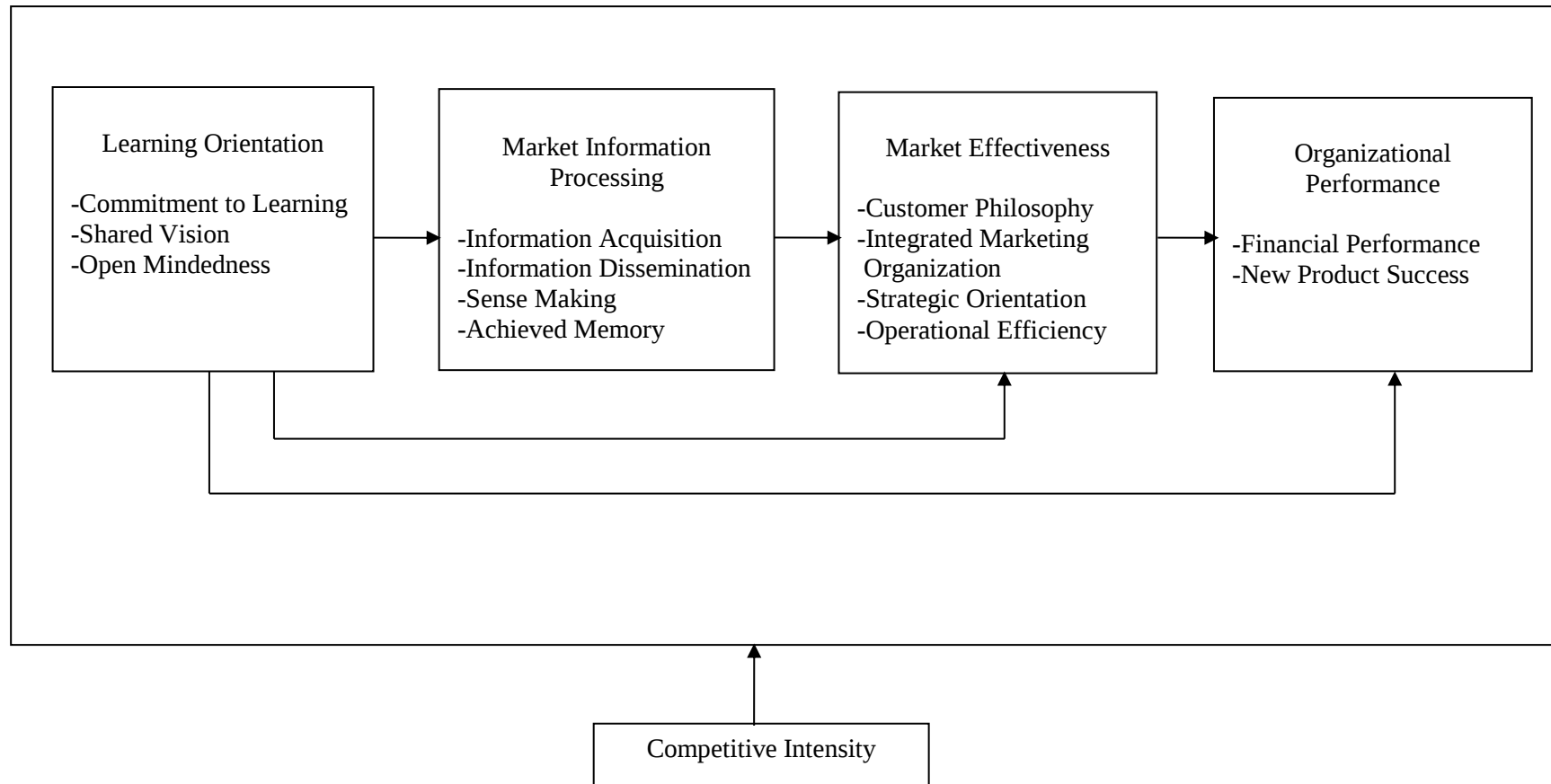


Figure 1. The basic model

of the firm. The market information processing activities are, then, predicted to increase marketing effectiveness, which in return leads to better organizational performance.

Within our study framework, learning orientation is the independent (predictor) variable. De Geus (1988) argued that the ability to learn is the only truly sustainable organizational competitive advantage. In this regard, the fact that learning orientation is an important organizational resource is rooted in the literature (e.g. Dickson, 1996; Hunt & Morgan, 1996).

In this study, market information processing activities are viewed as facilitators of the relationship between learning orientation and marketing effectiveness. Different from the work of Sinkula et al. (1997), this study incorporates the two dimensions of sense making and memory, in addition to market information acquisition and market information dissemination into the market information processing activities variable. Sinkula et al. (1997) did not include interpretation and memory in their model due to inherent difficulties to model and measure them.

Performance measures are considered to be indicators of successful learning in the long run (Pralahad & Hamel, 1990; Sinkula et al., 1997; Stata, 1992). Marketing effectiveness and organizational performance are depicted as the organizational outcome variables of this study.

The difference between the basic model and the alternative model is that in the latter model, each of the two dimensions of organizational performance (i.e., financial performance and new product success) is postulated as discrete constructs instead of the summated construct of two dimensions in the former model. Since there is a tendency in the literature to aggregate qualitative performance measures

like new product success with financial performance measures, the distinctions in their relationship to learning orientation and marketing effectiveness have not been usually explicitly recognized. By disaggregating the organizational performance construct into its two dimensions, we expect differential effects across these measures to be revealed. Figure 2 depicts the alternative model of this study.

It is important to note that the theoretical frameworks of the study do not attempt to examine all the links, which may exist between the study constructs. Rather, it is hoped to describe a market-based learning process and its relation to organizational performance. Next, the hypotheses related to the study models and the supporting literature are presented.

3.1 Hypotheses relating to the basic model

The hypotheses related to the basic model are listed in the next paragraphs.

3.1.1 The direct link between learning orientation and market information processing

Moorman (1995) suggested that organizational culture is influential in how a firm chooses the processes to accomplish its targeted outcomes. She also emphasized that previous research has failed to understand the cultural antecedents of organizational information processing in firms. Menon and Varadajaran (1992) and Sinkula (1994) argued that organizational culture influences market information processes. Baker and Sinkula (2002) asserted that the quality of market information processing behaviors is moderated by a firm's learning orientation. Sinkula et al. (1997) empirically showed that a stronger learning orientation directly increases market

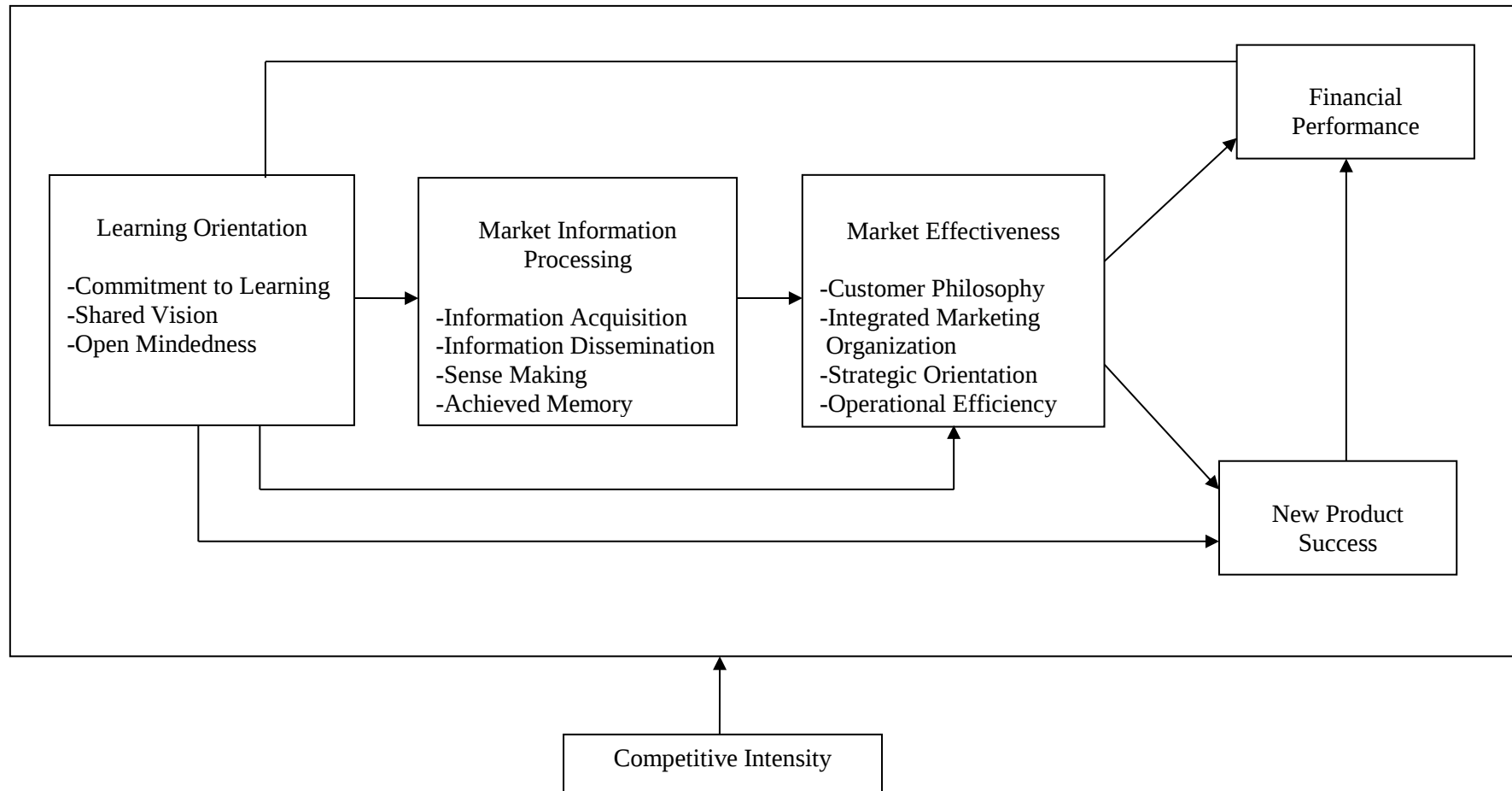


Figure 2. The alternative model

information generation and dissemination. Building on the work of Sinkula et al. (1997), this study incorporates sense making and memory, in addition to market information acquisition and market information dissemination as the dimensions of market information processing activities. Thus, the following relationship is hypothesized:

Hypothesis 1: There exists a positive relationship between learning orientation and market information processing activities.

3.1.2 The direct link between market information processing and marketing effectiveness

Webster (1995) emphasized the need for market information for effective marketing implementation. Appiah-Adu et al. (2001) also, underlined the managers' need for sufficient information for implementing effective marketing. Sinkula (1994) argued that insightful marketing knowledge development would lead to better results in employment of market information and subsequent market performance. Similarly, Vorhies (1998) stated that market information processing ability is a key factor in marketing effectiveness. He empirically showed that information-processing capabilities are significantly related to marketing capabilities. Based on such studies, market information processing is conceptualized as a predictor of marketing effectiveness in this study. As "information is needed to take appropriate marketing actions" (Vorhies, 1998, p. 14), the following hypothesis is derived.

Hypothesis 2: There exists a positive relationship between market information processing activities and marketing effectiveness:

3.1.3 The direct link between marketing effectiveness and organizational performance

As Appiah-Adu et al. (1999) stated, “it is important for researchers to test for possible links between marketing effectiveness and performance, due to the universal significance of both variables to most business practitioners” (p. 32). As elaborated in the literature review section of this study, empirical research (e.g. Alpay et al., 2012; Appiah-Adu et al., 1999; 2001; Ghosh et al., 1994; Hooley & Lynch, 1985; Mavondo, 1999; Sin & Tse, 2000) has evidenced the positive link between marketing effectiveness and organizational performance. As a result, it is hypothesized that:

Hypothesis 3: There exists a positive relationship between marketing effectiveness and organizational performance.

3.1.4 The direct link between learning orientation and marketing effectiveness

Learning orientation capacitates a firm to better comprehend the needs of its customers and also act on the environmental opportunities (Kharabsheh et al., 2014) and thus increases marketing effectiveness. Appiah-Adu et al. (1999) stressed the significance of a shared beliefs and values for achieving marketing effectiveness and they also pointed out to the importance of culture for effective marketing implementation. Connor and Tynan (1999) argued that some companies limit their marketing effectiveness by neglecting learning and not making it a part of their regular functioning. Several studies (e.g. Leisen et al., 2002; Norburn et al., 1988; 1990; Sin & Tse, 2000; Webster, 1995) have empirically confirmed a significant relation between organizational culture and marketing effectiveness. Empirical findings by (Celuch et al., 2002) indicated that firms with a stronger learning orientation also have stronger marketing capabilities. Therefore, it is expected that:

Hypothesis 4: There exists a positive relationship between learning orientation and marketing effectiveness.

3.1.5 The direct link between learning orientation and organizational performance

Many studies (e.g. Dickson, 1996; Hult et al., 2002; Hult et al., 2003; Hunt & Morgan, 1996; Liu et al., 2003; Slater & Narver, 1995) argued that cultural orientations enables organizations to have positional advantage and sustainable superior performance. Other scholars have argued that a learning orientation is necessary organizational resource to achieve a competitive advantage (e.g. Day, 1994; De Geus, 1988). Dickson (1996) stated that learning is preeminent over other resources because only it enables firms to maintain long-term competitive advantages by continuously improving information-processing activities at a faster rate than rivals improve. Researchers have also empirically evidenced the direct link between learning orientation and organizational performance (e.g. Baker & Sinkula, 1999a; Calantone et al., 2002; Farrell, 2000; Kharabsheh et al., 2014). Thus, it is hypothesized that:

Hypothesis 5: There exist a positive relationship between learning orientation and organizational performance.

3.1.6 Implied hypothesis of mediation – basic model

Based on the relationships discussed and hypothesized in the preceding sections, the implied hypothesis of mediation is proposed:

Hypothesis 6: The positive relationship between learning orientation and organizational performance is mediated by (a) market information processing and (b) marketing effectiveness.

3.2 Hypotheses relating to the alternative model

The hypotheses related to the alternative model are presented.

3.2.1 The direct link between marketing effectiveness and financial performance

It has been argued that marketing effectiveness is a determinant of financial performance (Kotler, 1977). Webster (1995) argued that financial performance indicators such as levels of return on investment, sales etc. depend on marketing effectiveness. This positive linkage has also been supported by other empirical studies (e.g. Appiah-Adu et al., 1999; Mavondo, 1999). Although they adopted other conceptualizations of marketing effectiveness, Mavondo et al. (2005) also found a strong and positive link between marketing effectiveness and financial performance. As effective marketing generally leads to higher market share, better financial results can be achieved. Thus, the following relationship is hypothesized:

Hypothesis 7: There exists a positive relationship between marketing effectiveness and financial performance.

3.2.2 The direct link between marketing effectiveness and new product success

As Kotler (1977) argued the firms must have a “well-defined system for developing, evaluating, testing and launching new products” (p. 72), so that they can effectively market their new products. Several studies cite marketing effectiveness as contributing to new product success (e.g. Cooper, 1980; Edgett, Shipley, & Forbes, 1992). For example, Dunn et al. (1994) empirically showed that marketing active organizations emphasized new product development measures more than marketing inactive organizations. Based on such arguments, and aiming to support the previous empirical findings, it is hypothesized as follows:

Hypothesis 8: There exists a positive relationship between marketing effectiveness and new product success.

3.2.3 The direct link between learning orientation and financial performance

Most studies have analyzed this link by using an aggregate measure of performance, which includes new product success, market success and profitability. However, there are also empirical studies, which demonstrated the distinct direct link between learning orientation and financial performance. (e.g. Calantone et al., 2002; Mavondo et al., 2005; Yilmaz et al., 2005). Based on such evidence, the following hypothesis is proposed:

Hypothesis 9: There exists a positive relationship between learning orientation and financial performance.

3.2.4 The direct link between learning orientation and new product success

Studies have evidenced the relationship of learning orientation and innovation and innovativeness (e.g. Calantone et al., 2002; Celush et al., 2002; Hurley & Hult, 1998; Hult et al., 2003). The direct and positive relation between learning orientation and new product success has been evidenced in the literature (e.g. Baker & Sinkula, 1999a; 1999b). As Slater and Narver (1995) argued, learning orientation determines the scope of higher order learning in the organization. As a result of higher order learning, market-driving or breakthrough innovations may become possible (Baker & Sinkula, 1999a). Thus, the following hypothesis is developed.

Hypothesis 10: There exists a positive relationship between learning orientation and new product success.

3.2.5 The direct link between new product success and financial performance

The investigation on the relationship between innovation and performance is grounded in organization science (Mavondo et al., 2005; Zaltman, Duncan, & Holbek, 1973). The positive and direct relation between new product success and financial performance has been discussed (e.g. Bayus, Erickson, & Jacobson, 2003; Srinivasan, Pauwels & Silva-Risso, 2009; Roberts & Amit, 2003) in the literature. There are also empirical findings (e.g. Geroski, Machin, & Van Reenen, 1993; Govindarajan & Kopalle, 2006; Jansen, Van Den Bosch, & Volberda, 2006; Kostopoulos, Papalexandris, Papachroni, & Ionnaou, 2011) evidencing this relationship. Thus, it is hypothesized that:

Hypothesis 11: There exists a positive relationship between new product success and financial performance.

3.2.6 Implied hypotheses of mediation – alternative model

The implied hypotheses of mediation, which are based on the discussions in the preceding sections, are presented below:

Hypothesis 12: The positive relationship between learning orientation and financial performance is mediated by (a) market information processing, (b) marketing effectiveness, (c) new product success.

3.3 Hypotheses related to moderation effects

The moderation effects are tested only on the re-specified alternative study model. Empirical findings (e.g. Hrebiniak & Joyce, 1985) show that environmental variation influences strategy. More specifically, Miller (1988) argued that competitor challenges leads to adaptations in strategy of firms. For example, an organization's

level of information processing is heightened in a fast changing environment (Daft & Huber, 1987). Supporting this view, others (Menon & Varadajaran, 1992; Vorhies, 1998) argued that in a turbulent environment, managers are in need of more information for making decisions. In particular, Vorhies (1998) stated, “information processing is another way in which the organization responds to environmental factors” (p. 8). Achrol (1991) argued, “an organization confronts environmental diversity by improving its information monitoring and processing efficiency” (p. 79).

Another strategic response to environmental change is innovation (Damanpour & Evan, 1984). In addition, Han, Kim, & Srivastava (1998) argued that firms usually innovate as a way of coping with the environmental instability. The empirical findings of Hanvanich et al. (2006) showed that the relation between learning orientation and organizational performance holds stronger in high turbulence, whereas it is weaker in low turbulence. Appiah-Adu et al. (2001) emphasized the importance of effective marketing practices in dynamic conditions. Based on such views and empirical evidence, it is hypothesized that competitive intensity moderates all of the relations in the alternative model. Thus, the following hypotheses are derived:

Hypothesis 13: The relationship between learning orientation and market information processing is moderated by competitive intensity.

Hypothesis 14: The relationship between market information processing and marketing effectiveness is moderated by competitive intensity.

Hypothesis 15: The relationship between marketing effectiveness and financial performance is moderated by competitive intensity.

Hypothesis 16: The relationship between marketing effectiveness and new product success is moderated by competitive intensity.

Hypothesis 17: The relationship between learning orientation and financial performance is moderated by competitive intensity.

Hypothesis 18: The relationship between learning orientation and new product success is moderated by competitive intensity.

Hypothesis 19: The relationship between new product success and financial performance is moderated by competitive intensity.

Hypothesis 20: The relationship between learning orientation and marketing effectiveness is moderated by competitive intensity.

CHAPTER 4

RESEARCH DESIGN AND METHODOLOGY

This section covers the design and methodology that are utilized in this study.

Objectives of the research, data collection and study design, sampling plan, and operationalization of variables are discussed.

4.1 Type of investigation

The objective of this study is to empirically analyze the relationship between learning orientation and organizational performance (i.e., financial performance and new product success) mediated by market information processes and marketing effectiveness. Data is collected from companies in Istanbul, Turkey. The research questions are listed as follows:

1. How (through what mechanisms) does learning orientation of a company relate to organizational performance?
2. How does learning orientation of a company relate to financial performance?
3. How does learning orientation of a company relate to new product success?
4. How does learning orientation of a company influence its market information processing?
5. How does the organizational market information processing relate to marketing effectiveness?
6. What is the relationship between marketing effectiveness and organizational performance?
7. What is the relationship between marketing effectiveness and financial performance?

8. What is the relationship between marketing effectiveness and new product success?
9. Does learning orientation of a company directly affect marketing effectiveness?
10. Does learning orientation of a company directly affect organizational performance?
11. Does learning orientation of a company directly affect financial performance?
12. Does learning orientation of a company directly affect new product success?
13. Is new product success of a company positively related to its financial performance?
14. How does competitive intensity moderate these relationships?

4.2 Data collection and study design

Both primary and secondary data are collected for this study. Primary data is gathered by a structured and undisguised questionnaire, which is filled by company partners, general managers, managers or assistant managers who are knowledgeable about marketing and general business procedures of their companies.

Secondary data involves the academic literature about the study constructs. The literature has been gathered from articles in several academic data sources such as library of Boğaziçi University. Another source of data is in the form of company lists, which also form the sampling frame of this study.

This study is descriptive as it is concerned with describing the behavior of organizations and the relations between certain variables (Churchill & Iacobucci, 2005). A survey is used which includes the variables of the study and their measures.

The respondents filled the questionnaires in their offices, which can be considered as their natural environments, during office hours. Therefore, this study

can be considered a field study. A cross sectional design, which provides a snapshot of the relationship at a single point in time, is used.

In this study, data is collected by a structured-undisguised questionnaire. Churchill and Iacobucci (2005) noted that the greatest advantage of structured-undisguised questions are that they are simple to administer and easy to tabulate and analyze. In such questionnaires, both the questions and the responses are standardized. Survey questions are listed with the same phrasing, and in the same order, to each respondent (Churchill & Iacobucci, 2005). As a pretest, the questionnaires were distributed to seventeen respondents who are company managers. Changes in wording and rephrasing were done upon the comments of these respondents. The final form of the questionnaire in English and in Turkish are presented in Appendix A and in Appendix B, respectively.

4.3 Sampling plan

In this section, the sampling plan is discussed. The unit of analysis in this study is the company. The sample is designed to (1) reach across industries, (2) and include companies that are large, medium and small. The questionnaire was submitted to the company managers or other key respondents with a personalized letter informing them about the content of the study. This study does not cover the entire nation. The geographical extent is limited to a metropolitan area, Istanbul region. A significant number of companies, from all kinds of industries, are already concentrated in Marmara region and especially in Istanbul region of Turkey. Therefore, Istanbul may be considered to be representative of the whole nation.

The sampling frame is the list of companies registered to ITO (Istanbul Chamber of Commerce). There are about 300.000 companies registered to ITO.

Judgmental snowball sampling is used as the sampling method. The key feature of judgment sampling is that population elements are purposively selected. This selection may not be made on the basis that they are representative, but rather because they can offer the contributions sought (Churchill & Iacobucci, 2005). In this study, the contribution sought is the understanding of the marketing and organizational constructs used. In initial set of respondents, with the desired characteristics, were located by the researcher by networking. Later, these individuals were asked to identify others with the desired characteristics. Thus, the sample snowballed by getting larger as participants identified still other possible respondents. Follow-ups on the initial respondents were done by phone or e-mail. The questionnaires were returned to the initial set of respondents, who sent them back to the researcher. Out of the 130 questionnaires, 114 were completed and returned.

4.4 Operationalization of the variables

The measures used in this study are among the widely used scales in this stream of research and have sound theoretical basis. The adoption of well-established scales will enable the researcher to explain the findings within the conceptual and empirical literature in this stream of research.

4.4.1 Operationalization of learning orientation

In this study, the learning orientation scale developed by Sinkula et al. (1997) is adopted. For developing the learning orientation scale, Sinkula et al. (1997) adapted the scale items of several scholars (e.g. Day, 1991; 1992; Senge, 1990; 1992; Tobin, 1993; Slater & Narver, 1994). They have conceptualized learning orientation as a set

of organizational values, which influence the ability of an organization to create and use knowledge. The scale of Sinkula et al. (1997) has been widely adopted and adapted in several studies (e.g. Baker & Sinkula, 1999a; Baker & Sinkula, 1999b; Hanvanich et al., 2006; Hult, 1998; Hult & Ferrell, 1997; Kharabsheh et al., 2014; Mavondo et al., 2005). The psychometric properties of the scale have generally been verified. The items of the scale are depicted in Table 2.

Table 2. Learning Orientation Scale

Item Abbr	Statement (Source: Sinkula et al., 1997)	Dimension
CL1	Managers basically agree that our company's ability to learn is the key to our competitive advantage.	Commitment to Learning
CL2	The basic values of this company include learning as key to improvement.	Commitment to Learning
CL3	The sense around here is that employee learning is an investment, not an expense.	Commitment to Learning
CL4	Learning in our company is seen as a key commodity necessary to guarantee survival.	Commitment to Learning
CL5	Our culture is one that makes employee learning a top priority.	Commitment to Learning
CL6	The collective wisdom in this company is that once we quit learning, we endanger our future.	Commitment to Learning
SV1	There is a well-expressed concept of who we are and where we are going as a company.	Shared Vision
SV2	There is a total agreement on our company vision across all levels, functions and divisions.	Shared Vision
SV3	Employees view themselves as partners in charting the direction of the company.	Shared Vision
SV4	Top leadership believes in sharing the company vision with the lower levels.	Shared Vision
OM1	We are not afraid to reflect critically on the shared assumptions we have about the way we do business.	Open-mindedness
OM2	Managers in this company do let their view of the world to be questioned.	Open-mindedness
OM3	Our company places a high value on open-mindedness.	Open-mindedness
OM4	Managers encourage employees to 'think outside the box'.	Open-mindedness
OM5	An emphasis on constant innovation is a part of our corporate culture.	Open-mindedness
OM6	Original ideas are highly valued in this company.	Open-mindedness

4.4.2 Operationalization of market information processing

Market information processing is measured by four dimensions, which are information generation, information dissemination, sense making and achieved memory. Information acquisition and dissemination are observable dimensions of organizational information processing (Sinkula et al., 1997), whereas, information interpretation and memory are unobservable. It is difficult to explicitly model and measure their effects. Therefore, there have been fewer attempts to measure information interpretation and memory in the organizational context. One such study was conducted by Moorman and Miner (1997), who have evidenced the impact of organizational memory level and dispersion on new product development processes. Some other studies (e.g. Hanvanich et al., 2006; Hult et al., 2004) have adopted Moorman and Miner's (1997) memory measure in other contexts. Following Hult et al. (2004), this study uses the term, achieved memory, which is defined as the amount of knowledge, experience, and familiarity with the marketing processes. Information acquisition and information dissemination measures are drawn from Kohli et al. (1993). Sense making measure, is adapted from a study by Akgün et al. (2002) on socio cognitive learning. Thus, the items of the proposed market information processing scale are presented in Table 3.

4.4.3 Operationalization of marketing effectiveness

Several marketing effectiveness scales have been developed (e.g. Alpay et al., 2012; Carson, 1990). Marketing effectiveness construct is multifaceted and has a dynamic nature (Morgan et al., 2002; Kahn & Myers, 2005). Some studies (e.g. Mavondo, 1999) have used single or several objective marketing performance indicators for measuring marketing effectiveness. As Leisen et al. (2002) argued, "culture and marketing orientation are much broader than specific marketing efforts, a broader

Table 3. Market Information Processing Scale

Item Abbr	Statement	Dimension	Sources
IA1	In this company, we meet with customers at least once a year to find out what products or services they will need in the future.	Information acquisition	Kohli et al.,1993
IA2	In this company, we do a lot of in house market research.	Information acquisition	Kohli et al.,1993
IA3	We are able to detect changes in our customers' product preferences on time.	Information acquisition	Kohli et al.,1993
IA4	We poll end users at least once a year to assess the quality of our products.	Information acquisition	Kohli et al.,1993
IA5	We are able to detect fundamental shifts in our industry (e.g. competition, technology, regulation) on time.	Information acquisition	Kohli et al.,1993
IA6	We periodically review the likely effect of changes in our business environment (e.g. regulation) on customers.	Information acquisition	Kohli et al.,1993
ID1	We have interdepartmental meetings at least once a quarter to discuss market trends and developments.	Information dissemination	Kohli et al.,1993
ID2	Marketing personnel in our company spend time discussing customers' future needs with other functional departments.	Information dissemination	Kohli et al.,1993
ID3	When something important happens to a major customer or market, the whole company knows it in a short period.	Information dissemination	Kohli et al.,1993
ID4	Data on customer satisfaction are disseminated at all levels in this company on a regular basis.	Information dissemination	Kohli et al.,1993
ID5	When one department finds out something important about competitors, it alerts other departments on time.	Information dissemination	Kohli et al.,1993
SM1	Market information collected is coded and sorted, to be understood, easily by all members of the company.	Sense making	Akgün et al., 2002
SM2	Market information is organized in meaningful ways.	Sense making	Akgün et al., 2002
SM3	Technical information is organized in meaningful ways.	Sense making	Akgün et al., 2002
AM1	Our company has a great deal of familiarity about the marketing process.	Achieved Memory	Moorman and Miner, 1997
AM2	Our company has a great deal of experience about the marketing process.	Achieved Memory	Moorman and Miner, 1997
AM3	Our company has invested a great deal of research and development in the marketing process.	Achieved Memory	Moorman and Miner, 1997
AM4	Our company has a great deal of knowledge about the marketing process.	Achieved Memory	Moorman and Miner, 1997

conceptualization of marketing effectiveness” (p. 203). In line with these arguments, this study adopted the multidimensional marketing effectiveness conceptualization of Kotler (1977). Despite many criticisms of its conceptualization and inconsistencies in its factor solutions across studies, the scale of Kotler (1977) has been widely used in many empirical studies (e.g. Appiah-Adu et al., 1999; Appiah-Adu et al., 2001; Connor & Tynan, 1999; Leisen et al., 2002; Norburn et al., 1988; Norburn et al., 1990; Sin & Tse, 2000; Webster, 1995) and resulted in robust findings. Additionally, Kotler’s conceptualization resembles this study’s understanding of what marketing effectiveness means.

Kotler (1977) conceptualized the construct of marketing effectiveness with five dimensions, namely, customer philosophy, integrated marketing organization, strategic orientation, and operational efficiency and adequate marketing information. These dimensions were discussed in Chapter 2.

One of Kotler’s original dimensions, namely, adequate information is excluded from our scale. As our study conceptualizes market information processing as a predictor of marketing effectiveness, including adequate market information in the marketing effectiveness scale would have led to collinearity and conceptual confusion. The scale, in Table 4, is adopted from an empirical research of Sin and Tse (2000) who adapted the items from the original measure of Kotler (1977).

4.4.4 Operationalization of organizational performance

The long-term success of organizational learning can be assessed by organizational performance measures (Sinkula et al., 1997; Prahalad & Hamel, 1990). For measuring organizational performance, subjective performance measures are used in this study.

Table 4. Marketing Effectiveness Scale

Item Abbr	Statement (Source: Kotler, 1977; Sin & Tse, 2000)	Dimension
CP1	Management recognizes the importance of designing or providing products or services, which serve the needs and wants of chosen markets.	Customer philosophy
CP2	Management takes into account suppliers, competitors, customers, and its operating environment in planning its organization.	Customer philosophy
CP3	Management develops different strategies for different segments of the market.	Customer philosophy
IMO1	There is marketing integration and control of major marketing functions (i.e. advertising, product development, marketing research, and personal selling)	Integrated marketing organization
IMO2	Employees responsible for marketing activities work well with employees in other functional areas.	Integrated marketing organization
IMO3	The process for assessing new product or service opportunities is well organized.	Integrated marketing organization
SO1	Management develops a detailed annual marketing plan and careful long-range plan that is updated annually.	Strategic orientation
SO2	The current strategy is clear, innovative, data based, and well reasoned.	Strategic orientation
SO3	Management formally identifies the most important contingencies and develops contingency plans	Strategic orientation
OP1	Marketing thinking at the top is successfully communicated and implemented down the line.	Operational efficiency
OP2	Marketing resources are adequate and deployed efficiently.	Operational efficiency
OP3	Marketing has installed systems yielding highly current information and fast reaction time.	Operational efficiency

The underlying reasons for using subjective measures are varied. First, subjective performance measures are correlated to objective measures of performance (Dess & Robinson, 1984; Slater & Narver, 1994). Second, companies are mostly unwilling to reveal their objective performance measures. Additionally, Such objective data is not always trustworthy due to balance sheet manipulations, especially in small firms. Third, measuring performance with the subjective approach has been shown to be reliable method (Pearce, Robbins, & Robinson, 1987). Fourth, subjective measures are more appropriate for our sample of multiple industries as “objective measures of performance will vary greatly from industry to industry” (Vorhies, 1998, p. 12).

Following (Baker & Sinkula, 1999a; 1999b), this study adopted multiple and various measures of organizational performance. Organizational performance is measured with the two dimensions of financial performance and new product success and it is assessed relative to competitors (Venkataraman & Ramanujam, 1986). Relative market share (Day, 1977), relative change in profit and relative change in sales revenue (Baker & Sinkula, 1999a) are used as the three items of financial performance measure. For measuring new product / product innovation outcomes, four items from the scale developed by Baker and Sinkula (1999a; 1999b) are used. Baker and Sinkula (1999a; 1999b) pointed out that their scale draws from the scales in Moorman (1995). Table 5 shows the measures of organizational performance used in the present study.

Table 5. Organizational Performance Scale

	Statement (Source: Baker & Sinkula, 1999a;1999b)	Dimension
For your company's principle served market segment over the last two years,		
FP1	Change in market share relative to your major competitor.	Financial Performance
FP2	Change in profit relative to major competitor.	Financial Performance
FP3	Change in sales revenue relative to your major competitor.	Financial Performance
NPS1	First to market with new applications.	New Product Success
NPS2	Degree of product differentiation relative to your company's major competitor.	New Product Success
NPS3	New product introduction rate relative to major competitor.	New Product Success
NPS4	New product success rate relative to major competitor.	New Product Success

New product scale also draws on Walker and Ruekert's (1987) study, where he discussed measures of organizational adaptability. This scale is designed to capture (1) the rate of new product introductions, (2) the uniqueness of new products, (3) the timeliness of new product introductions, and (4) the success of new product

introductions. New product success represents adaptability dimension of organizational performance. Baker and Sinkula (1999a) confirmed the unidimensionality, reliability and discriminant validity of this scale.

4.4.5 Operationalization of competitive intensity

Competitive intensity is the moderating construct in this study. In this study, perceived measures are preferred instead of objective measures. Several studies have confirmed the strong correlation between objective and subjective measures of environment (e.g. Dess & Robinson, 1984; Keats & Hitt, 1988; Pierce et al., 1987). Table 6 presents the competitive intensity measure, which is adapted from the work of Jaworski and Kohli. (1993).

Table 6. Competitive Intensity Scale

Item	Statement (Source: Jaworski and Kohli, 1993)
CI1	Competition in our industry is cutthroat.
CI2	There are many 'promotion wars' in our industry.
CI3	Anything that one competitor can offer, others can match in the industry.
CI4	Price competition is a hallmark of our industry.

Finally, five-point Likert scales are used for measuring all of the constructs. Scales with more points were not preferred as they are likely to cause respondents to leave the questionnaires incomplete (Connor & Tynan, 1999).

CHAPTER 5

DATA ANALYSES AND FINDINGS

In this chapter, the findings of reliability analyses, exploratory, and confirmatory factor analyses, correlation analyses, construct validity analyses are presented. While revising the scales theoretical implications are also considered. The deleted are decided with the judges, knowledgeable about the constructs. The judges were two professors from Boğaziçi University and an assistant professor from Marmara University. Then, configural and metric invariance are assessed. Finally, the hypotheses relating to both the basic and the alternative models are tested using the structural equation methodology.

5.1 Reliability analyses

After data collection, Cronbach's alpha value is calculated for each construct in the model. Each scale with Cronbach's alpha greater than .60 (Hair, Black, Babin, Anderson, & Tatham, 2010) is accepted.

5.1.1 Reliability analysis on learning orientation

Learning orientation (LO) is measured via the dimensions of commitment to learning, shared vision and open-mindedness. Cronbach alpha values for the three dimensions are all above the threshold value of .60. Commitment to learning is measured with six items and the Cronbach alpha is .903. Shared vision is measured with four items and the corresponding Cronbach alpha value is .834. Open mindedness is measured using six statements and the Cronbach alpha value for this dimension is .891. For the overall learning orientation scale, which contains 16

items, the Cronbach's alpha is calculated as .923. The analysis did not suggest the deletion of any item from the learning orientation scale. Table 7 summarizes the results of the reliability analysis of learning orientation scale.

Table 7. Learning Orientation Scale Reliability Analysis Findings

Dimension	Cronbach's alpha
Commitment to learning	.903
Shared vision	.834
Open mindedness	.891
Overall Cronbach's alpha for learning orientation scale	.923

5.1.2 Reliability analysis on market information processing

Market information processing (MIP) scale is measured with four dimensions including information acquisition, information dissemination, sense making, and achieved memory. The Cronbach's alpha for information acquisition is .685.

However, the alpha if item deleted results for information acquisition scale showed that deletion of fourth item (IA4 in Table 3) would improve the Cronbach's alpha to .710. Therefore, the fourth item of information acquisition scale is deleted. The Cronbach's alpha for information dissemination is calculated to be .805. The analysis did not suggest the deletion of any item for this dimension. The Cronbach's alpha values of sense making and achieved memory are .787 and .856, respectively. The analysis of both of these dimensions suggested the deletion of one item from each scale (SM3 and AM3 in Table 3). After a discussion with the judges, the researcher decided not to delete SM3 based on its theoretical value. However, third variable of achieved memory (AM3) was deleted. Table 8 shows the two items deleted from the market information processing scale.

Table 8. List of Deleted Items from the Market Information Processing Scale

Item Abbr	Dimension	Statement (Source: Kohli et al., 1993; Moorman & Miner, 1997)
IA4	Information Acquisition	We poll end users at least once a year to assess the quality of our products.
AM3	Achieved Memory	Our company has invested a great deal of research and development in the marketing process.

The analysis was re-run with the remaining items. The original and the revised analysis results are presented in Table 9.

Table 9. Market Information Processing Scale Reliability Analysis Findings

Dimension	Cronbach's alpha	Revised Cronbach's alpha
Information acquisition	.685	.710
Information dissemination	.805	.805
Sense-making	.787	.787
Achieved memory	.856	.892
Overall Cronbach's alpha for market information processing scale	.880	.896

5.1.3 Reliability analysis on marketing effectiveness

Marketing effectiveness (ME) is measured with four dimensions; namely customer philosophy, integrated marketing organization, strategic orientation and operational efficiency. All of the four dimensions were measured with three items each. The dimension of customer philosophy has a Cronbach's alpha of .825. For integrated marketing organization, Cronbach's alpha value is calculated as .818. Strategic orientation dimension has a Cronbach's alpha value of .830. Finally, Cronbach's alpha of operational efficiency dimension is .761. The Cronbach's alpha calculated for the whole scale with the 4 dimensions and 12 items is .920. The reliability analysis did not suggest any items to be deleted. Table 10 summaries these results.

Table 10. Marketing Effectiveness Scale Reliability Analysis Findings

Dimension	Cronbach's alpha
Customer philosophy	.825
Integrated marketing orientation	.818
Strategic orientation	.830
Operational efficiency	.761
Overall Cronbach's alpha for marketing effectiveness scale	.920

5.1.4 Reliability analysis on organizational performance

Organizational performance (OP) is measured with the two dimensions of financial performance, and new product success. The dimension of financial performance has a Cronbach alpha value of .878, whereas the dimension of new product success has a Cronbach alpha value of .872. For the overall organizational performance scale Cronbach's alpha was calculated to be .881, and shows high reliability. These analyses did not suggest the deletion of any item. The Cronbach's alpha values for the organizational performance scale are presented in Table 11.

Table 11. Organizational Performance Scale Reliability Analysis Findings

Dimension	Cronbach's alpha
Financial performance	.878
New product success	.872
Overall Cronbach's alpha for organizational performance scale	.881

5.1.5 Reliability analysis on competitive intensity

Competitive intensity has a Cronbach's alpha value of .703. The analysis did not suggest deletion of any items. The results are presented in Table 12.

Table 12. Competitive Intensity Scale Reliability Analysis Findings

Dimension	Cronbach's alpha
Competitive intensity	.703

In summary, the analyses showed that all of the scales have satisfactory reliabilities and only two items (see Table 8) from market information processing scale were deleted. Next, the constructs are subjected to exploratory factor analysis.

5.2 Exploratory factor analyses

Exploratory factor analyses are conducted with principal component extraction and varimax rotation method using a cut-off value of Eigen values greater than one (Hair et al., 2010). In following steps, factors are extracted, reliability measures are recomputed where necessary, and thus the constructs are further purified.

5.2.1 Factor analysis on learning orientation

As a first step, Kaiser-Meyer Olkin (KMO) measure of sampling adequacy (MSA) and Barlett's Test of Sphericity are checked. The resulting values of .903 and chi-square of 1139 significant at .000 level, respectively, demonstrate the existence of correlation among variables. As it is shown that the data is appropriate for factor analysis, the anti-image matrix and communalities are examined and the values are all above the cut of value of .5. The factor analysis showed that all of the items loaded on their respective three factors and the overall variance explained is 68%. The eigenvalues for the three factors are also above the cut off value of one. Thus, all of the three factors and their corresponding items are consistent with the existing literature of learning orientation. Table 13 summarizes the findings of factor analysis on learning orientation scale. Factor loadings, each factor's explained variance, as well as Cronbach's alpha values are presented.

Table 13. Learning Orientation Factor Analysis Findings

Item Abbr	Statement (Source: Sinkula et al., 1997)	Loading	Variance Explained %	Cronbach's alpha
	Factor 1: Commitment to Learning		25.9	.923
CL1	Managers basically agree that our company's ability to learn is the key to our competitive advantage.	.68		
CL2	The basic values of this company include learning as key to improvement	.79		
CL3	The sense around here is that employee learning is an investment, not an expense.	.79		
CL4	Learning in our company is seen as a key commodity necessary to guarantee organizational survival.	.87		
CL5	Our culture is one that makes employee learning a top priority.	.78		
CL6	The collective wisdom in this company is that once we quit learning, we endanger our future.	.76		
	Factor 2: Shared Vision		25.4	.830
SV1	There is a well-expressed concept of who we are and where we are going as a company.	.79		
SV2	There is a total agreement on our company vision across all levels, functions and divisions.	.84		
SV3	Employees view themselves as partners in charting the direction of the company.	.65		
SV4	Top leadership believes in sharing the company vision with the lower levels.	.58		
	Factor 3: Open Mindedness		16.7	.890
OM1	We are not afraid to reflect critically on the shared assumptions we have about the way we do business.	.74		
OM2	Managers in this company do let their 'view of the world' to be questioned.	.80		
OM3	Our company places a high value on open-mindedness.	.84		
OM4	Managers encourage employees to 'think outside the box'.	.68		
OM5	An emphasis on constant innovation is a part of our corporate culture.	.64		
OM6	Original ideas are highly valued in this organization.	.79		
Total variance explained of LO scale			68	
Overall scale reliability (Cronbach's alpha) of learning orientation scale				.921

5.2.2 Factor analysis on market information processing

After the reliability analyses, two items were deleted from the market information processing scale. Factor analysis was run for the remaining 16 items.

First, KMO-MSA and Barlett's Test of Sphericity are checked. The resulting values of .830 and chi-square of 908 significant at .000 level, respectively, demonstrate the appropriateness of data for factor analysis.

Next, the anti-image matrix values are all above the cut of value of .5. As for communalities, there is only one item (IA6 in Table 3), which has a value (.496) slightly below the threshold value of .5. However, five factors, explaining 72% of total variance, were extracted instead of the theorized four factors. With such a result, the literature on measures of market information processing was reviewed again and all of the items were reevaluated with the judges. After careful re-examination of the items of four dimensions, it was decided to delete four more items. Table 14 shows the deleted items of the market information processing scale.

Table 14. List of Deleted Items from the Market Information Processing Scale

Item Abbr	Dimension	Statements (Source: Kohli et al., 1993)
IA5	Information Acquisition	We detect fundamental shifts in our industry (e.g. competition, technology, regulation) in a timely manner.
IA6	Information Acquisition	We periodically review the likely effect of changes in our business environment (e.g. regulation) on customers.
ID1	Information Dissemination	We have interdepartmental meetings at least once a quarter to discuss market trends and developments.
ID2	Information Dissemination	Marketing personnel in our company spend time discussing customers' future needs with other functional departments.

After elimination of the four items shown in Table 14, the factor analysis was re-run.

The new KMO-MSA is .823 and the Barlett's test of Sphericity is also significant

(chi square of 639 at .000). This time, four factors are extracted, as desired, explaining 73% of total variance. Table 15 presents the analysis results of market information processing scale after deletion of four scale items.

Table 15. Market Information Processing Factor Analysis Findings

Item Abbr	Statement (Source: Akgün et al., 2002; Kohli et al., 1993; Moorman & Miner, 1997)	Factor Loading	Variance Explained %	Cronbach's alpha
	Factor 1: Information Processing Scale		12.9	.60
IA1	In this company, we meet with customers at least once a year to find out what products or services they will need in the future.	.73		
IA2	In this company, we do a lot of in house market research.	.65		
IA3	We are able to detect changes in our customers' product preference in a timely manner.	.46		
	Factor 2: Information Dissemination		19.4	.78
ID3	When something important happens to a major customer or market, the whole company knows it in a short period.	.80		
ID4	Data on customer satisfaction are disseminated at all levels in this company on a regular basis.	.71		
ID5	When one department finds out something important about competitors, it alerts other departments on time.	.82		
	Factor 3: Sense Making		17.7	.79
SM1	Market information collected is coded and sorted to be understood, easily by all members of the company.	.85		
SM2	Market information is organized in meaningful ways.	.81		
SM3	Technical information is organized in meaningful ways.	.58		
	Factor 4: Achieved Memory		22.9	
AM1	Our company has a great deal of familiarity about the marketing process.	.85		
AM2	Our company has a great deal of experience about the marketing process.	.83		
AM4	Our company has a great deal of knowledge about the marketing process.	.87		
Total variance explained of MIP scale			73	
Overall scale reliability (Cronbach's alpha) of market information processing scale				.90

5.2.3 Factor analysis on marketing effectiveness

Initially, KMO-MSA and Barlett's Test of Sphericity are evaluated. The resulting values of .887 and chi-square of 791 significant at .000 level, respectively, confirmed the appropriateness of data for conducting factor analysis.

The anti-image matrix and communalities are examined and the values are all above the cut of value of .5. However, two factors, explaining 63% of total variance, were extracted instead of the theorized four factors. Reproduced correlation values revealed that there are 53% non-redundant residuals with absolute values greater than .005. The values in the component transformation matrix were also higher than the cut off value of .06. These results were not acceptable.

The literature on measures of marketing effectiveness was reevaluated and discussed with the judges, knowledgeable about the subject. After careful re-examination of the items of four factors with the judges, it was decided that the operational efficiency and strategic orientation dimensions of marketing effectiveness should be taken out of the scale. It is important to mention that the deleted factor of operational efficiency was already critiqued in the literature. Kahn and Myers (2005) argued that efficiency should not be a component of effectiveness as marketing effectiveness and marketing efficiency are distinct constructs. This argument is also empirically reinforced by findings of negative correlation between marketing effectiveness and efficiency (e.g. Vorhies & Morgan, 2003). Thus, a total of six items were taken out of the analysis. Table 16 lists the items deleted from the scale.

Table 16. List of Items Deleted from Marketing Effectiveness Scale

Item Abbr	Dimension	Statement (Source: Kotler, 1977; Sin & Tse, 2000)
OE1	Operational Efficiency	Marketing thinking at the top is successfully communicated and implemented down the line.
OE2	Operational Efficiency	Marketing resources are adequate and deployed efficiently.
OE3	Operational Efficiency	Marketing has installed systems yielding highly current information and fast reaction time.
SO1	Strategic Orientation	Management develops a detailed annual marketing plan and careful long-range plan that is updated annually.
SO2	Strategic Orientation	The current strategy is clear, innovative, data based, and well reasoned.
SO3	Strategic Orientation	Management, formally, identifies the most important contingencies and develops contingency plans.

After deletion of six items, the factor analysis was re-run with the remaining two dimensions of customer philosophy, and integrated marketing. This time, the two factors led to acceptable results. KMO-MSA and Barlett's Test of Sphericity were checked. The resulting values, .856 and chi-square of 330 significant at .000 levels. Both, the anti-image matrix and communality values were all above the cut of value of .5. The overall variance explained was 74%. The eigenvalues for the two factors are also above the cut off value of one. The Cronbach's alpha of the final two factors scale is recalculated to be .88. Table 17 presents the revised scale and the related findings.

5.2.4 Factor analysis on organizational performance

First, KMO-MSA and Barlett's Test of Sphericity are calculated. The resulting values of .813 and chi-square of 479 significant, at .000 levels, respectively, hints the appropriateness of data for factor analysis. Then, the anti-image matrix and communalities are examined and the values are all above the cut of value of .5. When we examined the reproduced correlations, there were eight (38%) non-redundant residuals with absolute values greater than .05.

Table 17. Marketing Effectiveness Factor Analysis Findings

Item Abbr	Statement (Source: Kotler, 1977; in & Tse, 2000)	Factor Loading	Variance Explained %	Cronbach's alpha
	Factor 1: Customer Philosophy		38	.83
CP1	Management recognizes the importance of designing or providing products or services, which serve the needs and wants of chosen markets.	.87		
CP2	Management takes into account suppliers, competitors, customers, and its operating environment in planning its organization.	.81		
CP3	Management develops different strategies for different segments of the market.	.68		
	Factor 2: Integrated Marketing Organization		36	.82
IMO1	There is marketing integration and control of major marketing functions (i.e. advertising, product development, marketing research, and personal selling)	.85		
IMO2	Employees responsible for marketing activities work well with employees in other functional areas.	.80		
IMO3	The process for assessing new product or service opportunities is well organized.	.73		
Total variance explained of ME scale			74	
Revised overall scale reliability (Cronbach's alpha) of marketing effectiveness scale				.88

Communalities are also above .60. Two factors, explaining 77% of total variance, are extracted. All of the items loaded correctly on their respective factors. Factor loadings for individual variables, as well as the eigenvalues for the two factors are also above their respective cut off values. These results are considered satisfactory. Table 18 summarizes the findings of factor analysis on the organizational performance scale.

Table 18. Organizational Performance Factor Analysis Findings

Item Abbr	Statement (Source: Baker & Sinkula, 1999a; 1999b)	Factor Loading	Variance Explained %	Cronbach's alpha
Factor 1: Financial Performance			36	.88
FP1	Change in market share relative to your major competitor, in the last two years.	.88		
FP2	Change in profit relative to major competitor, in the last two years.	.82		
FP3	Change in sales revenue relative to your major competitor, in the last two years.	.89		
Factor 2: New Product Success			41	.87
NPS1	First to market with new applications, in the last two years.	.78		
NPS2	Degree of product differentiation relative to your company's major competitor, in the last two years.	.85		
NPS3	New product introduction rate relative to major competitor, in the last two years.	.86		
NPS4	New product success rate relative to major competitor, in the last two years.	.77		
Total variance explained of organizational performance scale			77	
Revised overall scale reliability (Cronbach's alpha) organizational performance scale				.88

5.2.5 Factor analysis on competitive intensity

The resulting values of KMO-MSA and Barlett's Test of Sphericity tests (.696 and chi-square of 81 significant at .000 level, respectively) showed the appropriateness of data for factor analysis. The anti-image matrix and communalities are examined and the values are all above the cut of value of .5. The factor analysis showed that all the items loaded on a single factor and the overall variance explained is 53%. The eigenvalues for the single factor is also above the cut off value of one. All of the original items remained in the scale. Table 19 presents these findings.

In summary, 12 items are taken out of the scales of market information processing and marketing effectiveness (see Tables 8, 14 and 16) because of the exploratory factor analyses and reliability analyses.

Table 19. Competitive Intensity Exploratory Factor Analysis Findings

Item Abbr	Statement (Source: Kohli et al., 1993)	Factor Loading	Variance Explained %	Cronbach's alpha
CI1	Competition in our industry is cutthroat.	.64		
CI2	There are many 'promotion wars' in our industry.	.75		
CI3	Anything that one competitor can offer, others can match in the industry.	.79		
CI4	Price competition is a hallmark of our industry.	.73		
Total variance explained of competitive intensity scale			53	
Scale reliability (Cronbach's alpha) competitive intensity scale				.70

5.3 Confirmatory factor analyses

For further checking the findings of exploratory factor analyses, confirmatory factor analyses (CFA) are conducted. First, the basic measurement model including four study constructs, namely, learning orientation, market information processing, marketing effectiveness and organizational performance, is tested. Then, the alternative measurement model is subjected to confirmatory factor analysis. As discussed before, alternative model includes the two dimensions of organizational performance, namely, new product success and financial performance, as two distinct latent variables. Finally, four additional confirmatory factor analyses for each of the individual constructs are conducted to test if the items load on their respective constructs.

As discussed in the literature, there are several goodness-of-fit (GOF) indices, which are functions of chi-square tests and assess the similarity between estimated and observed covariance matrices (Hair et al., 2010). Goodness of fit measures fall into three major groups, namely, absolute measures, incremental measures, and parsimony measures. Hair et al. (2010) states that, while absolute fit indices reflect

how well the proposed model fits the observed data, incremental fit indices assess the fit between the estimated model and the baseline model where all observed variables are uncorrelated.

Following the guidelines in Hair et al. (2010, p. 752-753), this study reports four indices. The first index, Comparative Fit Index (CFI), is both a goodness of fit and an incremental fit index. The second index, Root Mean Square Error of Approximation (RMSEA), is both an absolute fit and badness of fit index. The chi-square value and the associated degrees of freedom is the third index reported. Finally, chi square value / number of degrees of freedom (CMINDF) values are reported. CMINDF index is used, because it is one of the indices that minimize the impact of sample size on the chi square value.

The cutoff values of the selected indices will be assessed according to the below listed guidelines;

- The chi-square value should be represented with low values and should be insignificant, however it does not meet this condition most of the time, as it is sensitive to sample size (Hair et al., 2010).
- The chi square value / number of degrees of freedom (CMINDF) value should be less than two for an acceptable fit (Hair et al., 2010).
- CFI values should be greater than .90 to indicate good model fit (Hair et al, 2010).
- The RMSEA values less than or equal to 0.05 indicates a good fit, whereas, values up to 0.08 gives an acceptable fit (Browne & Cudeck, 1992).

5.3.1 Confirmatory factor analysis of the basic measurement model

First, the basic measurement model including the four constructs is tested. The null hypothesis is that the covariance matrix generated by the measurement model is equal to the observed covariance matrix. The four constructs tested are namely,

learning orientation, market information processing, marketing effectiveness and organizational performance. Confirmatory factor analysis was conducted by using maximum likelihood estimation procedure in AMOS 20. Maximum likelihood estimation (MLE) is conducted to achieve sufficient parameter to subject ratio (Tabachnick & Fidell, 2001). Hair et al. (2010) states that, maximum likelihood estimation has been found to give robust solutions even with samples of 50-150. Maximum likelihood estimation is also shown to be robust, when studying with non-normal data (Olsson, Foss, Troye & Howell, 2000; Olson, Foss & Breivik, 2004). Consistent with the basic procedure in confirmatory factor analysis, each item's loading is restricted to its a priori factor and each factor is allowed to correlate with other factors. As all of the four constructs have multiple dimensions, the items of these dimensions are aggregated to create composite variables.

The findings of the confirmatory factor analysis showed that all of the variables have loadings larger than .50 on latent variables and are all significant. The standardized regression weights for all of the variables are also larger than .50 and they all lie between -1 and +1, as desired. These results led us to conclude that the measurement model has unidimensionality, which means that a set of variables has only one underlying dimension in common. As shown in Table 20, the chi-square test is significant. However, all other GOF indices signal an acceptable fit for the basic measurement model.

Table 20. Basic Measurement Model – GOF Indices

Chi-square	53.30 (p < .001)
Df	38
CMINDF	1.40
CFI	.97
RMSEA	.06

The results are also checked to see whether there is model misspecification. Values larger than $|2.58|$ among the standardized residual values (i.e., residuals of the observed and estimated covariance matrix divided by their asymptomatic standard errors) indicates a model misspecification (Hair et al., 2010). Our analysis showed that there is no model misspecification since there is no value larger than $|2.58|$ among the standardized residuals.

Next, the modification indices (MI) are analyzed. The chi-square value may be improved, if the paths, with modification index values greater than four, are freed. In our analysis, the modification index values did suggest paths between some error terms to be freed. However, these suggested modifications were not justified by theory and would not improve the chi-square meaningfully, as the chi-square value is as high as 53.30. Therefore, no modifications are made.

5.3.2 Confirmatory factor analysis of the alternative measurement model

The first three latent variables of the alternative measurement model are learning orientation, market information processing and marketing effectiveness. As all of these three latent variables have several dimensions, the items of these dimensions are aggregated to create composite variables. The other two latent variables are new product success and financial performance (i.e., the two distinct dimensions of organizational performance). Thus, a total of five constructs are tested in the alternative measurement model.

The confirmatory factor analysis findings indicated that all of the variables have loadings larger than .50 on latent variables and are all significant. The standardized regression weights for all of the variables are also larger than .50 as expected. These results hint that the measurement model has unidimensionality.

Although the chi-square test is significant, as shown in Table 21, all other goodness of fit (GOF) indices, signal an acceptable fit for the alternative measurement model.

Table 21. Alternative Measurement Model, GOF Indices

Chi-square	152.75 (p < .001)
Df	94
CMINDF	1.62
CFI	.94
RMSEA	.07

The analysis showed that there is no model misspecification since there is no value larger than $|2.58|$ among the standardized residuals. The suggested modifications by the modification indices were not justified by theory and would not improve the chi-square meaningfully, as the chi-square value is as high as 152.75. Consequently, no modifications are made.

5.3.3 Confirmatory factor analysis on learning orientation variable

In this analysis, it is hypothesized that the 16 items, measuring learning orientation, load on their respective dimensions, namely; commitment to learning (CL), shared values (SV) and open mindedness (OM). The results show that, all of the variables have loadings larger than .50 on latent variables and are all significant. Also, the standardized regression weights for all of the variables lie between -1 and +1 and are larger than .50. Consequently, learning orientation construct has unidimensionality. Thus, our study also confirmed this well established scale, as all the variables fell into their original factors. As depicted in Table 22, despite a significant chi-square test, all other goodness of fit indices signal an acceptable fit.

Table 22. Confirmatory Factor Analysis of Learning Orientation, GOF Indices

Chi square	158 (p <.01)
Df	101
CMINDF	1.56
CFI	.95
RMSEA	0.07

Analysis of standardized residuals did not reveal any values larger than $|2.58|$. Therefore, no model misspecification is detected. The modification index values suggested some paths between error terms to be freed. However, as the suggested modifications were not justified by theory and would not improve the chi-square meaningfully, no modifications are considered.

5.3.4 Confirmatory factor analysis on market information processing (MIP) variable

It is hypothesized that the 12 items, measuring market information processing load on their respective dimensions of information acquisition (IA), information dissemination (ID), sense making (SM) and achieved memory (AM). The results show that all of the variables have regression weights larger than .50 on latent variables and are all significant. The standardized regression weights for all of the variables are also larger than .50, except for the first item measuring information acquisition (IA1) dimension of MIP, with a value of .49, which is still very close to .50. The values also lie between -1 and +1. Accordingly, market information processing construct has unidimensionality. Contrary to expectations, the chi-square test is significant. However, all other goodness of fit indices signals an acceptable fit for the measurement model of market information processing construct. The results are summarized in Table 23.

Table 23. Confirmatory Factor Analysis of Market Information Processing, GOF Indices

Chi square	84.46 (p <.01)
Df	48
CMINDF	1.76
CFI	.94
RMSEA	.08

Examination of standardized residuals did not indicate any model misspecification since there is no value larger than $|2.58|$ in the standardized residuals matrix.

Although analysis of modification index values, suggested some paths between error terms to be freed. However, as these suggested modifications were not justified by theory, no modifications are made.

5.3.5 Confirmatory factor analysis on marketing effectiveness variable

The hypothesis is that the six items, measuring marketing effectiveness load on their respective dimensions of customer philosophy (CP) and integrated marketing organization (IMO). The variables all have loadings larger than .50 on latent variables and are significant. The standardized regression weights for all of the variables lie between -1 and +1 and they are all larger than .50. Therefore, the marketing effectiveness construct has unidimensionality.

The standardized residuals matrix does not contain any values larger than $|2.58|$. Although the some modification index values larger than four are detected, these suggested modifications were not justified by theory and would not improve the chi-square meaningfully. Therefore, suggested modifications were ignored.

As seen in Table 24, the chi-square test is significant. Nevertheless, all other goodness of fit indices indicates an adequate fit for the measurement model of marketing effectiveness.

Table 24. Confirmatory Factor Analysis of Marketing Effectiveness, GOF Indices

Chi-square	8.03 (p <.01)
Df	8
CMINDF	1.00
CFI	0.99
RMSEA	0.006

5.3.6 Confirmatory factor analysis on organizational performance variable

It is hypothesized that the seven items measuring organizational performance load on their respective dimensions of financial performance and new product success. All of the variables have loadings larger than 0.50 and are all significant. In addition, the standardized regression weights for all of the variables are larger than .50. These results confirm the unidimensionality of organizational performance construct.

Table 25 presents a significant chi-square test result and a RMSEA value of .12, which is larger than the cut off value of .08. On the other hand, CFI and CMINDF indices signal adequate fit for the measurement model of organizational performance.

Table 25. Confirmatory Factor Analysis of Organizational Performance, GOF Indices

Chi-square	34 (p < .01)
Df	13
CMINDF	2.63
CFI	.96
RMSEA	.12

Model misspecification is not signaled, since there is no value larger than | 2.58 | among the standardized residuals. No modification suggested by the modification indices is deemed necessary.

5.4 Correlation analysis of the constructs

The study constructs, namely, learning orientation, market information processing, marketing effectiveness, financial performance, new product success and organizational performance are all significantly ($p < .01$) and positively correlated with each other as hypothesized. The constructs have insignificant correlations with the moderator variable of competitive intensity, as desired. Table 26 summarizes the descriptive statistics, as well as the correlations for all of the study constructs.

Table 26. Descriptive Statistics of Constructs and Construct Correlations

Variable	Mean	Standard Deviation	LO	MIP	ME	FP	NPS
Learning Orientation	3.79	.60	1				
Market Information Processing	3.78	.56	.638*	1			
Marketing Effectiveness	3.95	.60	.619*	.710*	1		
Financial Performance	3.47	.86	.354*	.346*	.418*	1	
New Product Success	3.56	.78	.446*	.421*	.453*	.516*	1
Competitive Intensity	3.96	.80	-.066	.031	.119	-.027	-.038
Organizational Performance	3.50	.72	.457*	.438*	.499*	n.a	n.a
Note: * $p < .01$							

5.5 Construct validity

Construct validity is evaluated by examining the convergent and discriminant validity. Convergent validity analyzes the similarity between related constructs, whereas discriminant validity examines the divergence between measures of related but conceptually different things (Cook, Campbell, & Day, 1979, p. 61).

Convergent validity of the measures is evidenced by the significant loadings of the items on their respective constructs. The average variance extracted (AVE) values, which are all larger than the threshold value of .50 (Fornell & Larcker, 1981) for all of the study constructs show presence of reliability. Composite reliability

values are also computed for each construct. Table 27 shows that they are all above the threshold value of .70 (Hair et al., 2010).

Table 27. Average Variance Extracted and Composite Reliability Values of Constructs

	Variable	Average Variance Extracted	Composite Reliability
1	Learning Orientation	.60	.96
2	Market Information Processing	.56	.95
3	Marketing Effectiveness	.62	.91
4	Organizational Performance	.68	.94
5	Financial Performance	.72	.89
6	New Product Performance	.64	.87

Discriminant validity is checked by the stringent technique developed by Fornell and Larcker (1981). Table 28 presents the mutual variances between the constructs, which are used to check for the presence of discriminant validity.

Table 28. Mutual Variances between the Constructs

Variable	LO	MIP	ME	OP	NPS	FP
Learning Orientation	<i>.60</i>					
Market Information Processing	.41	<i>.56</i>				
Marketing Effectiveness	.38	.50	<i>.62</i>			
Organizational Performance	.21	.19	.25	<i>.68</i>		
New Product Success	.20	.18	.21	-	<i>.64</i>	
Financial Performance	.13	.12	.17	-	.27	<i>.72</i>

The values on the diagonal (shown in italic) correspond with the average variance extracted values of the constructs. The non-diagonal elements are calculated as the square of the correlations between the constructs. The square of correlation for each couple of constructs is found to be smaller than their corresponding average variance extracted values. Thus, discriminant validity is attained and it is demonstrated that all of the study constructs are conceptually distinct from each other.

In summary, because of the confirmatory factor analyses, no items were dropped out of the study. Unidimensionality, reliability, convergent and discriminant validity criteria are all satisfied.

5.6 Assessment of configural and metric invariance – basic model

Two groups measurement model is estimated in order to test for external validity and examine configural and metric invariance of the study data across two groups (Vandenberg & Lance, 2000). Since the moderator (i.e., competitive intensity) is used only for splitting data into two groups to assess moderation, it was not included in the confirmatory factor analyses conducted in the previous section. In this section, two multi group confirmatory factor analyses are conducted in order to examine configural and metric invariance of the study data across two groups, namely; high and low competitive intensity ($n_{\text{high}} = 49$ and $n_{\text{low}} = 65$). The split was conducted, based on the median value of 4.00 (i.e., low CI < 4.00 and high CI ≥ 4).

Measurement invariance across, low and high competitive groups, is tested by comparing the chi-square statistics obtained from an unconstrained model (i.e., configural invariance model) with a constrained model (i.e., metric invariance model) where factor loadings are invariant across groups (Byrne, 2001). If the chi-square difference between the models is not significant (i.e., at a p value of .05), measurement invariance is ensured (French & Finch, 2006).

The results of the unconstrained two groups analysis support the existence of configural invariance of the measures across groups with indices ($\chi^2_{(76)} = 111$, CMINDF = 1.46, CFI = .93, RMSEA = .06) within acceptable levels. Metric invariance model also has acceptable fit indices ($\chi^2_{(83)} = 114$, CMINDF = 1.38, CFI = .94, RMSEA = .06). The chi-square difference test model ($\Delta\chi^2_{(7)} = 3$, $p > .05$) for the

configural and metric invariance models signal that the additional variance constraint on the factor loadings does not significantly affect the fit of the measurement model, compared to the unconstrained configural invariance. Thus, the existence of the same factor structure for both of the competitive intensity levels is ensured by the insignificant chi-square difference.

5.7 Assessment of configural and metric invariance – alternative model

In this section, multi-group confirmatory factor analysis for the alternative model is conducted. Configural and metric invariance of the study data across two groups, namely; high and low competitive intensity ($n_{\text{high}} = 49$ and $n_{\text{low}} = 65$) is examined.

The findings of the unconstrained two-group analysis support the existence of configural invariance of the measures across groups with indices ($\chi^2_{(188)} = 292$, CMINDF = 1.55, CFI = .90, RMSEA = .07) within acceptable levels. Metric invariance model is also supported ($\chi^2_{(199)} = 305$, CMINDF = 1.53, CFI = .90, RMSEA = .07). The chi-square difference test ($\Delta\chi^2_{(11)} = 13$, $p > .05$), for the configural and metric invariance models, signals that the additional variance constraint on the factor loadings does not significantly affect the fit of the measurement model, compared to the unconstrained configural invariance model. The existence of the same factor structure for both of the competitive intensity levels is ensured by the insignificant chi-square difference. Thus, metric invariance is evidenced for the alternative measurement model.

5.8 Hypothesis testing - basic model

In this section, the basic study model is evaluated based on how well it reproduces the observed covariance matrix and on the significance and direction of the

hypothesized paths. This is done, using the structural equation modeling methodology via AMOS 21.

Before testing the structural model, it is important to note that mediation requires significant correlations among all the related constructs. As already reported in Table 26 of this chapter, learning orientation, market information processing, marketing effectiveness and organizational performance constructs are all significantly correlated with each other.

Maximum likelihood estimation (MLE) method is used, as it provides unbiased, more consistent and efficient estimates (Hair et al., 2010). The relationships between the constructs are assessed independent of the effects of the moderator variable, which is competitive intensity. The same goodness of fit measures, used in confirmatory factor analysis of this study (see Chapter 5, section 5.3) is also used for the structural model assessment. These measures are chi-square, CMINDF, CFI and RMSEA. The reasons for preferring these measures and their respective cut off values were discussed in confirmatory factor analyses section of the present study.

The analysis of the basic structural model showed that the fit indices (CMINDF = 1.37; CFI = .97; RMSEA = .06) are all at acceptable levels. The chi-square value is calculated as 53.35 ($p = .06$). Overall, we can conclude that the study model fits the data. If a problem of model fit existed, it likely would be revealed through a high valued standardized residual or a high modification index (Hair et al., 2010). Our analysis of these values did not signal any problem of fit. However, good fit alone is insufficient to support a proposed structural model. Therefore, next, the individual standardized parameter estimates against the corresponding predictions or

paths, each representing a specific hypothesis, are examined. The findings related to the hypothesized paths of the basic model are presented in Table 29.

Table 29. Parameter Estimates of the Basic Structural Model

Hypothesis	Hypothesized Path	Non-standardized parameter estimate	Standardized Parameter estimate	t Value	Results of Hypothesis Testing
H1	LO → MIP	.88	.80	5.30**	Supported
H2	MIP → ME	.89	.81	3.69**	Supported
H3	ME → OP	.48	.39	1.92*	Supported
H4	LO → ME	.10	.10	.55	Not supported
H5	LO → OP	.43	.34	1.66*	Supported
** p < .01 (one sided), *p < .1 (one sided)					
GOF indices: $\chi^2 = 53.35$, (p = .06); CMINDF = 1.37; CFI = .97; RMSEA = .06					

The results show that the relationship between learning orientation and marketing effectiveness is fully mediated by market information processes since the paths from learning orientation to market information processing (H1) ($\gamma = .80$, $p < .01$) and from market information processing to marketing effectiveness (H2) ($\beta = .81$, $p < .01$) are both significant whereas the direct path from learning orientation to marketing effectiveness (H4) ($\gamma = .10$, $p > .1$) is insignificant.

The relationship between learning orientation and organizational performance is partially mediated by market information processing and marketing effectiveness since the paths from learning orientation to market information processing (H1) ($\gamma = .80$, $p < .01$), from market information processing to marketing effectiveness (H2) ($\beta = .81$, $p < .01$), and from marketing effectiveness to organizational performance (H3) ($\beta = .39$, $p = .05$), as well as the direct path from learning orientation to organizational performance (H5) ($\gamma = .34$, $p < .1$) is also significant, albeit at a marginal level. These results also indicate that the implied hypotheses of mediation (H6a and H6b), related to the basic model, are also accepted.

Next, the indirect and direct effects, as well as the total effects are presented. The size of indirect path 1 is trivial relative to the strength of indirect effect 2. As small indirect effects (i.e., less than .08), rarely add to the substantive conclusions (Hair et al., 2010), the first indirect effect will not be further interpreted. The breakdown of effects is presented in Table 30.

Table 30. Breakdown of the Direct and Indirect Effects of Basic Structural Model

Direct effect	LO ----->OP	.34
Indirect effect 1	LO----->ME----->OP	.04
Indirect effect 2	LO----->MIP----->ME----->OP	.25
Total effect		.63

Examination of total effect sizes (i.e., summation of both direct and indirect paths) of study constructs on organizational performance reveals that learning orientation has the highest total effect on organizational performance (.63), followed by marketing effectiveness (.39), and market information processing (.32) respectively.

The existence of a partial mediation can be further evaluated by testing the difference in the chi-square values of the re-specified partial mediation model and the full mediation model (Hair et al., 2010). Based on the findings presented in Table 29, basic model was re-specified by eliminating the insignificant path from learning orientation to marketing effectiveness. Then, a full mediation basic model was produced by eliminating the direct paths from learning orientation to marketing effectiveness and from learning orientation to organizational performance. As a result of testing these two models separately, it is observed that the path estimates differ slightly. The chi-square difference test ($\Delta\chi^2_{(1)} = 2.95, p < .1$) showed that the

re-specified partial mediation model has a marginally significant better fit than the full mediation model. This result confirms the structural fit of the basic model. Table 31 summarizes these findings.

Table 31. Comparison of Basic Re-specified Partial Mediation Model and Basic Full Mediation Model

Model Element	Basic Full Mediation Model	Basic Re-specified Partial Mediation Model
Model fit		
Chi-square	56.56	53.61
Df	41	40
Probability	.000	.000
CMINDF	1.38	1.34
RMSEA	.057	.054
CFI	.97	.95
Standardized parameter estimates		
LO → MIP	.82***	.81***
MIP → ME	.91***	.90***
ME → OP	.68***	.38**
LO → OP	Not estimated	.34*
***p < .001, ** p < .05, *p < .1 (one sided)		

A structural model evidencing an insignificant difference in chi-square value with its measurement model is strongly suggestive acceptable structural fit (Hair et al., 2010). Therefore, as a final check, the structural model fit and the measurement model fit of the basic model are compared. The results in Table 32 show that the chi-square difference test for our measurement and structural models is insignificant ($\Delta\chi^2_{(1)} = .05, p > .1$) suggesting adequate fit.

Table 32. Comparison of Basic Measurement and Structural Models

	χ^2	Df
χ^2 of Basic Measurement Model	53.30	38
χ^2 of Basic Structural Model	53.35	39
$\Delta\chi^2_{(1)}$	.05, p > .1	1

All of the above findings support the proposed basic model with a caveat for one direct path between learning orientation and marketing effectiveness (LO → ME) that is not supported. Consequently, market information processing and marketing effectiveness partially mediate the relationship between learning orientation and organizational performance in the basic study model.

5.9 Hypotheses testing - alternative model

The alternative structural model comprises of five latent. Of these five latent constructs, learning orientation is the independent latent variable while the other four constructs (i.e., market information processing, marketing effectiveness, financial performance and new product success) are the dependent latent variables.

As already reported in Table 26 of this chapter, learning orientation, market information processing, marketing effectiveness, financial performance and new product success are all significantly correlated with each other. As the significant correlation requirement of mediation is met, the alternative structural model is estimated using structural equation modeling (SEM) via AMOS 21. The maximum likelihood estimation (MLE) method is used as was done with the previous analysis. Again, the relationships between the constructs are assessed independent of the effects of the moderator variable (i.e., competitive intensity).

The analysis of the alternative structural model showed that the fit indices (CMINDF = 1.59; CFI = .94; RMSEA = .07) are all at acceptable levels, except the significant chi-square value ($\chi^2 = 153.05$, $p < .001$). Overall, the hypothesized alternative model fits the data well. The standardized residuals and the modification indices did not signal any problem of model fit. Next, the size, direction and the

significance of structural parameter estimates are examined. The parameter estimates for the hypothesized paths are presented in Table 33.

Table 33. Parameter Estimates of the Alternative Structural Model.

Hypothesis	Hypothesized Path	Non-standardized parameter estimate	Standardized Parameter estimate	t Value	Results of Hypothesis Testing
H1	LO → MIP	.88	.80	5.30**	Supported
H2	MIP → ME	.84	.81	3.69**	Supported
H4	LO → ME	.10	.10	.55	Not supported
H7	ME → FP	.48	.28	1.66*	Supported
H8	ME → NPS	.49	.30	1.70*	Supported
H9	LO → FP	-.15	-.09	-.50	Not supported
H10	LO → NPS	.51	.31	1.70*	Supported
H11	NPS → FP	.51	.49	4.07**	Supported
** p < .01 (one sided), *p < .1 (one sided)					
GOF indices: $\chi^2 = 153.05$, ($p < .001$); CMINDF = 1.59; CFI = .94; RMSEA = .07					

The relationship between learning orientation and financial performance is partially mediated by market information processing, marketing effectiveness and new product success. The paths from learning orientation to market information processing (H1) ($\gamma = .80$, $p < .01$), from market information processing to marketing effectiveness (H2) ($\beta = .81$, $p < .01$), from marketing effectiveness to new product success (H8) ($\beta = .30$, $p < .1$) and from new product success to financial performance (H11) ($\beta = .49$, $p < .01$) are all significant. Although, the direct path from learning orientation to financial performance (H9) ($\gamma = -.09$, $p > .1$) is insignificant, the path between learning orientation and new product success (H10) ($\gamma = .31$, $p < .1$), and the path between marketing effectiveness and financial performance (H7) ($\beta = .28$, $p < .1$) are significant, albeit at a marginal level. Thus, the implied mediating hypothesis of H12a, H12b and H12c are also accepted. The direct and indirect effects between learning orientation and financial performance are listed in Table 34.

Table 34. Breakdown of the Direct and Indirect Effects of Alternative Model

Direct effect	LO----->FP	-.09
Indirect effect 1	LO----->NPS----->FP	.15
Indirect effect 2	LO----->MIP----->ME----->FP	.18
Indirect effect 3	LO----->MIP----->ME----->NPS----->FP	.10
Indirect effect 4	LO----->ME----->FP	.03
Indirect effect 5	LO----->ME----->NPS----->FP	.01
Total effect		.37

The findings further illustrate that learning orientation and financial performance are connected indirectly. The size of direct effect is trivial relative to the strength of the first three indirect effects. The effects of fourth and fifth indirect effects are also trivial. As mentioned earlier, small indirect effects are rarely, add to the substantive conclusions (Hair et al., 2010). Thus, the direct effect, as well as the fourth and the fifth indirect paths will not be further interpreted.

Examination of total effect sizes of study constructs on financial performance reveals that new product success has the highest total effect on financial performance (.49), followed by marketing effectiveness (.43), learning orientation (.37), and market information processing (.35), respectively.

Next, the alternative model is re-specified and it is compared with a competing version of it. The findings show that the path estimates of the two models differ only slightly. The chi-square difference test ($\Delta\chi^2_{(2)} = 6.6, p < .05$) confirms that the re-specified partial mediation model has a significantly better fit than the competing model. This result reinforces the finding of adequate fit of the re-specified alternative model. Table 35 summarizes the results.

Table 35. Comparison of Re-specified Alternative Model and Competing Model.

Model Element	Competing Model	Re-specified Alternative Model
Model fit		
Chi-square	160.13	153.53
Df	100	98
Probability	.00	.00
CMINDF	1.60	1.57
RMSEA	.07	.07
CFI	.94	.94
Standardized parameter estimates		
LO – MIP	.82***	.81***
MIP – ME	.91***	.89***
ME – NPS	.58***	.31*
NPS – FP	.61***	.48***
ME – FP	Not estimated	.22**
LO – NPS	Not estimated	.30*
*** p < .001, ** p < .05, *p < .1 (one sided)		

As a final check, structural and measurement model fit are compared. The results in Table 36 show that the chi-square difference test for the alternative measurement and structural models is insignificant ($\Delta\chi^2_{(2)} = .3, p > .1$) suggesting adequate fit.

Table 36. Comparison of Alternative Measurement and Structural Models

	χ^2	Df
χ^2 of Alternative Measurement Model	152.75	94
χ^2 of Alternative Structural Model	153.05	96
$\Delta\chi^2_{(2)}$	.3, p > .1	2

All of the findings favor the alternative model with the exception of the direct paths from learning orientation to financial performance and the direct path from learning orientation to marketing effectiveness. Next, the findings of the moderation hypotheses tests, conducted on the alternative model are presented.

5.10 Moderation analyses of the alternative study model

Moderation analysis is conducted only on the re-specified alternative model.

Moderating effect of competitive intensity (CI) on the hypothesized alternative model is examined by a two-group comparison analyses, using structural equation modeling. The moderating hypotheses are supported if the unconstrained model has a significantly lower chi-square than the constrained model and if the effects are in the hypothesized direction (Hair et al., 2010).

As an initial step, some form of metric invariance must be established before examining any differences in structural estimates (Hair et al., 2010). Metric invariance across groups was already confirmed in this chapter (see section 5.7). Therefore, examination of structural variance across the two groups is conducted next. The two subsamples (high competitive intensity and low competitive intensity groups) were obtained by dividing the whole sample with a median split procedure in the multi group confirmatory factor analyses section of this study. Chi-square difference test is conducted to compare the unconstrained model in which all parameters are estimated freely with a constrained model. In the constrained model, both factor loadings and structural weights are considered equal across the low and high groups. As a result, both unconstrained and constrained models showed overall acceptable fit ($\chi^2_{\text{UNCON}} = 301.37$, $\text{CMINDF}_{\text{UNCON}} = 1.54$, $\text{CFI}_{\text{UNCON}} = .90$, $\text{RMSEA}_{\text{UNCON}} = .07$, $\chi^2_{\text{CON}} = 318.79$, $\text{CMINDF}_{\text{CON}} = 1.51$, $\text{CFI}_{\text{CON}} = .90$, $\text{RMSEA}_{\text{CON}} = .07$). The insignificant chi-square difference test ($\Delta\chi^2_{(15)} = 17.4$, $p > .10$) signals structural invariance. These results of the moderation hypotheses tests are summarized in Table 37.

Table 37. GOF Finding for the Constrained and Unconstrained Alternative Models

	χ^2	do	CMINDF	CFI	RMSEA
Unconstrained model	301.37	211	1.54	.90	.07
Constrained model	318.79	196	1.51	.90	.07
$\Delta\chi^2_{(15)}$	17.42 (p > .1)				

The findings indicate that the moderating role of competitive intensity in learning orientation–financial performance relationship is supported for only certain paths of the alternative study model. Table 38, below, shows the standardized parameter estimates for the high and low competitive intensity groups.

Table 38. Findings for the Moderating Effects of Competitive Intensity on Hypothesized Relationships

Hypothesis	Hypothesized Path	Standardized Parameter Estimates		t value	Results of Hypothesis Testing
H13	LO → MIP	High	.95	5.13***	Not supported
		Low	.85	2.56**	
H14	MIP → ME	High	.91	5.61***	Not supported
		Low	.80	2.99***	
H15	ME → FP	High	.14	.96	Supported
		Low	.34	2.01**	
H16	ME → NPS	High	.58	2.35*	Supported
		Low	-.13	-.43	
H18	LO → NPS	High	.06	.29	Supported
		Low	.66	1.89*	
H19	NPS → FP	High	.60	3.81***	Not supported
		Low	.28	1.67*	
*** p < .01, ** p < .05, *p < .1 (one sided)					

The influence of learning orientation on market information processing is confirmed for both low and high groups. The effect value ($\gamma = .95$ p < .01) for the high CI group is higher than the effect value ($\gamma = .85$, p < .01) for the low CI group. In addition, the path between market information processing and marketing effectiveness is significant for both of the CI groups with a higher effect value ($\beta = .91$ p < .01) for the higher groups and a lower effect value of ($\beta = .80$, p < .01). Similarly, the

influence of new product success on financial performance is confirmed for both of the groups ($\beta_{\text{high}} = .60, p < .01, \beta_{\text{low}} = .28, p < .1$). The analysis of unstandardized parameter estimates and their standard errors (SE) is conducted to see whether the differences in these values are meaningful. The findings of this analysis are summarized in Table 39.

Table 39. Unstandardized Parameter Estimates and Standard Error Analysis

Hypothesis	Hypothesized Path	Unstandardized Parameter Estimates		SE	$\mu + 3\sigma$	$\mu - 3\sigma$
H13	LO $\rightarrow$ MIP	High	.91	.17	1.42	.40
		Low	1.02	.40	2.22	-.18
H14	MIP $\rightarrow$ ME	High	.90	.16	1.38	.42
		Low	.74	.24	1.46	.02
H19	NPS $\rightarrow$ FP	High	.65	.17	1.16	.14
		Low	.28	.17	.79	-.23

Referring to Table 39, it is concluded that competitive intensity does not moderate the three of the hypothesized paths (MIP $\rightarrow$ ME, LO $\rightarrow$ MIP, NPS $\rightarrow$ FP) as the effect values of high and low groups do not differ significantly for neither of the relationship. Therefore, H13, H14, and H19 are rejected. The marketing effectiveness and financial performance relationship (H15) is significant only for lower CI group ($\beta = .34, p < .05$). Thus, H15 is accepted. The relationship between marketing effectiveness and new product success (H16) is significant only for high CI group ($\beta = .58, p < .05$). Therefore, the moderating hypotheses H16, is supported. The relationship between learning orientation and new product success (H18) is significant only for low CI group ($\gamma = .66, p < .1$). Therefore, H18 is also supported. Moderation effect of competitive intensity on the direct relationship between learning orientation and marketing effectiveness (H20) and on the direct relationship between learning orientation and financial performance (H17) were not tested for moderation, since the previous analyses revealed that the path estimates for these two

relationships are insignificant. In sum, out of the 20 hypotheses, 13 were supported, 5 were not supported and 2 were not estimated. Table 40 summarizes the results of hypothesis testing of both the basic and the alternative models. These findings are discussed in the next chapter.

Table 40. Results of Hypotheses Testing

Hypothesis	Hypothesized Relationship	Result of Hypothesis Testing
H1	There exists a positive relationship between learning orientation and market information processing.	Supported
H2	There exists a positive relationship between market information processing and marketing effectiveness.	Supported
H3	There exists a positive relationship between marketing effectiveness and organizational performance.	Supported
H4	There exists a positive relationship between learning orientation and marketing effectiveness.	Not supported
H5	There exist a positive relationship between learning orientation and organizational performance.	Supported
H6	The positive relationship between learning orientation and organizational performance is mediated by (a) market information processing and (b) marketing effectiveness.	Supported
H7	There exists a positive relationship between marketing effectiveness and financial performance.	Supported
H8	There exists a positive relationship between marketing effectiveness and new product success.	Supported
H9	There exists a positive relationship between learning orientation and financial performance.	Not supported
H10	There exists a positive relationship between learning orientation and new product success.	Supported
H11	There exists a positive relationship between new product success and financial performance.	Supported
H12	The positive relationship between learning orientation and financial performance is mediated by (a) market information processing, (b) marketing effectiveness, (c) new product success.	Supported
H13	The relationship between learning orientation and market information processing is moderated by competitive intensity.	Not supported
H14	The relationship between market information processing and marketing effectiveness is moderated by competitive intensity.	Not supported
H15	The relationship between marketing effectiveness and financial performance is moderated by competitive intensity.	Supported
H16	The relationship between marketing effectiveness and new product success is moderated by competitive intensity.	Supported
H17	The relationship between learning orientation and financial performance is moderated by competitive intensity.	Not estimated
H18	The relationship between learning orientation and new product success is moderated by competitive intensity.	Supported
H19	The relationship between new product success and financial performance is moderated by competitive intensity.	Not supported
H20	The relationship between learning orientation and marketing effectiveness is moderated by competitive intensity.	Not estimated

CHAPTER 6

CONCLUSION

In this final chapter, the study findings are discussed. Then, the implications of the findings for theory and practice are provided. Finally, the study's limitations and the suggested areas for future research are discussed.

6.1 Discussion of findings

The purpose of the current study is to explicate the underlying mechanisms of the relationship between learning orientation and organizational performance (i.e., new product success and financial performance). First, the basic model where organizational performance is depicted as the dependent variable was developed. Then, the alternative model is developed by decomposing the organizational performance variable into its two distinct dimensions of new product success and financial performance and by using them as two distinct variables in the alternative model. The alternative model was created to present a more detailed picture of the learning orientation – organizational performance link. Market information processes and marketing effectiveness are investigated as the mediating variables in this relationship. Another aim of the study was to comprehend how these relationships are moderated by competitive intensity.

To test the hypotheses a quantitative research that comprises a survey is administered. Data were collected from 114 companies, in various industries in Istanbul. Manufacturing companies constitute 37% and, service companies constitute 63% of the sample. One key informant from each company answered the survey. Data is analyzed with structural equation modeling procedure in AMOS 21.

6.1.1 Discussion on the basic study model

The findings of the basic model suggest a direct and positive relationship between learning orientation and market information processing. This finding supports our hypothesis and the widely accepted view in the literature that learning oriented firms are constantly involved in monitoring and improving their market information processes (e.g. Sinkula, 1994; Sinkula et al., 1997; Slater & Narver, 1995; 2000). Additionally, the findings support the view that organizational culture affects information processing activities of an organization (e.g. Menon & Varadarajan, 1992; Moorman, 1995; Sinkula, 1994).

Our finding of a positive and direct relationship between market information processing and marketing effectiveness is conceptually in line with previous studies which have emphasized the significance of organizational information processes in shaping how firms responds to their markets (e.g. Kohli & Jaworski, 1990; Narver & Slater, 1990; Menon & Varadarajan, 1992; Moorman, 1995; Sinkula, 1994; Sinkula et al., 1997; Slater & Narver, 1995; Homburg & Pflesser, 2000). Studies have also provided empirical results regarding how organizational information processes positively affect marketing performance (e.g. Moorman, 1995) and marketing capabilities (Vorhies, 1998). This study is also consistent with such previous findings. The findings also reinforce the arguments (e.g. Appiah-Adu et al., 2001; Kotler, 1977) that adequate and sufficient market information is required for effective marketing implementation. Additionally, the results imply that the market information processing activities can be influential on marketing strategies.

Contrary to our expectations, the hypothesized direct effect of learning orientation on marketing effectiveness is not supported. This finding is contradicting with some previous findings in the literature. Some studies have shown a direct and

positive link of organizational culture and marketing effectiveness (e.g. Dunn et al., 1994; Sin & Tse, 2000; Webster, 1995). Other studies evidenced direct (e.g. Gül, 2009) and indirect (e.g. Mavondo et al., 2005) positive links between learning orientation and marketing effectiveness. A possible explanation for the insignificant learning orientation – marketing effectiveness link is that, the mere existence of a learning culture does not necessarily lead to marketing effectiveness. A learning oriented company needs to take action to collect and process market information to turn them into knowledge and use the knowledge to effectively market its products. Thus, market information processing is actually causing the improvement in marketing effectiveness of a learning oriented company. This argument and our study findings lead us to conclude that the relationship between learning orientation and marketing effectiveness is fully mediated by market information processing. This result is conceptually similar to the study of Norburn et al. (1990) who empirically showed that those firms, which, had a common set of values, are close to customers and demonstrated an external market orientation (i.e., market information processing) had a high degree of marketing effectiveness.

As expected, our findings indicate that marketing effectiveness directly and positively influence organizational performance. This finding verifies previous conceptual (e.g. Kahn & Myers, 2005; Kotler, 1977) and empirical studies on this relationship (e.g. Alpay et al., 2012; Appiah-Adu et al., 1999; Appiah-Adu et al., 2001; Hooley & Lynch, 1985; Mavondo, 1999; Sin & Tse, 2000).

In line with prior research (e.g. Baker & Sinkula, 1999a; Farrell, 2000; Hanvanich et al., 2006; Hult et al., 2003; Kharabsheh et al., 2014) that investigate the relation between learning orientation and organizational performance, the findings of this study also indicates that learning orientation is directly and positively influential

on organizational performance. However, this relationship is only marginally significant.

The results discussed in the preceding paragraphs lead to the conclusion that, the relation between learning orientation and organizational performance, is partially mediated by market information processing and marketing effectiveness, as hypothesized. Thus, market information processing and marketing effectiveness account for some but not all of the relationships between learning orientation and organizational performance. The indirect route of $LO \rightarrow MIP \rightarrow ME \rightarrow OP$ indicates that learning oriented firms can improve their organizational performances through focusing on their markets and marketing activities. However, as the direct route of $LO \rightarrow OP$ implies, a learning oriented firm can attain superior organizational performance without a focus on its markets and marketing. In this regard, it can be argued that learning orientation, leads to superior organizational performance through market-focused behavior or through other means. Next, findings of the alternative model, discussed in the next paragraphs further clarify the routes through which a learning oriented company improves its organizational performance.

6.1.2 Discussion on the alternative study model

As previously mentioned, the alternative model was tested to shed more light on the proposed relationships by disaggregating organizational performance variable into its two distinct dimensions of new product success and financial performance. The findings indicate that learning orientation directly and positively influences new product success. As learning orientation directly affects the degree to which higher order learning takes place (Slater & Narver, 1995) and as higher order learning leads

to market-driving or breakthrough innovations (Baker & Sinkula, 1999a), this finding makes sense.

Contrary to our hypothesis and to some previous empirical findings (e.g. Calantone et al., 2002; Yılmaz et al., 2005), the results suggest that learning orientation is not directly linked to financial performance. This finding implies that the mere existence of learning orientation does not necessarily lead to superior financial performance. Moreover, it may even adversely affect the financial outcome as our negative insignificant result indicates. The main rationale behind this argument is that developing an organizational learning orientation is a long term and costly process. This result is also in line with the findings (e.g. Yılmaz et al., 2005) that learning orientation relates more strongly to qualitative performance indicators such as new product success rather than financial and market performance indicators.

As expected, this study confirmed the positive influence of marketing effectiveness on new product success. This makes sense as marketing support given to a new product can have a significant effect on its success, whereas a lack of understanding of customers and adequate integration between all organizational functions may lead to new product failure. Thus, our findings are in line with previous studies (e.g. Cooper, 1980; Edgett et al., 1992), which cite marketing effectiveness as contributing to new product success.

The hypothesized positive and direct effect of marketing effectiveness on financial performance is verified. As effective marketing leads to higher market share, higher profits can be achieved. This finding is in line with the argument that marketing effectiveness is a determinant of financial performance (e.g. Kotler, 1977; Webster, 1995) and confirms other empirical studies (Appiah-Adu et al., 1999; Mavondo, 1999) on this relationship.

Our findings also provide evidence that new product success leads to better financial performance. This result supports the previous empirical findings (e.g. Geroski et. al., 1993; Govindarajan & Kopalle, 2006; Jansen et al., 2006; Kostopoulos et al., 2011), as well as prior conceptual arguments (e.g. Bayus et al., 2003; Srinivasan, 2009; Roberts & Amit, 2003) in the literature.

In summary, the alternative model suggests three significant routes of mediation between learning orientation and financial performance. The first significant route ($LO \rightarrow MIP \rightarrow ME \rightarrow NPS \rightarrow FP$) indicates that learning orientation helps the firms to successfully process market information and effectively implement marketing activities for new product offerings. Thus, new product success, which leads to increased financial performance, is achieved. We can argue that such new products are likely to be market-driven new products because they are developed through a market focus.

The second significant route ($LO \rightarrow NPS \rightarrow FP$) implies that a learning oriented firm can also attain new product success without focusing on its markets. This can be explained with the case of firms, which concentrate on the latent needs of customers instead of their expressed needs. Such firms are more likely to come up with breakthrough innovations, rather than incremental innovations and develop market-driving new products. Such market-driving or breakthrough new products lead to superior financial performance.

On the other hand, the third and final significant route ($LO \rightarrow MIP \rightarrow ME \rightarrow FP$) is similar to the first route except it lacks new product success (NPS) variable. This route can be explained by the argument that learning oriented firms do not only attain superior financial performance by developing new products, but also focusing on market information and by effectively marketing their current product offerings.

For example, in some industries, technology does not change, as rapidly as in others. Therefore, new products may not be as frequently introduced.

Finally, when we look at the total effects (both direct and indirect), of the variables, tested in the alternative model, new product success is found to be the most important variable in terms of affecting financial performance, followed by marketing effectiveness, learning orientation and market information processing.

6.1.3 Discussion of moderation effects

The results of the moderation analysis, conducted on the alternative model indicate that competitive intensity does not moderate the learning orientation and market information processing relationship. Likewise, there is no moderation effect on the market information processing - marketing effectiveness link. Contrary to expectations, these relationships strongly exist in both higher and lower competitive intensity. This finding leads us to argue that regardless of competitive intensity level, market information processing activities facilitate the relationship between learning orientation and marketing effectiveness.

There is negative moderation for the marketing effectiveness – financial performance link. Thus, in higher competitive intensity, the direct influence of marketing effectiveness on financial performance is insignificant whereas, for lower competitive intensity, this relationship is significant. This leads us to the possible explanation that, in a lower competitive environment, firms may financially perform better by effectively marketing their current product offerings. Thus, they may increase their market share and benefit from higher profit margins resulting from low competition. Also, in low competition, there will be less pressure to continuously introduce new products for attaining superior financial performance. However, in

higher competitive intensity, if a firm performs financially superior, it may have less to do directly with its marketing effectiveness. In such a competitive environment, the price and promotion wars, will lead to lower profit margins. Thus, effective marketing of the existing products may not, by itself, lead to better financial results. Instead, marketing effectiveness would lead to financial success through the introduction of new products.

Similarly, our findings suggest negative moderation for the relationship between learning orientation, and new product success. In other words, when competitive intensity is higher, the direct learning orientation – new product success link is not significant. However, when the competitive intensity is lower, this direct link becomes significant. This makes sense because, in tough competition, the mere existence of a learning orientation may not be sufficient for new product success. In such an environment, market information processing activities and effective marketing of the product is needed to facilitate success of market-driven new products. On the other hand, in lower competition, a direct link between learning orientation and new product performance is possible. As Baker and Sinkula (1999a) pointed out, this could be the case of market-driving products, which are developed through generative learning resulting from a learning orientation. It is also important to note that in a highly competitive environment resources available to the firm are restricted whereas, in lower competition resources are more available to a firm. For developing market driving, innovations, firms, may be in need of more resources In this regard, it may be more difficult to develop such products, in a highly competitive environment, even in the existence of a learning-oriented culture. Rather, market-driven new products may be introduced.

The results also suggest that competitive intensity moderates the relation between marketing effectiveness and new product success. When the firm does not have many competitors, marketing support may lose its significance for the success of new product. Other predictors of new product success, such as product quality, or product originality may be at play. This may be the case of market-driving products. However, when competition is tough, marketing effectiveness becomes crucial for market-driven new product success.

Finally, there is a positive and direct relationship between new product success and financial performance both in low and high competitive situations. Thus, the influence of new product success on financial performance exists in any competitive intensity level and there is no moderation.

To summarize, in low competitive intensity there are two significant explicating routes from learning orientation to financial performance. The first route ($LO \rightarrow MIP \rightarrow ME \rightarrow FP$) goes through market information processing and marketing effectiveness to financial performance. This route does not go through new product success. A possible argument for this first route is that learning oriented companies can perform financially better by using market-based information to effectively market their current product offerings with possibly higher profit margins, in lower competitive intensity. The second route ($LO \rightarrow NPS \rightarrow FP$) connects learning orientation and financial performance through the mediating effect of new product success. A potential explanation for this route is that, in lower competition, a company may attain superior financial performance by developing market-driving, new products. In such a case, other factors such as technological focus may be at play, instead of a market focus.

In the case of higher competitive intensity, there is one significant indirect route (LO → MIP → ME → NPS → FP) between learning orientation and financial performance, which is mediated by market information processing, marketing effectiveness and new product success. High competition is generally characterized by lower profit margins and less resources available to firms. Consequently, when the competition is intense, a firm may not have access to the resources required for developing market-driving innovations. Additionally, high competition requires higher competitive orientation (Gautignon & Xuereb, 1997). These characteristics of high competition may lead the firm to focus on its markets and marketing activities and develop market-driven new products, which in return leads to better financial performance. Firms may also integrate market information with other important information such as technological information (Baker & Sinkula, 1999a) and create new products to attain good financial outcomes.

6.2 Implications for theory

This study contributes to the research domain, which explores the mediating role of market information processing in the relationship between learning orientation and organizational outcomes. This domain is grounded in the process view of learning and was first empirically tested by Sinkula et al. (1997). Hopefully, this research will be useful for academicians and practitioners by clarifying the underlying mechanisms by which learning orientation influences organizational outcomes.

This study followed a theory-testing approach similar to other empirical studies (e.g. Baker & Sinkula, 1999a; 1999b; Sinkula et al., 1997) in this area of research. The study findings reinforce the literature (e.g. Day, 1994; Dickson, 1996;

Hunt & Morgan, 1996), which argues that a learning orientation is a necessary organizational resource to achieve competitive advantage and superior performance.

As Moorman (1995) suggested it is important to understand the cultural antecedents of organizational information processing and our empirical findings are consistent with the view that organizational culture influences information processes (e.g. Moorman, 1995; Sinkula, 1994; Sinkula et al., 1997). Our findings contributes to this stream of literature by showing that there is strong link between learning orientation and market information processing in both high and low competitive intensity.

Additionally, the findings contributed to the new product development literature, by showing that learning orientation is an important predictor (directly and indirectly) of innovation-driven performance. The results of this study support the prior findings (e.g. Baker & Sinkula, 1999a, 1999b; Han et al., 1998, Hurley & Hult, 1998) on this subject. The study findings also confirm the previous findings, which show that new product success is an important indicator of financial performance (e.g. Jansen et al., 2006; Kostopoulos et al. 2011)

Another aim of the study was to adapt and test a measure of market information processing activities measure by drawing on the socio cognitive, organizational learning and marketing literatures on information processing. This measure was successfully tested and validated in this study.

6.3 Implications for managers

Based on the results of this study, companies are advised to be committed to learning, to proactively question their conventional wisdom and to unlearning obsolete knowledge. Managers should also bear in mind that, developing a learning

orientation is an ongoing process and that it can be achieved in the long run. Our results imply that the mere existence of a learning orientation is not enough for attaining financial performance. As it may be expensive to create and maintain a learning culture, it may even adversely affect the financial results of the firm. In this regard, in a learning oriented company, managers are advised to focus on the quality and quantity of market information processes to be able to effectively market their products. With such systematic effort, they can successfully introduce new market-driven products. On the other hand, managers are also advised not to rely only on market-based information for new product development. As our findings imply, learning orientation can directly lead to new product success without a market and marketing focus. Thus, managers should be encouraging their employees to go after not only market information but also other kinds of information such as technological information, which leads to developing market-driving new products for the latent needs of customers. Such market-driving products will lead to superior financial performance. Another implication for managers is that learning orientation which leads to a market focus enables firms to modify their marketing actions for their current product offerings effectively, which in turn leads to superior financial performance.

Finally, competitive pressures, is a key challenge facing marketers today. Based on our findings managers are advised to be aware that as the competitive intensity changes, the relationship between learning orientation and financial performance is impacted in many ways. Consequently, managers should take the level of competitive intensity into consideration while adjusting their organizational actions and strategies related to marketing and new product development.

6.4 Limitations of the study

The study results pose some limitations. First, sampling method is an important limitation of this study. As a non-probability sample is used, there is problem of generalizability of findings. Another issue is sample size. Although structural models consisting of five or fewer constructs, each with more than three items, and with high item communalities, can be comfortably estimated with samples of 100-150 (Hair et al., 2010), a larger sample size could have led to an improvement in external validity of the findings.

The use of key informants is another limitation of this research. Although top managers are the people most suitable to assess an organization's culture (Cameron & Freeman, 1991; Farrell, 2000), culture would be best measured by surveying all members of the organization. It is important to keep in mind that the top managers of the organization may have a different perception of the organizational culture than do the rest of the organization's employees.

Subjective approach used to measure organizational performance is also a limitation of the study. Use and validation of this method in prior research (Solberg, 2002; Sin, Tse, Yau, Chow, & Lee, 2005) and practical difficulties related to collection of objective data lead to the use of subjective measures in this study.

This study used cross-sectional data, which limits inferences to causality. As longitudinal research captures temporal order by assessing the influence of a predictor at a time subsequent to its cause, longitudinal data are more likely to lead to superior causal inferences (Jap & Anderson, 2004). Therefore, longitudinal studies would be useful to provide the ability to examine causality in learning orientation–organizational outcomes relationship. Additionally, cross-sectional design is prone to common method variance. As the measures of both the independent and the

dependent variables come from the same source, common method variance may inflate the structural relationships (Hair et al., 2010). Consequently, the effect of hypothesized predictors may have been overestimated.

There are some final issues worth mentioning. A normative scale, like the Likert scale used in this study is prone to social desirability bias and may have inflated the construct reliabilities (Meglino & Ravlin, 1998). In addition, the intense proportion for service industry (i.e., 67%) in our sample may have led to sectorally biased findings.

6.5 Suggestions for future research

Additional qualitative and quantitative studies are needed to understand the mechanisms underlying the relationship between learning orientation and organizational outcomes. In the following paragraphs, some possible research areas are suggested.

An area for future research is to examine the long-term implications of a learning orientation on organizational performance. As establishing company-wide learning orientation is a long-term process, whether the strength of this relationship increases over time, should be analyzed. As Jap and Anderson (2004) put it, longitudinal data is more likely to generate superior causal inference. Additionally, conducting case studies would certainly provide depth to such a study.

Another potentially fertile area for future research would be to focus on the dimensions of market information processing activities. Such a study could examine the degree to which the dimensions of market information processing may vary independently of each other, rather than co-vary.

Future research may try to develop and refine more reliable and valid scales for marketing effectiveness construct. Previous research has reported inconsistent factor solutions for the marketing effectiveness scale developed by Kotler in 1977 (e.g., Gül, 2009, Sin & Tse, 2000, Webster, 1995). Also, market information processing scales, can be further refined, by incorporating and adapting items from organizational and socio-cognitive literatures in future studies.

When replicating this study, it is advisable to examine the effect of common method variance. It is possible to use a confirmatory factor analysis model to examine the possibility of measurement bias in the form of a nuisance factor (Hair et al., 2010). Also, longitudinal surveys may be a cure for common method variance in future studies.

Considering the hostility of the business environment, rapid technological changes, unexpected global political and economic crises researchers should focus on how such environmental factors influence the learning climate and learning process in the organization. After all, a learning capability is an important organizational resource, which can help the firms to survive in highly turbulent environments. Environmental dimensions such as market growth, technological turbulence and environmental munificence can be incorporated as moderating variables in future studies.

Also, comparative cross-cultural, cross-countries, and cross-industries studies would be useful to further clarify the facilitators of learning orientation and organizational outcomes relationship.

Finally, it is also noteworthy to mention that the empirically tested models in this study are two of the many possible models. For purposes of parsimony, this study did not test all possible relations between the constructs and did not include all

potential influencers. Further studies, which may introduce new elements, such as entrepreneurial orientation and absorptive capacity, to our study model, would be useful. Additionally, testing the direct impact of market information processing activities on financial performance and new product success will further broaden the nomological framework of this study.

APPENDIX A

SURVEY IN ENGLISH

Dear Manager,

This questionnaire is prepared and submitted to you for a study of PhD thesis in Boğaziçi Üniversitesi, Management Department. The answers you provide will be used only for academic purposes and will be kept confidential. Thank you in advance for your time and answers.
Sincerely,

Thesis Student: Hale Çaloğlu

Company Information

1. What is your position in the company?.....
2. Which year was your company established?
3. What is your company's area of business?.....
4. How many full time employees does your company have?
5. How is the capital structure of your company? Domestic%.....Foreign %.....

Please evaluate the following statements by putting an X in the appropriate box .

LEARNING ORIENTATION					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Managers basically agree that our company's ability to learn is the key to our competitive advantage.					
The basic values of this company include learning as key to improvement.					
The sense around here is that employee learning is an investment, not an expense.					
Learning in our company is seen as a key commodity necessary to guarantee survival.					
Our culture is one that makes employee learning a top priority.					
The collective wisdom in this company is that once we quit learning, we endanger our future.					
There is a well-expressed concept of who we are and where we are going as a company.					
There is a total agreement on our company vision across all levels, functions and divisions.					
Employees view themselves as partners in charting the direction of the company.					
Top leadership believes in sharing the company vision with the lower levels.					
We are not afraid to reflect critically on the shared assumptions we have about the way we do business.					
Managers in this company do let their 'view of the world' to be questioned.					
Our company places a high value on open-mindedness.					
Managers encourage employees to 'think outside the box'.					
An emphasis on constant innovation is a part of our corporate culture.					
Original ideas are highly valued in this company.					

MARKET INFORMATION PROCESSING					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
In this company, we meet with customers at least once a year to find out what products or services they will need in the future.					
In this company, we do a lot of in house market research.					
We are able to detect changes in our customer' product preferences on time.					
We poll end users at least once a year to assess the quality of our products.					
We are able to detect fundamental shifts in our industry (e.g., competition, technology, regulation) on time.					
We periodically review the likely effect of changes in our business environment (e.g., regulation) on customers.					
We have interdepartmental meetings at least once a quarter to discuss market trends and developments.					
Marketing personnel in our company spend time discussing customers' future needs with other functional departments.					
When something important happens to a major customer or market, the whole company knows it in a short period.					
Data on customer satisfaction are disseminated at all levels in this company on a regular basis.					
When one department finds out something important about competitors, it alerts other departments on time.					
Market information collected, coded and sorted to be understood, easily by all members of the company.					
Market information is organized in meaningful ways.					
Technical information is organized in meaningful ways.					
Our company has a great deal of familiarity about the marketing process.					
Our company has a great deal of experience about the marketing process.					
Our company has invested a great deal of research and development in the marketing process.					
Our company has a great deal of knowledge about the marketing process.					
MARKETING EFFECTIVENESS					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Management recognizes the importance of designing or providing products or services, which serve the needs and wants of chosen markets.					
Management takes into account suppliers, competitors, customers, and its operating environment in planning its organization.					
Management develops different strategies for different segments of the market.					
There is marketing integration and control of major marketing functions (i.e. advertising, product development, marketing research, and personal selling)					
Employees responsible for marketing activities work well with employees in other functional areas.					
The process for assessing new product or service opportunities is well organized.					
Management develops a detailed annual marketing plan and careful long-range plan that is updated annually.					
The current strategy is clear, innovative, data based, and well-reasoned.					
Management formally identifies the most important contingencies and develops contingency plans					
Marketing thinking at the top is successfully communicated and implemented down the line.					
Marketing resources are adequate and deployed efficiently.					
Marketing has installed systems yielding highly current information and fast reaction time.					

COMPETITIVE INTENSITY					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Competition in our industry is cutthroat.					
There are many 'promotion wars' in our industry.					
Anything that one competitor can offer, others can match in the industry.					
Price competition is a hallmark of our industry.					
ORGANIZATIONAL PERFORMANCE					
	Very Low	Low	Neutral	High	Very High
Change in market share relative to your major competitor.					
Change in profit relative to major competitor.					
Change in sales revenue relative to your major competitor.					
First to market with new applications.					
Degree of product differentiation relative to your company's major competitor.					
New product introduction rate relative to major competitor.					
New product success rate relative to major competitor.					

APPENDIX B

SURVEY IN TURKISH

ÖĞRENME ODAKLILIK- PERFORMANS İLİŞKİSİ ANKETİ

Sayın Yönetici, Boğaziçi Üniversitesi, İktisadi ve İdari Bilimler Fakültesinde yürütülen doktora tezi kapsamında hazırlanmış olan bu anketin cevapları yalnızca akademik amaçlı kullanılacak ve gizli tutulacaktır. Yanıtlarınız ve kıymetli vaktiniz için şimdiden teşekkür ederiz, Saygılarımızla.

Tez öğrencisi: Hale Çaloğlu

Firma Bilgileri

4. Firmadaki göreviniz nedir?.....
2. Firmanız hangi yılda kurulmuştur?
3. Firmanızın faaliyet alanı nedir?.....
4. Firmanızda sürekli çalışan eleman sayısı nedir?
5. Firmanızın sermaye dağılımı nasıldır? Yerli %....., Yabancı %.....

Lütfen aşağıdaki ifadeleri uygun kutucuğu işaretleyerek değerlendiriniz.

ÖĞRENME ODAKLILIK	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Yöneticilerimize göre şirketimizin öğrenme yeteneği en önemli rekabet avantajımızdır.					
Öğrenme, gelişimin anahtarıdır ilkesi bu şirketin temel değerleri arasındadır.					
Burada, çalışanın eğitilmesi ve öğrenmesi bir maliyet değil, bir yatırım olarak görülür.					
Şirketimizde öğrenme, varlığımızı sürdürebilmek için gerekli bir anahtar değer olarak görülür.					
Şirket kültürümüzde çalışanın öğrenmesi öncelik teşkil eder.					
Şirketimizde genel inanış şudur ki; öğrenmeyi bırakırsak, geleceğimiz tehlikeye girer.					
Şirket olarak kim olduğumuz ve nereye gittiğimizle ilgili iyi ifade olunmuş bir anlayış vardır.					
Tüm kademeler, fonksiyonlar, ve bölümler nezdinde şirketimizin vizyonu ile ilgili tam bir uzlaşma mevcuttur.					
Çalışanlarımız, şirketimizin yönünü belirlemede kendilerini birer aktif katılımcı olarak görürler.					
Üst yönetim şirket vizyonunun alt kademelerle de paylaşılması gerektiği inancındadır.					
Şirketimizde iş yapış şeklimizle ilgili paylaştığımız ilkeleri eleştirmekten çekinmeyiz.					
Yöneticilerimiz kendi bakış açılarının sorgulanmasına izin verirler.					
Şirketimiz açık fikirliliğe çok değer verir.					
Yöneticilerimiz çalışanları sıradışı düşünmeye teşvik ederler.					
Sürekli yenilik şirket kültürümüzün bir parçasıdır.					
Bu şirkette orijinal fikirlere çok değer verilir.					

PİYASA BİLGİSİ DEĞERLENDİRMESİ					
	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Müşterilerimizle gelecekte onların ihtiyaç duyabilecekleri ürün ve hizmetleri öğrenmek için yılda en az bir kez buluşuyoruz.					
Şirketimiz kendi bünyesi içerisinde bir çok pazar araştırması yapar.					
Müşterilerimizin tercihlerindeki değişiklikleri zamanında tespit edebiliyoruz.					
Ürünlerimizin kalitesi hakkında ne düşündüklerini öğrenmek için müşterilerimizle yılda en az bir kez anket yapıyoruz.					
Sektörümüzde meydana gelen temel değişiklikleri (örn. Rekabet, teknoloji, hukuki konular) zamanında tesbit edebiliyoruz.					
İş dünyasında gerçekleşen, müşterileri etkileyebilecek değişiklikleri (örneğin, hukuki konular) düzenli olarak izliyoruz.					
Pazardaki gelişmeleri ve eğilimleri tartışmak için departmanlar arasında en az üç ayda bir toplantılar düzenliyoruz.					
Pazarlama personeli diğer departmanlarda çalışanlarla, müşterilerin gelecekteki ihtiyaçları hakkında sık sık görüşür.					
Önemli bir müşterimizin veya pazarımızın başına bir şey geldiğinde tüm şirket olaydan kısa süre içerisinde haberdar olur.					
Müşteri memnuniyeti hakkındaki bilgi şirketin her seviyedeki çalışanlarına düzenli olarak dağıtılır.					
Bir departmanımız rakiplerimiz hakkında önemli bir şey bulduğunda diğer departmanları geç kalmadan uyarır.					
Toplanan piyasa bilgisi, tüm şirket çalışanlarının kolayca anlaması için kodlanır ve sınıflandırılır.					
Piyasa bilgisi anlamlı şekilde organize edilmiştir.					
Teknik bilgiler anlamlı şekilde organize edilmiştir.					
Şirketimizin pazarlama süreci hakkında büyük ölçüde aşinalığı vardır.					
Şirketimizin pazarlama süreci hakkında büyük ölçüde tecrübesi vardır.					
Şirketimiz pazarlama sürecine büyük ölçüde araştırma ve geliştirme yatırımı yapmıştır.					
Şirketimizin pazarlama süreci hakkında büyük ölçüde bilgisi vardır.					
PAZARLAMA ETKİNLİĞİ					
	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Yönetim, seçilmiş pazarların ihtiyaç ve istekleri doğrultusunda ürün veya hizmetleri tasarlamamanın veya temin etmenin öneminin farkındadır.					
Yönetim, örgütlenmesini planlarken tedarikçiler, rakipler, müşteriler, ve iş ortamını dikkate alır.					
Yönetim, farklı pazar segmentleri için farklı stratejiler geliştirir.					
Ana pazarlama fonksiyonlarımız (reklam, ürün geliştirme, pazarlama araştırması, vb) arasında entegrasyon ve kontrol mevcuttur.					

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Pazarlamadan sorumlu çalışanlar diğer işlevsel alanlarda çalışanlarla iyi bir çalışma sergilerler.					
Yeni ürün veya hizmet fırsatlarını değerlendirme sürecimiz iyi organize edilmiştir.					
Yönetim, detaylı yıllık pazarlama planı ve her yıl güncellenen itinalı uzun vadeli planlar geliştirir.					
Şu anki strateji açık, yenilikçi, verilere dayanan, ve iyi düşünülmüştür.					
Yönetim, en önemli riskleri resmi olarak belirler ve ihtimal acil durum planları geliştirir.					
Üst düzey yönetimin düşünceleri başarıyla alt seviyeye iletilir ve uygulanır.					
Pazarlama kaynaklarımız uygun ve verimli konuşlandırılır.					
Pazarlama, yüksek ölçüde güncel bilgi veren ve hızlı veri alınan sistemler kurmuştur.					
REKABET FAKTÖRLERİ					
	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Endüstrimizde rekabet yoğundur.					
Endüstrimizde yoğun promosyon savaşları olmaktadır.					
Endüstrimizde yeni ürünler rakiplerce kopyalanır.					
Fiyat rekabeti endüstrimizin özelliğidir.					
ŞİRKET PERFORMANSI					
	Rakiplerden çok daha düşük	Rakiplerden biraz daha düşük	Rakiplerle aynı	Rakiplerden biraz daha yüksek	Rakiplerden çok daha yüksek
Son iki yılda, en önemli rakibinize göre pazar payınızdaki değişim nasıldı?					
Son iki yılda, en önemli rakibinize göre karlılığınızdaki değişim nasıldı?					
Son iki yılda, en önemli rakibinize göre satış gelirlerindeki değişim nasıldı?					
Son iki yılda, pazarda yeni uygulamalarla piyasada ilk olma konusunda nasıldınız?					
Son iki yılda, en önemli rakibinize göre ürün farklılaştırma dereceniz nasıldı?					
Son iki yılda, en önemli rakibinize göre yeni ürün piyasaya sürme hızınız nasıldı?					
Son iki yılda, en önemli rakibinize göre yeni ürünlerde başarı oranınız nasıldı?					

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