A partial theory of holistic firm-level marketing capability: An empirical investigation

Abhijit M. Patwardhan
Texas A&M International University

ABSTRACT

The American Marketing Association (AMA) revised (December 2007 and approved it again in July 2013) the definition of marketing wherein marketing is considered an organization-wide "activity" instead of just a "function." This encouraged us to investigate the role of marketing at the firm level. In this paper, we introduce a new abstract concept termed 'Holistic Firm-Level Marketing Capability' (HFMC), that is consistent with the view of marketing as an organization-wide activity, and further analyze how organizational learning impacts the HFMC which in turn affects firm performance in the context of various strategic orientations of the firm. We incorporate a novel methodology through the use of secondary data proxies and find empirical evidence of existence of the holistic firm-level marketing capability. Therefore, this research can be described as a positive research and enhances current knowledge of marketing science in both the context of discovery and the context of justification (Hunt, 2002).

This study reports sometimes positive and more inverted U type (i.e. positive up to a certain point) relationship between the HFMC and firm performance both in reasonably stable (Years 2002-2007) and unstable (Years 2008-2011) environment. There is a strong opportunity for scholars to investigate the optimal point beyond which spending in holistic marketing related activities may not be desirable.

Finally, it is suggested that this model can be considered as a partial theory of holistic firm-level marketing capability. We evaluate this claim based on the literature from the philosophy of science discipline.

Keywords: Organizational Learning, Holistic, Theory, Marketing Capability, Strategic Orientation, Philosophy of Science

INTRODUCTION

Understanding the capabilities of a firm is a favorite subject of various scholars (Krasnikov & Jayachandran, 2008; Prasnikar, Lisjak, Buhovac, & Stembergar, 2008; Day, 2011). The 'capability logic' is based on the assumption that "one firm will outperform another if it has a superior ability to develop, use, and protect elemental, platform competencies and resources" (Lengnick-Hall & Wolff, 1999, p. 1111). Snow, Miles, and Miles (2005) highlighted the importance of competitive strategy and organization. They suggested that "external factors (e.g., industry conditions) account for roughly 19 percent of a firm's performance" whereas "developing a sound competitive strategy and organization is responsible for about 32 percent of performance results (Snow, Miles, & Miles, 2005, p. 431). Numerous studies have emphasized the impact of marketing capabilities on firm performance (Day, 1994; Vorhies & Morgan, 2005; Akdeniz, Gonzales-Padron, & Calantone, 2010). Day (1994) suggests that the firms with superior capabilities in marketing are better able to satisfy the needs and wants of the customers. Judge and Blocker (2008, p. 917) described "marketing-related capabilities as keys to competitive advantage." Ramaswami, Srivastava, and Bhargava (2009) also highlighted the need to understand the importance of market-based capabilities while analyzing a firm's financial performance. In a meta-analysis conducted by Krasnikov and Jayachandran (2008), the authors have found stronger impact of marketing capability on firm performance than operations and R&D capability. Nath, Nachiappan and Ramanathan (2010, p. 317) also concluded that "marketing capability is the key determinant for superior financial performance." Even though Marketing scholars have also suggested the changing nature of "cross-functional dispersion of marketing activities" (e.g., Workman, Homburg, & Gruner, 1998, p. 31; Krohmer, Homburg, & Workman, 2002) in the past, there seems to be a growing outcry of diminishing role of marketing function in the corporate world (Schultz, 2005; Webster, Malter, & Ganesan, 2005; Nath & Mahajan, 2008; Verhoef & Leeflang 2009; Srinivasan & Hanssens, 2009). Furthermore, these authors highlight an influential role played by marketing in corporate strategy in many companies as well. Kotler and Keller (2009, p. 19) have described the "holistic marketing" concept which is based on "the development, design, and implementation of marketing programs, processes, and activities that recognizes their breadth and interdependencies." This approach incorporates the idea that "everything matters" in marketing and suggests relationship marketing, integrated marketing, internal marketing, and performance marketing as components characterizing holistic marketing. In other words, Kotler and Keller (2009) seem to highlight marketing's embeddedness in other functions within organizations. While describing the future of marketing, Kotler and Keller (2012) have even predicted "the demise of marketing department and the rise of holistic marketing" (p. 646).

Webster (1997) described marketing as a value-delivery process and suggests that every person in the organization is responsible for delivering superior value to customers. This means that marketing can be considered an *activity* instead of a function. Gundlach and Wilkie (2009) have provided an excellent perspective on the AMA's (2007) new definition of marketing. They have explained how this definition adopts "an aggregate conception of marketing" and have highlighted an emphasis on "marketing's broader role and responsibility to offer value for customer, clients, partners, and society at large" (p. 263) in this definition. The AMA's updated definition of marketing considers marketing as an organization-wide activity in which "both formal marketing departments and others in organizations" are involved (Gundlach & Wilkie, 2009, p. 261). This encouraged us to attempt to understand and explain marketing activity at the

firm level. Therefore, a new abstract concept termed 'Holistic Firm-Level Marketing Capability' (HFMC) is introduced here. Based on the definition of capabilities suggested by Day (1994, p. 38), we define the HFMC as the "complex bundles of skills and accumulated knowledge" that enable a firm to serve every stakeholder-related need of firms. This definition also acknowledges the importance of the growing literature relating to stakeholder marketing (Smith, Palazzo, & Bhattacharya, 2010; Gundlach & Wilkie, 2010).

The organizational capacity to learn has also been viewed as a critical element in developing and maintaining a competitive advantage (Hamel & Valikangas, 2003). Various scholars focus on the importance of organizational learning in gaining competitive advantage (Dickson, 1992; Baker & Sinkula, 1999; Slater & Narver, 1995; Crossan & Berdrow, 2003). DeGeus (1988, p. 71) mentioned that "the ability to learn faster than your competitors may be the only sustainable competitive advantage." Some scholars, such as Dickson (1996), even argue that learning processes are the only basic competence that can lead to sustainable competitive advantage (SCA). Another relevant factor in this research is strategic orientation of firms. Slater, Olson and Hult (2006) mention that strategic orientation is concerned with the decisions businesses make to attain superior performance. This orientation is concerned with the planned patterns of organizational adaptation to the market through which a business seeks to achieve its strategic goals (Matsuno & Mentzer, 2000; Conant, Mokwa, & Varadarajan, 1990). It also means that strategic orientation is the tendency of an organization to discover, develop, and maintain a set of consistent responses to environmental factors (Bahaee, 1992). Zhou, Yim, and Tse (2005, p. 44) mention that a firm's capability can be identified in its strategic orientation. We apply a widely used strategic typology suggested by Miles and Snow (1978) at the corporate level. In sum, we integrate different research streams relating to marketing capabilities, organizational learning, and business strategies and therefore, state the research question addressed in this study as below:
How does organizational learning impact holistic firm-level marketing capability which in turn affects organizational performance in the context of various strategic orientations of a firm? The nature of this question can be described as a positive question, which attempts to explain *how things are* instead of *how things should be* (Hunt, 2002).

Contributions of the Study

Thus, this study contributes to the strategic marketing literature in four ways. First, we introduce a new abstract concept termed 'Holistic Firm-Level Marketing Capability' and build a partial theory of the HFMC that attempts to understand, explain and predict how organizational learning affects the HFMC under different strategic orientations which in turn influences organizational performance. Second, we utilize a novel methodology to operationalize these variables by the use of secondary data. This has an important contribution in terms of methodology wherein the importance of secondary data proxies is demonstrated. This study derives realized strategic profiles of firms by use of publicly available financial data. Scholars, such as Mezias and Starbuck (2003), report inaccuracy in managers' perceptions about their organizations that leads to erroneous results of survey-based studies. In this study, the use of secondary data also helps to incorporate "realized," instead of "intended," strategic orientation of the firms in the existing literature that is based on perceptual measures such as surveys. Third, this study conducts multiyear analyses, which adds a current literature stream in the area of dynamic capabilities by identifying commonalities across firms. This may enhance

understanding of "the elusive black box of dynamic capabilities" (Pavlou & El Sawy, 2011, p. 239) and contribute to the debate of "the effect of dynamic capabilities" (Weerawardena & Mavondo, 2011, p. 1220). The fourth contribution is that this study focuses at the firm level as opposed to the majority of past research, which was conducted at the marketing department level. This is necessary as traditional forms of organizations are rapidly changing in the current globalized world. For example, marketing researchers draw attention to the rising nature of network organizations (Achrol & Kotler, 1999; Day, 2011). This study introduces and empirically demonstrates the existence of holistic firm-level marketing capability. This is in line with the holistic marketing concept propounded by Kotler and Keller (2009). We have examined this research question by two approaches. A micro level approach is applied when we analyze every industry and strategic group separately. This approach should help us to investigate a phenomenon in more depth as firms are grouped on the basis of strategic orientation and industry environment. A macro level approach is applied when we analyze multiple industries simultaneously. However, we consider these multiple industries belonging to the domain of the R&D intensive industries. This approach should help us to generalize the findings to some extent.

THEORETICAL FOUNDATIONS AND HYPOTHESES

Organizational Learning

Many scholars suggest that organizational learning can be considered a key to organizational success in the future (Achrol, 1991; Argote & Miron-Spektor, 2011). Organizational learning can be viewed as a way to develop capabilities that are difficult to imitate and are considered valuable by customers. In the dynamic capabilities theory, learning plays a key role (Dodgson, 1993). Crossnan and Berdrow (2003) have even suggested underresearched but critical linkage between strategy and organizational learning processes. According to the resource-based view, the resources and capabilities of a firm can be a source of sustainable competitive advantage. Barney (1991) described organizational learning as a resource and capability which leads to sustainable competitive advantage. Dodgson (1993) highlighted diversity of opinions to the question: what is organizational learning? For economists, learning is simple quantifiable improvements in activities, whereas scholars in the management discipline compare learning and sustainable competitive advantage. These literatures tend to focus on the outcome of learning instead of the process of learning as focused by scholars in organization theory and psychology. Dodgson (1993) also discussed the centrality of R&D in the organizational learning mechanism. Fiol and Lyles (1985) highlighted the importance of higher-order learning as it impacts a firm's long term survival. In a seminal article, March (1991, p. 71) explained importance of the relation between "the exploration of new possibilities and the exploitation of old certainties." Both these activities are essential for organizations. The author further states that exploration activities can be described by terms such as "search, variation, risk taking, experimentation, play, flexibility, discovery, innovation." Exploitative activities can be captured by terms such as "refinement, choice, production, efficiency, selection, implementation, execution." The conceptual distinction suggested by March (1991) is widely used in the literature across disciplines (Gupta, Smith, & Shalley, 2006; He & Wong, 2004; Im & Rai, 2008; Raisch & Birkinshaw, 2008; Li, Chu, & Lin, 2010). We once again emphasize that this study is not limited to examine the functional level of marketing.

This is because of the suggested diminishing role of marketing in the future. Kotler and Keller (2009, p. 627) state that "marketing no longer has sole ownership of customer interactions" because "every functional area can interact directly with customers." In other words, the philosophy of marketing is being adopted across divisions and levels that include the corporate level. This should certainly help to increase firms' sales revenues significantly.

As organizational capability is considered as one of the outcomes of organization learning (Grant, 1996; Dixon, Meyer, & Day, 2007), we next discuss a critical capability at the firm level in the marketing context. This is consistent with the influence of marketing at the corporate level noted by Varadarajan and Jayachandran (1999, p. 121). Olson, Slater, and Hult (2005) have also suggested the need to examine marketing's contribution at the corporate level as it is one of the under-researched areas.

Holistic Firm-Level Marketing Capability

Marketing scholars demonstrate the contribution of marketing resources and capabilities to the creation of competitive advantage. These scholars consider marketing capabilities as rare, difficult to achieve, and difficult to duplicate (Dutta, Narasimhan, & Rajiv, 1999; Hooley, Grrenley, Cadogan, & Fahy, 2005). However, the view of considering marketing as everything is not new. It has been propounded by authors such as McKenna (1991, p. 68) when he defined marketing as "a way of doing business.. its job is to integrate the customer into the design of the product and to design a systematic process of interaction that will create substance in the relationship." Day (1992, p. 323) mentioned that "the deeper marketing is embedded within an organization and becomes the defining theme for shaping competitive strategies, the more likely the role of marketing as a distinct function to be diminished." This is evident by the fact that employees in other departments such as operations, R&D, quality control and even finance, now discuss focus on customers (Lehman, 1997). Webster, Malter, and Ganesan (2005, p. 36) echo similar views when they state that "many elements of the central marketing function have been 'centrifuged' outward and embedded in functions as diverse as field sales and product engineering that are closer to customers." These authors also state that marketing is "more a diaspora of skills and capabilities spread across and even outside the organization." On December 17, 2007, the American Marketing Association sent a memo in which a new definition of marketing was announced and approved it again in July 2013. The current definition of marketing is as below:

> "Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large."

The previous definition (AMA 2004) defines marketing as "an organizational function and a set of processes for creating, communicating, and delivering value to customers and for managing customer relationships in ways that benefit the organization and its stakeholders." The clear emphasis of marketing as an organization-wide activity is positioned in the new definition. Now the definition of marketing recognizes "action" in which everyone in the organization is involved while "creating, communicating, delivering, and exchanging" value to stakeholders. According to Verhoef and Leeflang (2009), pricing and distribution issues are mostly handled by departments other than marketing. Therefore, functional marketing department seems to be responsible for only advertising, segmentation, targeting, positioning, and customer satisfaction. Blesa and Ripolles (2008, p. 653) describe networking capabilities as "the ability to create

mutual trust and commitment between partners, as well as sharing expertise and more tangible assets." Furthermore, Kotler and Keller (2009) discuss the holistic marketing concept that incorporates relationship marketing (i.e., development of marketing network which consists of the company and its supporting stakeholders), integrated marketing (i.e., functional level marketing activities), internal marketing (i.e., marketing activities within the company), and performance marketing (which includes addressing broader concerns of marketing activities and their legal, ethical, social, and environmental effects).

Scholars, such as Bowman and Ambrosini (2003), Prasnikar et al. (2008), also indicated the existence of corporate level capabilities those are different from those at strategic business unit levels. This review of literature necessitates us to consider marketing capabilities at the firm level. Based on the definition of capabilities suggested by Day (1994, p. 38), we define holistic firm-level marketing capability (HFMC) as the "complex bundles of skills and accumulated knowledge" that enable a firm to serve every stakeholder-related need of firms.

We further posit that holistic firm-level marketing capability can be considered as a dynamic and higher level capability, which can be partially examined by analyzing sales revenues and selling, general, and administrative (SGA) expenses along with goodwill.

Dynamic Capabilities

The notion of dynamic capabilities as the source of competitive advantage has generated a stream of predominantly conceptual research (Teece, 2007; Zhou & Li, 2010). Dynamic capabilities are higher order learning processes which enable modification and renewal of a firm's existing resources. Helfat et al. (2007, p. 4) provided a conceptual definition of a dynamic capability as "the capacity of an organization to purposefully create, extend or modify its resource base." Here "the resource base" indicates tangible, intangible, and human assets (resources) along with capabilities which the organization owns, controls, or can have access to. In other words, capabilities are considered as part of the resource base. Therefore, dynamic capabilities are part of an organization's resource base. The term "capacity" suggests: a) the ability to perform a task in at least a minimally acceptable and satisfactory manner and b) repeatability. This excludes some sort of innate talent which is not a capability of any kind. The word "purposefully" implies some kind of intent. This helps differentiating dynamic capabilities from some kind of organizational routines that lack intent. This "intent" characteristic differentiates dynamic capability from luck or accident. The words "create, extend, or modify" do not apply for operational capabilities. Dynamic capabilities can alter an organization's resource base depending on the circumstances. In other words, this definition of dynamic capabilities incorporates organizational learning processes inherently due to its inclusion of the "renewal and reconfiguration" dimension (Green, Larsen, & Kao, 2008). Interestingly, Barreto (2010) proposed a new conceptualization of dynamic capability as an aggregate construct.

Argote (2011, p. 442) has stated that "a greater understanding of how dynamic capabilities develop through organizational learning is needed." Crossnan, Maurer, and White (2011) have highlighted an opportunity to link dynamic capabilities to organizational leaning (OL) in order to enrich OL literature. When the concept of dynamic capability is applied to marketing, it indicates that a firm's marketing capabilities may be heavily influenced by its learning capabilities. This can enable the firm to align its resource deployments with its market environment better than its rivals (Day, 1994; Eisenhardt & Martin, 2000). We extend this idea

to the new concept introduced in this study, i.e., holistic firm-level marketing capability and suggest the following hypothesis:

H1: There is a positive relationship between organizational learning and holistic firm-level marketing capability.

Strategic Orientation

Miles and Snow (1978) is a widely embraced dominant framework of strategic orientation (Desarbo, Benedetto, Song, & Sinha, 2005; Song, Benedetto, & Nason, 2007). Hambrick (2003) discusses the reasons of the popularity and longevity of Miles and Snow typology. It seems that Miles and Snow (1978) typology corresponds to the actual strategic postures of firms in multiple industries and multiple countries. This typology helped to develop the concept of strategic equifinality which is the idea that there is more than one way to prosper. Ashmos and Huber (1987) argue that organizational researchers should investigate the phenomenon of equifinality. Doty, Glick, and Huber (1993) demonstrate that Miles and Snow types of strategies are subject to equifinality in terms of financial performance. While describing the assumption of equifinality, Katz and Kahn (1978, p. 30) mentioned that "a system can reach the same final state from differing initial conditions and by a variety of paths." Thus, the concept of equifinality suggests that there are different paths to success and "multiple organizational forms are equally effective" (Doty, Glick, & Huber, 1993, p. 1996). While discussing the condition of commonalities relating to dynamic capabilities, Newbert (2005) highlighted the inherent existence of equifinality. Newbert (2005, p. 58) further argued that "a dynamic capability will be equifinal, or that likely will be initiated from different starting points and progress along distinctive paths; substitutable, or that while the manner in which a dynamic capability is executed may vary by firm its underlying process is constant across all firms; and fungible or that best practices are effective across a range of industries." Therefore, we posit that this study can provide an excellent opportunity to explore the phenomenon of equifinality.

Peng, Tan and Tong (2004) argued for superiority of Miles and Snow typology due to its empirical support. According to Slater and Mohr (2006, p. 27), it is a "comprehensive framework that highlights alternative ways organizations define and approach their product-market domains and construct structures and processes to achieve success in those domains." Miles and Snow (1978) classify the organizations into four strategic types: prospectors, analyzers, defenders and reactors. Prospectors lead changes in industry and operate in a broad product-market domain. Their competition is based on the identification of latent needs of customers. Defenders adopt a secure niche in a reasonably stable and narrow product-market domain. They are more risk averse and tend to satisfy customers' expressed needs (Song, Benedetto, & Nason, 2007). Analyzers can be considered in the middle position between prospectors and defenders. Ghoshal (2003, p. 113) described analyzers as the most "complex organizations that combine some aspects of both defenders and prospectors." Analyzers compete on defender-like strengths such as efficiency and low cost in the relatively stable environment. However, analyzers also act like prospectors in a dynamic environment. Reactors lack long term plans and have inconsistent strategy.

We apply this typology at the corporate level. This has been done in past research (Miles & Cameron, 1982; Hambrick, 1981, 1982, 1983; Meyer, 1982; McDaniel & Kolari, 1987; Evans & Green, 2000). Such strategic orientation can be identified by analyzing contents in the annual

reports as well (Kabanoff & Brown, 2008). Furthermore, Morris and Pitt (1993) and Varadarajan (1992) argued for the existence of marketing strategy at the corporate level. Past research indicates that many organizational processes vary according to strategy. Since organizational adaptation is driven by the firm's response to its external environment, internal firm processes such as marketing capabilities (Day, 1994; Vorhies & Morgan, 2003) and the learning processes used to enhance, retire and replace marketing capabilities (Morgan, 2004; Slater & Narver, 1995) should also be expected to vary according to strategic type and should be major factors in determining the short term performance of the firm, as well as driving the firm's ability to maintain longer term competitive advantages.

Prospectors will need advanced learning capabilities and firm-level marketing capability in order to enable the deployment of the market knowledge gained. They also need more explorative learning capabilities and are expected to have lower exploitative learning as they often leave matured markets (Sidhu, Volberda, & Commandeur, 2004). Auh and Menguc (2005) demonstrated the positive relationship between exploration with firm performance in case of prospectors. Based on the review of the past research, scholars such as Olson, Slater, and Hult (2005) stated that prospectors are the most market-oriented strategy types. However, there seems to be inconsistency in the past research relating to marketing capabilities. For example, Snow and Hrebiniak (1980) report that managers in prospector organizations provide more importance to marketing and marketing-related competencies. Hambrick (1982) found strong environmental scanning in the case of prospector enterprises. McDaniel and Kolari (1987) observed that prospectors value marketing research and new product development more than defenders do. Conant et al. (1990) found a strong association of marketing competency with prospectors. These marketing competencies are in the areas of marketing planning, revenue forecasting, allocation of marketing resources and control of marketing activities. Woodside, Sullivan, and Trappey (1999) reported superior marketing competency in the case of prospectors. However, Song et al. (2007) found support for the highest marketing capabilities for defenders and the lowest marketing capabilities for prospectors. Another study conducted by Slater, Hult, and Olson (2007) noted no relationship between customer orientation and performance in the case of prospectors. Menguc and Auh (2008) observed support for positive association of exploration for prospectors. Auh and Menguc (2005) reported positive association of exploration for both prospectors and defenders. These inconsistent findings clearly demand further investigation on this issue. The competitive advantage of analyzers is based on flexibility. Therefore, they are expected to need moderate learning capabilities. Vorhies and Morgan (2003) noted the necessity of sufficient marketing capabilities for analyzers. Defenders are expected to need higher exploitative learning capabilities as their competitive advantage is based on efficiency. However, there seems to be inconsistent findings in the past research. For example, Auh and Menguc (2005) found no support for association of exploitation with defenders in order to gain superior performance. Instead, they find efficient firm performance due to exploitation in case of prospectors. This study should help in clarifying these inconsistencies further. Mckee, Varadarajan, and Pride (1989) stated that reactors have no clear strategy. Song, Benedetto, Nason (2007) mentioned that past empirical studies reported prospectors, defenders, and analyzers as equally successful in terms of performance. Furthermore, they generally outperform reactors (Snow & Hrebiniak, 1980). Some scholars, such as Thomas, Litschert, & Ramaswamy (1991), suggest using only contrasting orientations such as prospectors and defenders to examine sharp differences in phenomenon. Auh and Menguc (2005) provide a similar suggestion. However, as this study focuses on understanding capabilities of relatively successful strategic

types, we do not consider reactors in this analysis. While deriving Miles and Snow typology even at the SBU level, Hambrick (1983) recommended the use of more valid labels such as prospector-like and defender-like. Therefore, we suggest the following hypotheses:

H2: The relationship between organizational learning and holistic firm-level marketing capability is moderated by strategic orientation.
H2A: The effect of explorative organizational learning on holistic firm-level marketing capability is higher for prospector-like firms than for defender-like firms.
H2B: The effect of exploitative organizational learning on holistic firm-level marketing capability is higher for defender-like firms than for prospector-like firms.
H2C: The effect of both explorative and exploitative organizational learning on holistic firm-level marketing capability is approximately same for analyzer-like firms.

Firm Performance

Stewart (2009, p. 639) suggested that "cash flow is the ultimate marketing metric," and it is "a consistent measure across markets, products, customers, and activities." Stewart (2009) further described sources of cash where he discusses customer acquisition and retention, share of wallet within and across-category along with business models. He further explained how business models can be a source of cash flow. For example, profit margin or frequency with which an organization sells a product can be considered cash-flow sources. Furthermore, the level of analysis in this study is at the firm level. Another advantage of cash flows is that they are "highly reliable" and "less subject to manipulation by management" (Marshal, McManus, & Viele, 2002, p. 48). Lusch and Webster (2011, p. 130 & 131) have stated that "most of the stakeholders of the firm are either its resource providers or the government and thus share in the cash flows of the enterprise" and have emphasized that cash flow should be the financial metric to reflect marketing as "stakeholder unifying and value cocreating philosophy". Therefore, we consider financial performance measure, such as cash flow, as an outcome variable in this study and suggest the following hypothesis:

H3: There is a positive relationship between holistic firm-level marketing capability and organizational performance.

Furthermore, we consider holistic firm-level marketing capability present in three strategic types, and these strategic types are equally successful. According to Short, Payne, and Ketchen (2008, p. 1067), the concept of equifinality "has long been an important issue within organization theory." This concept suggests that no particular strategy is considered inherently superior. Doty, Huber and Glick (1993) described this phenomenon as equifinality in terms of financial performance and suggested that all three of the Miles and Snow types lead to approximately equal financial performance. Equifinality indicates that there are different paths to success in terms of the implementation of strategic types. Payne (2006, p. 756) stated that equifinality is "the state of achieving a particular outcome (e.g., high levels of performance) through different types of organizational configurations." Even though some studies, such as Hambrick (1983), found mixed support for the concept of equifinality relating to Miles and Snow (1978) typology, many empirical studies support on average equal performance for prospectors, defenders, and analyzers. For example, Conant, Mokwa, and Varadarajan (1990) reported insignificant

differences in organizational performance among prospectors, defenders, and analyzers. Zahra and Pearce (1990) reviewed studies supporting equifinal outcomes. Slater and Olson (2000) reported that past research had found support for equal performance in the cases of prospectors, analyzers and defenders. Vorhies and Morgan (2003) found support for this concept as well. Moore (2005) empirically demonstrates equal performance in the cases of prospectors, defenders and analyzers in the retailing context. Furthermore, Newbert (2005) argued for equifinality in the case of dynamic capabilities as well. Therefore, we suggest the following hypothesis:

H4: Prospector-like, Analyzer-like and Defender-like firms will have equal level of long-term financial performances.

METHODOLOGY

Sample

We have used secondary data to derive these variables at the firm level. This can help minimize the gap between "getting there" and "being there" as suggested by Mintzberg (1990, p. 133). The use of secondary data proxies is widely accepted practice in disciplines such as finance, economics, and health care administration. In fact, Houston (2004) suggested marketing scholars adopting this practice. Furthermore, Desarbo et al. (2005) also argue for superiority of quantitative methods for deriving Miles and Snow (1978) strategic typology. The sampling frame was the manufacturing and services firms listed in the four-digit SIC codes 2000-3999 and 7370-7379. Short et al. (2007) discuss the need to focus on single-business firms in order to avoid statistical noise and confounding. This is consistent with the recent studies in which the authors such as Danneels and Sethi (2011, p. 1030) have focused on single-business manufacturing firms to "minimize intrafirm heterogeneity with respect to organization and environmental characteristics." Some of the R&D intensive industries and SIC codes, in which the existence of high likelihood of a single-business unit is anticipated, are a) Semiconductor-related devices-3674, and b) Prepackaged software-7372. The numbers of firms in each category are shown in Table 1 (Appendix). The nature of this data can be described as "unbalanced repeated cross-sectional" due to variations in firms' strategic orientations and availability of sufficient data in the Compustat.

Measures

We prepared datasets by using financial data from Compustat and focused on the timeframe Year 2002-2007. These years were chosen in order to minimize environmental impact on corporate America, as there was no major national-level disastrous event reported in those years. To test the hypotheses in the context of macro level analysis, we focused on Year 2002 and we merged the data of all industries. To test hypotheses 4, Year 2007 was chosen. For micro level analysis, we downloaded data for multiple years (up to Year 2011) even though we were in need of only Year 2007 data to test hypothesis 4. It was necessary as we wanted to examine whether there are any patterns due to exploratory nature of this topic (Firebaugh, 1997).

Dependent Variable

We calculated the ratio of cash flow from operating activities and total assets for each company by using data in the annual financial statements.

Independent Variables

We have employed the Data Envelopment Analysis (DEA) method to derive independent variables. DEA is a "non-parametric linear programming technique" which provides efficiency score expressed a number between 0 and 1 (Avkiran, 2009, p. 536; Akdeniz, Gonzalez-Padron, & Calantone, 2010). Dutta, Kamakura, and Ratchford (2004) state that DEA determines a firm's efficiency relative its competitors and discuss how DEA has been used in the marketing literature. It is important to note that past researchers have employed DEA to measure marketing capabilities [For example, Nath et al. (2010); Wang, (2010); Yu, Ramanathan, & Nath, (2014); Angulo-Ruiz et al. (2013)]. In case on macro level analysis, efficiency scores were calculated in each industry segment whereas separate scores were calculated in each group of firms belonging to strategic orientations in each industry segment for micro level analysis. This demonstrated robustness of the suggested methodology. We applied output-oriented variable returns to scale approach to derive efficiency scores (Coelli, Rao, O'Donnell, & Battese, 2005).The use of variables from the annual financial statements to derive firm capabilities is well accepted practice in the literature (e.g., Dutta, Narasimham, & Rajiv, 1999; Cui & Kumar, 2012; Sun & Cui, 2012; Sun & Cui, 2013). Consistent with Sarkess (2007) and Sarkees et al. (2014), sales was used as an output variable as a firm's goal is to maximize sales revenue and cost of goods sold (COGS), accounts receivables, and capital expenditures were used as input variables to measure exploitation at the firm level. Cost of goods sold (COGS) indicates "the total cost of merchandise removed from inventory and delivered to customers as a results of sales" (Marshal et al. 2002, p. 36). Consistent with the description of exploitation activities, COGS represents production and efficiency as efficient handling of purchasing activities should help a firm to reduce COGS. Here again, we highlight the ideas that everything matters in marketing and everyone is responsible to deliver superior value to customers. Furthermore, we also highlight that the concepts of relationship marketing and internal marketing are inherent in the marketing activity. The consequences of the relationships developed with both internal customers and external suppliers should reflect in COGS. Accounts receivable indicates "amounts due from customers who have purchased merchandise on credit and who have agreed to pay within a specified period" (Marshall et al. 2002, p. 34). In other words, it also indicates customers' interest in the products or services offered by a firm. Capital expenditures indicate the amount of investment a firm has made in buying property, plant and equipment that should enable a firm to enhance its efficiency.

Exploration activities were measured by using sales as an output variable and past research & development (R&D) activities along with acquisitions (if sufficient data is available) were used as input variables. As explained in the theoretical foundations, exploration activities are reflected by the terms such as risk taking, innovation, discovery, and experimentation. Because firms can acquire external knowledge through acquisition (Perez-Nordtvedt et al. 2010) and furthermore, R&D expenditure is considered as the main factor in understanding organization learning (Dodgson 1993), these inputs are most appropriate to measure exploration in our research. After reviewing numerous studies, Hall et al. (2010) state that R&D lag can be anywhere from one up to six years. Therefore, we have taken the average number of years it takes to realize the impact

of R&D expenditure into net revenue. It will differ according to industry segment. For example, it may require four years to realize the impact of R&D investment in the semiconductors industry. Similarly, it is reasonable to consider requirement of one year to reflect the impact of R&D spending in the software industry. Firms can gain knowledge by acquiring other firms as well.

Strategic Orientation

Here again, firm level constructs were derived by the use of secondary data. Researchers have suggested different methodologies depending on the context of their study. For example, Short et al. (2007) describe how to use data from COMPUSTAT in order to derive constructs indicating various strategic groups. We further describe a combination of measures used by Sabherwal and Sabherwal (2007) and Aubert, Guillaume, Croteau, & Rivard (2008) to examine a firm's strategic orientation. These measures were selected due to their importance, clarity of meaning, and availability of data.

a) **Beta of the firm**: it is a measure of volatility of the company shares which also indicates perceived level of risk. Prospectors should have higher beta (above 1) and defenders should have lower beta (less than 1). Analyzers should have beta close to the median of the industry (Aubert et al., 2008).
b) **Debt structure:** debt to equity ratio represents long-range financial liability (Sabherwal & Sabherwal, 2007). It should be high for prospectors and low for defenders because defenders tend to favor stability. Prospectors tend to use debt for expansion as they are considered as high risk takers. Analyzers should have a moderate level of debt (Aubert et al., 2008).
c) **Asset efficiency**: Total asset turnover = sales/total assets. This ratio indicates a firm's ability to utilize its assets efficiently to generate more sales. For prospectors, this should be low, whereas it should be high for defenders. This is because defenders tend to focus more on efficiency. For analyzers, asset efficiency ratio lies between other two types (Doty et al., 1993; Sabherwal & Sabherwal, 2007).

It should also be noted that we have classified firms based on a qualitative judgment suggested by Aubert et al. (2008). For example, if two indicators strongly suggest a strategic orientation of prospector, then the firm is classified as a prospector. Another example is in the case of analyzers. If we find inconsistencies relating to above described indicators (e.g., all ratios are low or both asset efficiency and debt equity ratio are high), then the firm is classified as an analyzer because this firm demonstrates characteristics of both a prospector and a defender. We also needed to decide the cut-off points (both high and low) for debt structure and asset efficiency. We, therefore, reviewed some of the past literature where scholars had collected primary data to analyze strategic profiles of firms (e.g., Tavakolian, 1989, Conant, Mokwa, & Varadarajan, 1990; Olson & Slater, 2002; Aubert et al., 2008). Based on the percentages of strategy types these authors had found, we classified the data assuming 25% prospectors, 28-35% defenders and 37-40% analyzers exist in each industry segment.

Holistic Firm-level Marketing Capability (HFMC)

Data Envelopment Analysis (DEA) technique was used to measure this capability by considering sales as an output variable and selling, general, and administrative activities (SGA) along with goodwill (if sufficient data is available). The goal of marketing is to deliver superior value to customers and this goal is partially reflected in the net sales or revenue. Therefore, it is appropriate to consider revenue as the output measure. In order to explain appropriateness of various input variables, we refer to the suggested definition of holistic firm-level marketing capability, i.e., the "complex bundles of skills and accumulated knowledge" that enable a firm to serve every stakeholder-related need of firms. SGA expense represents "operating expenses of the entity" (Marshal et al. 2002, p. 36). This SGA captures expenses relating to integrated marketing, internal marketing, and some part of relationship marketing dimensions of holistic marketing (Kotler and Keller 2009, 2012) concept. As we view the marketing as an organization-wide activity, it is logical to consider SGA as an input resource to achieve sales. Goodwill is the amount, over the net book value, for an acquisition. Similar to SGA, it is an expense for the firm while acquiring other firm. However, it is an intangible asset due to which a firm can charge higher prices for its products. According to Investopedia (http://www.investopedia.com), goodwill "typically reflects the value of intangible assets such as a strong brand name, good customer relations, good employee relations, and patents or proprietary technology." This 'goodwill' reflects performance marketing and a significant part of relationship marketing dimensions of holistic marketing concept. Therefore, it makes sense to consider goodwill as an input in order to measure holistic firm-level marketing capability.

Control Variables

Industry segment and size [the number of employees in a firm; (Hurley & Hult, 1998; Ruiz-Ortega & Garcia-Villaverde, 2008; Zhou & Li, 2010; Ngo & O'Cass, 2012]; For years 2008-2011 and macro level analysis, firm age was also added as a control variable (Yamakawa, Yang, & Lin, 2011).

RESULTS

As mentioned earlier, data were merged relating to all industries for the year 2002 for the macro level analysis. As far as micro level analysis is concerned, data for each industry segment were grouped according to three strategic orientations: prospectors, analyzers, and defenders. In other words, we had three data sets for each industry. This helped us to minimize industry influence.

In order to test the hypotheses, a baseline year 2002 was chosen. This choice was based on the assumption that environment may be somewhat stable during Year 2002. However, we have attached results for 10 consecutive years to enable us analyze trends, if any. It appears that the environment in Year 2007 may be considered as reasonably stable. However, the economy experienced tremendous turmoil in the year 2008 again and scholars, such as Kotler and Caslione (2009) even suggest that high market turbulence will be the new normality. Therefore, we have focused on data relating to Year 2002 and Year 2007 only to test the hypotheses. Hypotheses H1, H2C, and H3 were tested by employing seemingly unrelated regression (SUR) which enables simultaneous modeling (Greene, 2002; Wooldridge, 2006). This is recommended when the error

terms of different regressions may be correlated (Gatignon, 2003). To minimize potentially extreme multicollinearity issues, variables were mean-centered (Cohen, Cohen, West, & Aiken, 2003). This is also strongly recommended while testing nonlinear relationship (Cohen et al., 2003). Recently, Dalal and Zickar (2012) have recommended centering while investigating moderating and nonlinear relationships simultaneously as well.

The procedures described by Jaccard, Turrisi and Wan (1990) and Jaccard and Turrisi (2003) were followed to test hypotheses H2A and H2B. These authors describe a case where a qualitative moderator and continuous independent variables are included in the equation. A set of dummy variables are created. In addition to this, the interactions between the qualitative and continuous variables are created. Significance test of interaction effect is conducted by comparing main-effects-only model with the full model. This technique is suggested for testing interactions in case of a multiple regression. However, we have adapted this technique and applied it for seemingly unrelated regression (SUR).

In order to test the concept of equifinality suggested in the hypothesis H4, we conducted an ANOVA and Brown-Forsythe test for performance data in Year 2007 in each industry segment. For macro level data, we conducted these tests for the combined performance data in Year 2007 as well. The system of regression equations to test various hypotheses is as below:

System of Regression Equations (for H1 and H3-micro level)

Firm Performance (LNCFTA) = β_0 + β_1 *Size + β_2 *Holistic Firm-Level Marketing Capability + β_3 *Holistic Firm-Level Marketing Capability Squared + β_4 *Year03 + β_5 *Year04 + B_6 *Year05 + B_7 *Year06 + B_8 *Year07 + error

Holistic Firm-Level Marketing Capability (HFMC) = β_0 + β_1 *Size + β_2 *Exploitation + β_3 *Exploration + β_4 *Year03 + β_5 *Year04 + B_6 *Year05 + B_7 *Year06 + B_8 *Year07 + error

System of Regression Equations (for H2A-micro level)

Firm Performance (LNCFTA) = β_0 + β_1 *Size + β_2 *Holistic Firm-Level Marketing Capability + β_3 *Holistic Firm-Level Marketing Capability Squared + β_4 *Year03 + β_5 *Year04 + B_6 *Year05 + B_7 *Year06 + B_8 *Year07 + error

Holistic Firm-Level Marketing Capability (HFMC) = β_0 + β_1 *Size + β_2 *Exploitation + β_3 *Exploration + β_4 *D1 + β_5 *D2 + β_6 *(D1×Exploration) + β_7 *(D2×Exploration) + β_8 *Year03 + β_9 *Year04 + B_{10} *Year05 + B_{11} *Year06 + B_{12} *Year07 + error

System of Regression Equations (for H2B-micro level)

Firm Performance (LNCFTA) = β_0 + β_1 *Size + β_2 *Holistic Firm-Level Marketing

Capability + β_3 *Holistic Firm-Level Marketing Capability Squared + β_4 *Year03 + β_5 *Year04 + B_6 *Year05 + B_7 *Year06 + B_8 *Year07 + error

Holistic Firm-Level Marketing Capability (HFMC) = β_0 + β_1 *Size + β_2 *Exploitation + β_3 *Exploration + β_4 *D1 + β_5 *D2 + β_6 *(D1×Exploitation) + β_7 *(D2×Exploitation) + β_8 *Year03 + β_9 *Year04 + B_{10} *Year05 + B_{11} *Year06 + B_{12} *Year07 + error

System of Regression Equations (for H1 and H3-macro level Year 2002)

Firm Performance (LNCFTA) = β_0 + β_1 *Size + β_2 *ind2 + β_3 *Age + β_4 *Holistic Firm-Level Marketing Capability + β_5 *Holistic Firm-Level Marketing Capability Squared + error

Holistic Firm-Level Marketing Capability (HFMC) = β_0 + β_1 *Size + β_2 *ind2 + β_3 *Age + β_4*Exploitation + B_5 *Exploration + error

Micro Level Analysis

Industry Segment: Semiconductor related devices (SIC code 3674)

Please refer Table 2 (Appendix) for detailed results. In case of analyzers-like firms, holistic firm-level marketing capability (HFMC) (t= 11.04, p-value < 0.0001), exploration (expl) (t = 9.94, p-value < 0.0001), and exploitation (expt) (t = 4.00, p-value < 0.0001) appear to be significant.

Therefore, hypotheses H1 and H3 are supported here. It was also revealed that there is an inverted U relationship between the HFMC and firm performance (HFMCSQ t = -6.46, p-value < 0.0001). In case of prospector-like firms, HFMC (t = 2.45, p-value = 0.0161) and exploration (expl t = 12.53, p-value < 0.0001) appear to be significant. Therefore, we find partial support to the hypothesis H1 and strong support to H3 among prospector-like firms. Here again, an inverted U relationship between the HFMC and organizational performance was revealed (HFMCSQ t = -3.66, p-value = 0.0004). Additionally, we do not find support to the hypothesis H3 among defender-like categories. However, we find partial support to H1 (exploration t = 6.80, p-value < 0.0001) among defender-like firms. Furthermore, we find a significant interaction (t = 2.57, p-value = 0.0105) after following the procedures suggested by Jaccard et al. (1990) and Jaccard and Turrisi (2003) while testing hypothesis H2A. Therefore, hypothesis H2A is supported. Interestingly, we also find a significant interaction (t = -3.06, p-value = 0.0024) while testing the hypothesis H2B. The negative sign indicates that the effect of exploitation is higher for defender-like firms. This provides support to H2B. In addition to above, there appears to be significant impact of both exploitation and exploration as far as analyzer-like firms are concerned. Therefore, hypothesis H2C seems to be supported. We conducted ANOVA and Brown-Forsythe test on Year 2007 data to examine the equifinality concept indicated in the hypothesis H4. ANOVA p-value 0.131 and Brown-Forsythe p-value 0.287 provide support for H4 in this industry segment as well.

In summary, hypotheses H1 and H3 are partially supported and H4 seems to be reasonably supported in this industry segment. Furthermore, hypotheses H2A, H2B, and H2C are supported as well.

Industry Segment: Prepackaged software (SIC code 7372)

Please refer Table 3 (Appendix) for detailed results. In case of analyzer-like firms, holistic firm-level marketing capability (HFMC) (t= 13.37, p-value < 0.0001) and exploration (expl) (t = 14.04, p- value < 0.0001) whereas exploitation activities (expt) appear to be non-significant. Therefore, hypothesis H1 is partially supported and hypothesis H3 is supported here. It was also revealed that there is an inverted U relationship between the HFMC and firm performance (HFMCSQ t = -13.08, p-value < 0.0001). In case of prospector-like firms, we find support to hypothesis H1 (expl t = 6.46, p-value < 0.0001; expt t = 2.05, p-value = 0.0428) and support to hypothesis H3 (HFMC t = 5.98, p-value < 0.0001). Here again, an inverted U relationship between the HFMC and organizational performance was revealed (HFMCSQ t = -5.27, p-value < 0.0001). In case of defender-like firms, we find partial support to the hypothesis H1 (expl t = 9.37, p-value < 0.0001) and strong support to the hypothesis H3 (HFMC t = 9.43, p-value < 0.0001). We also observe an inverted U relationship between the HFMC and firm performance (HFMCSQ t = -7.68, p-value < 0.0001). Furthermore, we did not find significant interactions after following the procedures suggested by Jaccard et al. (1990) and Jaccard & Turrisi (2003). Therefore, hypotheses H2A and H2B are not supported as well. In addition to above, there appears to be significant difference in exploitation and exploration as far as analyzers are concerned. Therefore, hypothesis H2C is not supported. As mentioned earlier, we conducted ANOVA and Brown-Forsythe test on Year 2007 data to examine the equifinality concept indicated in the hypothesis 4. ANOVA p-value 0.000 and Brown-Forsythe p-value 0.033 do not provide support for H4 in this industry segment.

In summary, H1 and H3 are partially supported in this industry segment. An inverted U relationship between the HFMC and firm performance is observed among all firms having different strategic orientations. However, we did not find any support for hypotheses H2A, H2B, H2C, and H4.

Macro Level Analysis

Please refer Table 4 (Appendix) for detailed results for the merged data relating to all industry segments and strategic orientations for the year 2002. Overall, holistic firm-level marketing capability (t = 6.04, p-value < 0.0001), exploration activities (t = 11.42, p-value < 0.0001) and exploitation activities (t = 2.00, p-value = 0.0473) seem to be significant. We also observe an inverted U relationship between the HFMC and firm performance (HFMCSQ t = -2.75, p-value = 0.0067). Therefore, hypotheses H1 and H3 are supported.

Interestingly, we observed an inverted U relationship in case of analyzers (HFMC t = 5.66, p-value < 0.0001; HFMCSQ t = -4.39, p < 0.0001) and prospectors (HFMC t = 5.20, p-value < 0.0001; HFMC squared t = -2.53, p-value = 0.0151). We also find support to hypothesis H2A as well because interaction term is significant (t = 2.79, p-value = 0.0059). However, we do not find support to H2B (t = -0.32, p-value = 0.7515) and H2C as there appears to be significant difference between exploration and exploitation activities relating to analyzer-like firms. We

further conducted ANOVA and Brown-Forsythe test on the merged data of the year 2007 to investigate the concept of equifinality suggested in hypothesis H4. We find support to H4 as we referred Brown-Forsythe test statistics ($p = 0.077$) due to unequal group sizes. In summary, hypotheses H1, H3, H4, and H2A are supported in the merged data. However, we do not find overall support to hypotheses H2B and H2C.

DISCUSSIONS AND IMPLICATIONS

The objective of this research project was to introduce a new concept i.e., holistic firm-level marketing capability and attempt to develop and empirically test a partial theory of holistic firm- level marketing capability. The idea originated when the American Marketing Association (2007) described marketing as an "activity" instead of a "function" in its definition of marketing. We were able to develop this concept further when we came across another idea of "holistic marketing" propounded by Kotler and Keller (2009). Looking backwards, this research project supported a thought posited by Leeflang (2011, p. 85) that "textbooks are often the starting point for (future) researchers and research." This study reveals existence of the holistic firm-level marketing capability (HFMC) within a firm and attempts to demonstrate empirically how organizational learning impacts the HFMC under various strategic orientations which in turn influences organizational performance.

We further delineate the difference between market orientation and holistic firm-level marketing capability. According to Kohli and Jaworksi (1990), market orientation (MO) is defined as "organizationwide generation of market intelligence pertaining to current and future customer needs, dissemination of intelligence across departments, and organizationwide responsiveness to it." Day (1994, p. 38) describes capabilities as "complex bundles of skills and accumulated knowledge, exercised through organizational processes, that enable firms to coordinate activities and make use of their assets." Careful evaluation of these definitions reveals that market orientation is an organizational process. It also means that market orientation may enhance holistic firm-level marketing capability. In case some firms are not market oriented, those firms still possess holistic firm-level marketing capability. Furthermore, market orientation neglects a firm's "partnering orientation" (Hunt & Lambe, 2000, p. 28). Holistic firm-level marketing capability construct captures networking or partnering abilities, along with integrated marketing abilities, internal marketing abilities and performance marketing abilities, of firms. Based on this analysis, we defined the HFMC as mentioned earlier in the paper and also empirically examined antecedents and consequences of HFMC. As suggested in the past research (e.g., Dixon, Meyer, & Day, 2007), firm capabilities are outcomes of organizational learning. Such capabilities can be rare, inimitable, non-substitutable resources due to which firms can gain and sustain competitive advantage. Identification of such capabilities is a very difficult task for managers. We have suggested a way to examine a crucial firm capability, i.e., holistic firm-level marketing capability. We also posit that this capability is part of dynamic capabilities of firms. Therefore, this study can be described as a positive research and attempts to enrich existing knowledge of marketing science in both the context of discovery and the context of justification (Hunt, 2002).

One of the interesting findings of this study is the empirically demonstrated importance of exploration activities across firms and industry segments. Another interesting finding is in case of prospector-like and analyzer-like firms across industry segments. It seems that these firms do possess a higher level of holistic firm-level marketing capability. However, there is an

inverted U relationship between the HFMC and the firm performance. The concept of equifinality also seems to be supported in case of the semiconductor-related industry segment.

A PARTIAL THEDORY OF HOLISTIC FIRM-LEVEL MARKETING CAPABILITY

Hunt (1971) emphasized the importance of the development of theories as a worthy goal for any scientific discipline such as marketing. Theories deal with abstract concepts, and science can lead us to the "reality behind the observable phenomenon" (Forster, 2007, p. 588). Colquitt and Zapata-Phelan (2007) reviewed the importance of theoretical contributions of empirical studies in the literature and discuss various definitions of "theory." Bass (1995, G6) described science as a "process involving the interaction between empirical generalizations and theory." Empirical generalizations, which are the building blocks of science, can either precede a theory or be predicted by a theory (Bass & Wind, 1995). Scientists can understand, explain and predict a process, a sequence of events or a phenomenon (may by only probabilistically) by the use of a theory. Marketing's ability to develop scientific generalizations makes it possible to claim to be a science (Burgess & Steenkamp, 2006). Empirical generalizations are important sources in the context of scientific discovery. However, Hunt (2002) argues that just empirical generalization is not enough for them to achieve the status of laws in social science as the generalizations can be accidental. Social scientists need to discover causal processes which can allow significant explanation and prediction in order to support the existence of laws (Kincaid, 2004). Furthermore, Bacharach (1989, p. 498) describes a theory "as a system of constructs and variables in which constructs are related to each other by propositions and the variables are related to each other by hypotheses."

Based on the thorough literature review and earlier developed hypotheses, we further posit that the derived model can be described as a partial theory of holistic firm-level marketing capability. To evaluate this claim, we refer to the definition of theory, originally suggested by Rudner (1966), and mentioned by Hunt (2002, p. 193) which is as below:

> "A theory is a systematically related set of statements, including some lawlike generalizations, that is empirically testable. The purpose of theory is to increase scientific understanding through a systematized structure capable of both explaining and predicting phenomena."

We further explain why we can consider this contribution as a partial theory of holistic firm-level marketing capability.

Lawlike Generalizations

If we analyze suggested hypotheses, we may not be able to observe strict wording for generalized (if-then) conditionals. However, these statements clearly express relationships between two variables. We can easily construct these statements in the form "Every time A occurs, then B will occur." For example, every time an "increase in organizational learning" occurs, then "strengthening of holistic firm-level marketing capability" will occur. Another example can also illustrate this, e.g., every time an "increase in holistic firm-level marketing capability" occurs, then "improvement in organizational performance" will occur. Most of the above-mentioned hypotheses represent facts in the real world (synthetic statements). Most of the statements can be tested. Therefore, they satisfy the empirical content criterion. The statements are not accidental generalizations because they have a hypothetical power that goes beyond a

single or a few situations (nomic necessity). All these statements can be integrated in the marketing literature (systematic integration). In fact, careful observation reveals that these hypotheses are derived from some existing literature that does include data supporting to their findings. In summary, the claimed partial theory of holistic firm-level marketing capability does contain statements which are lawlike generalizations.

Systematically related

It seems that a consensus position that is supported by a careful examination of previously cited perspective in theory exists here. It also seems that the statements do have a high degree of internal consistency as all of the concepts in each statement are clearly defined, all of the relationships among the concepts are clearly specified, and the entire interrelationship among the statements is clearly delineated. For example, we have defined various concepts such as Organizational Learning (Exploration and Exploitation), Strategic Orientation (Prospectors, Defenders, and Analyzers), Holistic Firm-Level Marketing Capability, and Firm Performance. We have incorporated the formal language system with elements, formation rules and definitions. The statements seem to be appropriate for axiomatization as they are a) free from contradiction, b) independent, c) sufficient, and d) necessary (Popper, 1959 cited by Hunt, 2002, p. 200). The first requirement is an internal consistency criterion. The second requirement implies that no statement can be deductible from the other statements. The third requirement implies that all of the statements that are part of the theory proper can be derived from the set of fundamental statements. The fourth criterion implies that there are no superfluous statements. We also believe that the interpretation of the statements is clear. We refer to many studies conducted in this area and transform those results into hypotheses. This demonstrates the existence of proper transformation rules.

Empirically testable

Hunt (2002) mentions that research hypotheses are directly testable. The hypotheses are predictive-type statements which are a) derived from theories and b) testable with real-world data. The suggested hypotheses in this paper are intersubjectively certifiable and are different from analytical schemata.

The analysis conducted so far leads us to believe that this study does contain a systematically related set of statements, including some lawlike generalizations, that is empirically testable. This model suggests the existence of marketing capabilities at the firm level. This is consistent with the recent view of marketing as an organization-wide activity instead of a function. It incorporates antecedents and consequences relating to holistic firm-level marketing capability. It also has the capability to explain and predict the process of how organizational learning and holistic firm-level marketing capability vary according to strategic orientations of firms. However, this study does not consider other possibly relevant variables such as environment, organization structure, group behavior, organization culture, and human resource practices in firms (Desarbo et al., 2005). Therefore, we posit that the suggested model in this study can be considered as a partial theory of holistic firm-level marketing capability.

POST HOC ANALYSIS

Grewal and Tansuhaj (2001, p. 67) have mentioned that "market orientation has an adverse effect on firm performance after a crisis." Lilien and Srinivasan (2010) have stated a negative impact of advertising spending on firm performance among B2B organizations during recession. After analyzing R&D and advertising spending among B2B (Goods and Services) and B2C (Goods and Services) firms during recession, Lilien and Srinivasan (2010, p. 182) reached the following conclusion:

> "(1) there is no single best marketing spending strategy in a recession- the answer is…. "it depends" and (2) more research is needed to really understand exactly what those dependencies are."

We, therefore, consider our research as an excellent opportunity to contribute in this debate. We have analyzed data relating to Year 2008, 2009, 2010, and 2011 (Table 5 and Table 6).

System of Regression Equations (for H1 and H3-micro level)

$$\text{Firm Performance (LNCFTA)} = \beta_0 + \beta_1 * \text{Size} + \beta_2 * \text{Age} + \beta_3 * \text{Holistic Firm-Level Marketing Capability} + \beta_4 * \text{Holistic Firm-Level Marketing Capability Squared} + \beta_5 * \text{Year09} + \beta_6 * \text{Year10} + B_7 * \text{Year11} + \text{error}$$

$$\text{Holistic Firm-Level Marketing Capability (HFMC)} = \beta_0 + \beta_1 * \text{Size} + \beta_2 * \text{Age} + \beta_3 * \text{Exploitation} + \beta_4 * \text{Exploration} + \beta_5 * \text{Year09} + \beta_6 * \text{Year10} + B_7 * \text{Year11} + \text{error}$$

Interestingly, it was revealed that the HFMC has a negative impact on the firm performance for the most of years. This consistency demonstrates robustness of the suggested methodology. However, it was also revealed that there is an inverted U type and non-linear relationships in some cases {e.g., defenders (SIC 3674); prospectors (SIC 7372)}. We may be able to observe some patterns by looking at industry data. According to the MarketLine industry profile (2012), the U.S. software industry grew by 7.1% in Year 2010 and 8.1% in Year 2011. Similarly, the US semiconductor industry "fluctuated between stark decline and strong, double digit growth for the 2007-2011 period" (MarketLine, 2012, p. 7). It appears that the HFMC may help firms to develop resilience in such crisis. However, the Financial Crisis Inquiry Commission report (2011) describes 2008 crisis as "the worst financial meltdown since the Great Depression" (p. 3) and conclude that "the comprehensive historical record of this crisis continues to be written" (p. xiii). Therefore, we hesitate to make any conclusive comments due to too much turmoil and uncertainty in the business environment even at this point. In summary, our partial theory is applicable when there is no major, unprecedented economic and financial crisis.

LIMITATIONS AND FUTURE RESEARCH

The most critical component of this study is the way we have classified firms into three strategic orientations. This classification is based on only three criteria, i.e., debt/equity ratio, beta, and asset efficiency. Additional indicators, such as scope, product-market dynamism, fixed asset efficiency, firm-level uncertainty need to be included. Furthermore, more rigorous methodology suggested by Sabherwal and Sabherwal (2007) can help to validate identification of firms' strategic orientations. Because we have used secondary data to operationalize constructs

relating to exploration activities, we focused on R&D intensive industries such as semiconductors and prepackaged software. This limits generalizability and adoption of methodology to examine organizational learning suggested in this study. Another issue is relating to missing data and data envelopment analysis (DEA). While analyzing this issue, Kuosmanen in fact (2009, p. 1767) has argued that "allowing missing values into the data set can only improve estimation of best- practice frontier." Even though, it is conceptually appropriate to include goodwill and acquisition data, it was not always possible to use both these input variables due to missing data. However, we have observed that p-value in the seemingly unrelated regression results doesn't change due to either inclusion or exclusion of these two variables simply because other non-missing main input variables, such as R&D and Selling, General & Administrative expenses are more significant. As suggested by Webster (2005), measures at the strategic level will inevitably be less precise. Still, examining a phenomenon at the firm level is necessary to enrich existing academic literature.

One of the emerging research areas in organization science is to study the concept of ambidexterity (Raisch, Birkinshaw, Probst, & Tushman, 2009; Cao, Gedajlovic, & Zhan, 2009; Sarkees, Hulland, & Prescott, 2010) which suggests simultaneous pursuit of both exploration and exploitation activities. Recently, O'Reilly and Tushman (2011) have encouraged scholars to work on the topic of dynamic capabilities and ambidexterity. Therefore, this needs to be incorporated in the future studies. We have observed sometimes positive and more inverted U type (i.e., positive up to a certain point) relationship between the HFMC and organizational performance both in reasonably stable environment (Years 2002-2007) and unstable environment (Years 2008-2011). There is a strong opportunity for scholars to investigate the optimal point beyond which spending in marketing related activities may not be desirable. There is a clear need to delineate the influence of other variables such as organizational culture, human resource practices, and organizational structure in the OL, strategic orientation and holistic firm level marketing capability relationship. If we can deconstruct the environment and analyze which strategic orientation is stronger in the crisis, it will be a significant contribution to the literature as well. Furthermore, it will be interesting to study whether the relationship between the HFMC and firm performance is linear or non-linear in the presence of other important factors.

We have operationalized firm performance in terms of a financial measure, such as cash flow. However, we can certainly include secondary data of customer satisfaction variable which we, marketers, claim to own. While deriving various independent variables such as organizational learning and holistic firm-level marketing capabilities, we have employed non-parametric method such as Data Envelopment Analysis (DEA). However, there seems to be a debate among scholars about appropriateness of efficiency frontier method. For example, some scholars suggest using Stochastic Frontier Estimation (SFE) to measure capabilities as well (Dutta et al., 1999; Narsimhan, Rajiv, & Dutta, 2006). Luo and Donthu (2005) conclude that these two methods may produce different results and therefore, recommend scholars to use both approaches. However, we highlight that it depends on the nature and structure of data as well. If there are too many zeros or missing data in one of the input variables, it may not be even possible to run Stochastic Frontier. Methodologists need to explore this topic further in the future. Additionally, there is a clear need to develop a scale to measure holistic firm level marketing capability. During this process, it is necessary to refine this construct by collecting primary data from multiple stakeholders as well. This construct i.e., HFMC also needs to be investigated in various industries in multiple countries.

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APPENDIX

Table 1: Sample Details

SIC CODE	Year 2002	Year 2003	Year 2004	Year 2005	Year 2006	Year 2007	Year 2008	Year 2009	Year 2010	Year 2011
3674										
Prospectors	23	21	19	19	22	24	20	17	11	16
Defenders	12	15	18	20	16	15	13	19	10	11
Analyzers	60	67	71	68	70	69	91	93	106	107
Total	95	103	108	107	108	108	124	129	127	134

SIC CODE	Year 2002	Year 2003	Year 2004	Year 2005	Year 2006	Year 2007	Year 2008	Year 2009	Year 2010	Year 2011
7372										
Prospectors	37	19	22	14	25	23	27	16	23	17
Defenders	27	33	31	26	22	15	23	28	25	24
Analyzers	83	101	100	113	106	113	112	128	128	138
Total	147	153	153	153	153	151	162	172	176	179

Table 2: Pooled Data SIC 3674 (Years 2002-2007)

(ref: Year 2002)

Equation 1: Dependent Variable = Natural Log (Cash Flow/Total Assets)
Equation 2: Dependent Variable = Holistic Firm-level Marketing Capability

Analyzer-like Firms	t-value	p-value	Std. Est.
HFMC	11.04	<.0001	0.76686799
HFMCSQ	-6.46	<.0001	-0.33075002
LNEMPL	-0.16	0.8732	-0.00982350
Year03	0.43	0.6670	0.02479578
Year04	1.60	0.1102	0.09252919
Year05	2.25	0.0250	0.13002699
Year06	3.44	0.0007	0.20318509
Year07	2.47	0.0141	0.14832539
R-square	0.5607		

Analyzer-like Firms	t-value	p-value	Std. Est.
LNEMPL	8.07	<.0001	0.37353779
Exploitation	4.00	<.0001	0.14043795
Exploration	9.94	<.0001	0.45670486
Year03	0.24	0.8136	0.01096013
Year04	-1.43	0.1551	-0.06621985
Year05	-1.68	0.0932	-0.07825066
Year06	-0.94	0.3463	-0.04491776
Year07	-0.57	0.5719	-0.02732791

Defender-like Firms	t-value	p-value	Std. Est.
HFMC	1.04	0.3014	0.12861465
LNEMPL	3.33	0.0015	0.42438496
Year03	-0.65	0.5196	-0.09721337
Year04	-0.14	0.8899	-0.02128537
Year05	0.60	0.5518	0.09446660
Year06	0.11	0.9101	0.01782998
Year07	0.87	0.3865	0.13492675
R-square	0.4528		

Defender-like Firms	t-value	p-value	Std. Est.
LNEMPL	1.01	0.3190	0.10446051
Exploitation	-0.72	0.4729	-0.06517362
Exploration	6.80	<.0001	0.66107041
Year03	-1.47	0.1475	-0.17447842
Year04	-0.18	0.8603	-0.02167093
Year05	0.12	0.9047	0.01522396
Year06	-1.12	0.2678	-0.13948285
Year07	-0.80	0.4258	-0.09882364

Prospector-like Firms	t-value	p-value	Std. Est.
HFMC	2.45	0.0161	0.23143566
HFMCSQ	-3.66	0.0004	-0.32010540
LNEMPL	4.07	<.0001	0.36554296
Year03	0.27	0.7907	0.02537888
Year04	-0.15	0.8798	-0.01483313
Year05	-0.07	0.9454	-0.00676489
Year06	0.52	0.6013	0.05202886
Year07	-0.39	0.6971	-0.03976077
R-square	0.5497		

Prospector-like Firms	t-value	p-value	Std. Est.
LNEMPL	-1.60	0.1129	-0.11266140
Exploitation	-1.02	0.3121	-0.05737265
Exploration	12.53	<.0001	0.87847776
Year03	0.10	0.9211	0.00681068
Year04	-0.10	0.9237	-0.00671119
Year05	0.48	0.6300	0.03422457
Year06	0.38	0.7017	0.02741198
Year07	0.61	0.5448	0.04446203

Interactions (To test H2A)

[Dummy Coding: Prospectors (1, 0), Defenders (0, 1), Analyzers (0, 0)]

	t-value	p-value	Std. Est.
LogEMPL	5.44	<.0001	0.20449849
Exploitation (Expt)	2.34	0.0199	0.06847037
Exploration (Expl)	12.21	<.0001	0.55319159
D1	-0.93	0.3551	-0.02805772
D2	1.57	0.1168	0.04697817
D1Expl	**2.57**	**0.0105**	**0.09149138**
D2Expl	0.88	0.3806	0.02816474
Year03	-0.16	0.8701	-0.00621814
Year04	-0.95	0.3441	-0.03614188
Year05	-0.74	0.4578	-0.02863157
Year06	-0.79	0.4327	-0.03065891
Year07	-0.30	0.7675	-0.01174604

Interactions (To test H2B)

	t-value	p-value	Std. Est.
LogEMPL	5.19	<.0001	0.19373707
Exploitation (Expt)	3.67	0.0003	0.12537767
Exploration (Expl)	16.84	<.0001	0.61669477
D1	-0.68	0.4945	-0.02064466
D2	1.55	0.1210	0.04636251
D1Expt	**-3.06**	**0.0024**	**-0.10182392**
D2Expt	-1.35	0.1784	-0.04043706
Year03	-0.11	0.9089	-0.00433947
Year04	-0.92	0.3581	-0.03497765
Year05	-0.82	0.4114	-0.03158908
Year06	-0.86	0.3887	-0.03359186
Year07	-0.35	0.7287	-0.01374170

Table 3: Pooled Data SIC 7372 (Years 2002-2007)

(ref: Year 2002)

Equation 1: Dependent Variable = Natural Log (Cash Flow/Total Assets)
Equation 2: Dependent Variable = Holistic Firm-level Marketing Capability

Analyzer-like Firms	t-value	p-value	Std. Est.
HFMC	13.37	<.0001	0.70586152
HFMCSQ	-13.08	<.0001	-0.64639262
LNEMPL	6.99	<.0001	0.24838527
Year03	0.17	0.8636	0.00763293
Year04	1.89	0.0591	0.08484210
Year05	1.06	0.2888	0.04929574
Year06	1.82	0.0694	0.08324814
Year07	2.80	0.0053	0.12902386
R-square	0.3860		

Analyzer-like Firms	t-value	p-value	Std. Est.
LNEMPL	0.14	0.8916	0.00577226
Exploitation	1.28	0.2012	0.04824889
Exploration	14.04	<.0001	0.59965680
Year03	0.55	0.5850	0.02498040
Year04	0.76	0.4504	0.03496729
Year05	1.06	0.2916	0.05019031
Year06	1.03	0.3017	0.04865148
Year07	0.24	0.8087	0.01220810

Defender-like Firms	t-value	p-value	Std. Est.
HFMC	9.43	<.0001	0.93805777
HFMCSQ	-7.68	<.0001	-0.74087723
LNEMPL	-0.31	0.7540	-0.02307637
Year03	-0.42	0.6769	-0.03863128
Year04	-1.11	0.2701	-0.10217284
Year05	-1.11	0.2683	-0.10159156
Year06	0.56	0.5789	0.04947864
Year07	-1.42	0.1587	-0.11868415
R-square	0.4826		

Defender-like Firms	t-value	p-value	Std. Est.
LNEMPL	0.13	0.8956	0.00965657
Exploitation	1.93	0.0556	0.13126789
Exploration	9.37	<.0001	0.66300900
Year03	-1.26	0.2117	-0.11399842
Year04	-0.80	0.4228	-0.07278154
Year05	-0.73	0.4660	-0.06538730
Year06	-0.84	0.4003	-0.07333325
Year07	-0.27	0.7896	-0.02200690

Prospector-like Firms	t-value	p-value	Std. Est.
HFMC	5.98	<.0001	0.48209342
HFMCSQ	-5.27	<.0001	-0.41309669
LNEMPL	3.16	0.0020	0.25097188
Year03	1.11	0.2699	0.09345502
Year04	-0.54	0.5886	-0.04606931
Year05	1.34	0.1839	0.11045444
Year06	0.15	0.8800	0.01312795
Year07	0.70	0.4874	0.05971838
R-square	0.4225		

Prospector-like Firms	t-value	p-value	Std. Est.
LNEMPL	0.28	0.7821	0.02426140
Exploitation	2.05	0.0428	0.25256218
Exploration	6.46	<.0001	0.54164508
Year03	0.19	0.8483	0.01720870
Year04	-0.31	0.7578	-0.02774588
Year05	-1.51	0.1329	-0.19261658
Year06	0.20	0.8440	0.01822234
Year07	0.15	0.8809	0.01369348

Interactions (To test H2A)

[Dummy Coding: Prospectors (1, 0), Defenders (0, 1), Analyzers (0, 0)]

	t-value	p-value	Std. Est.
LogEMPL	0.71	0.4788	0.02532887
Exploitation (Expt)	2.14	0.0326	0.06363764
Exploration (Expl)	13.64	<.0001	0.57319327
D1	0.02	0.9863	0.00048978
D2	0.55	0.5844	0.01650299
D1Expl	**-0.74**	**0.4573**	**-0.02351540**
D2Expl	1.50	0.1334	0.04869947
Year03	-0.17	0.8686	-0.00607337
Year04	0.05	0.9617	0.00177734
Year05	0.26	0.7971	0.00967277
Year06	0.40	0.6857	0.01512156
Year07	-0.28	0.7793	-0.01075522

Interactions (To test H2B)

	t-value	p-value	Std. Est.
LogEMPL	0.47	0.6396	0.01638815
Exploitation (Expt)	1.05	0.2923	0.03857701
Exploration (Expl)	17.93	<.0001	0.59069607
D1	-0.07	0.9470	-0.00200043
D2	0.49	0.6239	0.01481222
D1Expt	**0.43**	**0.6682**	**0.01518652**
D2Expt	1.75	0.0799	0.05133638
Year03	-0.20	0.8431	-0.00727011
Year04	0.03	0.9744	0.00118638
Year05	0.22	0.8271	0.00835168
Year06	0.40	0.6881	0.01500355
Year07	-0.06	0.9523	-0.00233044

Table 4: Merged Data Year 2002

(ref = SIC 7372; ind2 = SIC 3674)
Equation 1: Dependent Variable = Natural Log (Cash Flow/Total Assets)
Equation 2: Dependent Variable = Holistic Firm-level Marketing Capability

Year 2002	t-value	p-value	Std. Est.
HFMC	6.04	<.0001	0.60112549
HFMCSQ	-2.75	0.0067	-0.25126333
LNAGE	0.58	0.5603	0.04261211
Ind2	1.10	0.2714	0.07745512
LogEMPL	0.16	0.8753	0.01191437
R-Sqaure	0.4263		

Year 2002	t-value	p-value	Std. Est.
Exploitation	2.00	0.0473	0.10757669
Exploration	11.42	<.0001	0.69553930
LNAGE	2.86	0.0048	0.15860922
Ind2	-0.43	0.6692	-0.02325408
LogEMPL	-0.86	0.3903	-0.05656785

Analyzer-like Firms	t-value	p-value	Std. Est.
HFMC	5.66	<.0001	0.68350491
HFMCSQ	-4.39	<.0001	-0.48302180
LNAGE	0.02	0.9805	0.00212671
Ind2	0.54	0.5876	0.04384416
LogEMPL	2.51	0.0139	0.23581376
R-Sqaure	0.5246		

Analyzer-like Firms	t-value	p-value	Std. Est.
Exploitation	1.05	0.2961	0.07016576
Exploration	9.22	<.0001	0.72076616
LNAGE	2.20	0.0305	0.14885222
Ind2	-0.04	0.9644	-0.00291444
LogEMPL	0.06	0.9492	0.00543731

Defender-like Firms	t-value	p-value	Std. Est.
HFMC	0.59	0.5644	0.24883293
HFMCSQ	0.06	0.9505	0.02643993
LNAGE	-0.41	0.6839	-0.08748523
Ind2	0.44	0.6619	0.09467178
LogEMPL	-0.80	0.4334	-0.17265826
R-Sqaure	0.1959		

Defender-like Firms	t-value	p-value	Std. Est.
Exploitation	0.37	0.7177	0.07110540
Exploration	2.62	0.0157	0.51268263
LNAGE	0.72	0.4776	0.13481028
Ind2	-0.12	0.9030	-0.02355034
LogEMPL	0.04	0.9649	0.00880404

Prospector-like Firms	t-value	p-value	Std. Est.
HFMC	5.20	<.0001	0.99831902
HFMCSQ	-2.53	0.0151	-0.43778936
LNAGE	1.05	0.2977	0.13530622
Ind2	-1.36	0.1811	-0.16528752
LogEMPL	-1.26	0.2141	-0.16672273
R-Sqaure	0.6333		

Prospector-like Firms	t-value	p-value	Std. Est.
Exploitation	0.67	0.5038	0.05986625
Exploration	7.58	<.0001	0.87240868
LNAGE	1.59	0.1191	0.15190514
Ind2	1.59	0.1191	0.15190514
LogEMPL	-2.57	0.0137	-0.30169164

Interactions

[Dummy coding: Prospectors (1, 0), Defenders (0, 0), Analyzers (0, 1)]

	t-value	p-value	Std. Est.
LogEMPL	-1.07	0.2878	-0.07538219
LNAGE	2.65	0.0087	0.14686676
Exploitation	0.69	0.4897	0.09737374
Exploration	3.87	0.0002	0.45269356
D1	-0.91	0.3629	-0.07079116
D2	-1.33	0.1845	-0.09976114
D1Expl	**2.79**	**0.0059**	**0.21223341**
D2Expl	2.05	0.0419	0.21739926
D1Expt	**-0.32**	**0.7515**	**-0.03004624**
D2Expt	-0.05	0.9627	-0.00548662
Ind2	-0.27	0.7879	-0.01452197

Table 5: Pooled Data SIC 3674 (Years 2008-2011)

(ref: Year 2008)

Equation 1: Dependent Variable = Natural Log (Cash Flow/Total Assets)
Equation 2: Dependent Variable = Holistic Firm-level Marketing Capability

Analyzer-like Firms	t-value	p-value	Std. Est.
HFMC	-4.16	<.0001	-0.22169599
LNEMPL	8.41	<.0001	0.45641284
LNAGE	1.61	0.1080	0.08252618
Year09	0.13	0.8985	0.00783854
Year10	1.35	0.1766	0.08525872
Year11	0.00	0.9987	0.00009950
R-Square	0.6215		

Analyzer-like Firms	t-value	p-value	Std. Est.
LNEMPL	-0.09	0.9279	-0.00287311
LNAGE	1.95	0.0521	0.05725041
Exploitation	-0.13	0.9003	-0.00358783
Exploration	27.24	<.0001	0.87014908
Year09	-0.73	0.4688	-0.02510413
Year10	-0.63	0.5261	-0.02250831
Year11	-0.54	0.5890	-0.01912850

Defender-like Firms	t-value	p-value	Std. Est.
HFMC	2.29	0.0280	0.26840081
HFMCSQ	-6.36	<.0001	-0.68537347
LNEMPL	0.61	0.5460	0.06694807
LNAGE	0.05	0.9633	0.00508579
Year09	0.89	0.3785	0.10682258
Year10	-0.73	0.4690	-0.08418630
Year11	0.14	0.8877	0.01647661
R-Square	0.6017		

Defender-like Firms	t-value	p-value	Std. Est.
LNEMPL	0.67	0.5064	0.09237487
LNAGE	2.60	0.0134	0.32205348
Exploitation	-1.33	0.1922	-0.16338689
Exploration	3.11	0.0035	0.42103158
Year09	0.75	0.4607	0.10919692
Year10	1.33	0.1919	0.18164255
Year11	0.71	0.4794	0.09961925

Prospector-like Firms	t-value	p-value	Std. Est.
HFMC	-1.57	0.1237	-0.21847555
LNEMPL	3.69	0.0006	0.51754438
LNAGE	1.91	0.0626	0.24127697
Year09	-1.04	0.3059	-0.15636214
Year10	-0.27	0.7846	-0.04008009
Year11	-0.75	0.4590	-0.11187628
R-Square	0.5794		

Prospector-like Firms	t-value	p-value	Std. Est.
LNEMPL	-0.73	0.4682	-0.07697157
LNAGE	0.84	0.4071	0.07616037
Exploitation	-0.36	0.7210	-0.03486373
Exploration	8.79	<.0001	0.87301840
Year09	-0.07	0.9455	-0.00675367
Year10	-0.33	0.7460	-0.03084159
Year11	0.06	0.9517	0.00597676

Table 6: Pooled Data SIC 7372 (Years 2008-2011)

(ref: Year 2008)

Equation 1: Dependent Variable = Natural Log (Cash Flow/Total Assets)
Equation 2: Dependent Variable = Holistic Firm-level Marketing Capability

Analyzer-like Firms	t-value	p-value	Std. Est.
HFMC	-6.56	<.0001	-0.30070320
LNEMPL	6.70	<.0001	0.31861375
LNAGE	2.10	0.0368	0.09734145
Year09	0.08	0.9400	0.00434548
Year10	1.27	0.2064	0.07341319
Year11	0.27	0.7857	0.01594213
R-Square	0.4106		

Analyzer-like Firms	t-value	p-value	Std. Est.
LNEMPL	1.13	0.2599	0.04093987
LNAGE	-3.12	0.0019	-0.10826987
Exploitation	1.43	0.1531	0.05262930
Exploration	18.53	<.0001	0.69115046
Year09	-0.51	0.6120	-0.02195914
Year10	-0.32	0.7481	-0.01398899
Year11	-0.07	0.9459	-0.00298515

Defender-like Firms	t-value	p-value	Std. Est.
HFMC	-0.04	0.9694	-0.00457034
LNEMPL	2.90	0.0047	0.36392641
LNAGE	-0.96	0.3391	-0.09869557
Year09	0.19	0.8509	0.02409724
Year10	0.81	0.4226	0.10146408
Year11	0.45	0.6533	0.05868150
R-Square	0.3061		

Defender-like Firms	t-value	p-value	Std. Est.
LNEMPL	1.90	0.0608	0.22410194
LNAGE	1.31	0.1935	0.11953697
Exploitation	0.45	0.6506	0.03997316
Exploration	4.29	<.0001	0.49634282
Year09	0.47	0.6379	0.05082090
Year10	-0.40	0.6905	-0.04234892
Year11	-0.84	0.4055	-0.09200559

Prospector-like Firms	t-value	p-value	Std. Est.
HFMC	-2.69	0.0094	-0.33559009
HFMCSQ	-3.50	0.0009	-0.46516074
LNEMPL	2.59	0.0123	0.32192740
LNAGE	0.16	0.8743	0.01805162
Year09	-1.77	0.0829	-0.20958525
Year10	-1.20	0.2369	-0.15333490
Year11	0.76	0.4478	0.09269965
R-Square	0.3494		

Prospector-like Firms	t-value	p-value	Std. Est.
LNEMPL	1.43	0.1589	0.18756987
LNAGE	-0.33	0.7404	-0.04169203
Exploitation	0.55	0.5831	0.06429867
Exploration	3.43	0.0011	0.42596661
Year09	0.12	0.9044	0.01580585
Year10	0.14	0.8921	0.01852916
Year11	-0.41	0.6866	-0.05383993