ANTECEDENTS AND CONSEQUENCES OF NEW PRODUCT SUCCESS

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ABSTRACT

Our understanding of what organizational orientation and organizational enablers need to be in place to enhance new product success is still incomplete. To that end, we try to synthesize the organizational enabler factors together with firm strategic orientation presented by the interactive relationship between market orientation (MO) and entrepreneurial orientation (EO) together with organizational learning; to build a unified conceptual model that identifies the path to new product success. The effect of new product success on long term financial performance in the presence of environmental turbulence is also depicted by the model.

Keywords: New product success, market orientation, entrepreneurial orientation.

INTRODUCTION

Development and introduction of new products can be an important determinant of sustained company performance (Ernst, 2002). In spite of the great opportunities carried with development and introduction of new products, there is a great risk of failure that organizations should be prepared for through making the necessary changes in strategy, culture, leadership, and structure (Ernst, 2002). Paladino (2007) has identified three major causes for the success of new products: (1) the uniqueness or superiority of the new product, (2) management possession of market knowledge, and (3) marketing proficiency. Paladino study come in a similar way of thinking to the study conducted by Callahan and Lasry (2004) which makes it clear that in order for an organization to identify the newness of its products to the market, it needs to be aware of the nature of market and how it evolves, the current customers’ needs as well as the potential customers’ expectations; an organization will also need to have the resources necessary to acquire knowledge about the market and the customers, transform it within the organization which in turn should have the culture that encourages experimentation and support innovation (Atuahene Gima and Ko, 2001; Ernst, 2002; Narver et al., 2004; Paladino, 2010).

Although organization culture, senior management commitment and strategy have been found to be a key determinant of new product success (Ernst 2002), to date, the question of what specific combinations of organizational mindset needs to be in place to promote the success of new products, and to manage “the failure-success paradox” remained unanswered. Such a paradox results in if a firm indulges heavily in developing new products that capture latent customer needs while ignoring expressed needs, a behavior that eventually leads to a definite failure through being trapped to the short term benefit achieved by the organization or what has been referred to as success trap (March, 1991; Narver et al., 2004). Similarly, a firm that tries to avoid involvement in new product development might be under risk due to most probable failure on the
long run due to exclusion of exploring emergent, unexpressed customer needs or what March (1991) identify as “failure trap”. Such failure will be more likely if a competitor company was able to address the latent customer needs and was able to successfully introduce new product that match these latent customer needs.

Embracing certain organizational orientation can only be effective in the presence of the organizational enablers that we identify in term of top management support and resource availability (Choi and Cheng, 2009). Although new product success is highly correlated with profitability, its long term financial influence might be affected by environmental turbulence (market and technology).

Atuahene Gima and Ko (2001) proved through an empirical study that product innovation and performance is contingent upon the levels of MO and EO adopted by the firm. They basically stressed the importance of balancing EO and MO to achieve new product performance that they measured through four items scale: market share, sales and customer use, sales growth, and profit objectives since its launch.

This study represents an important contribution to the understanding of new product success for the following reasons: (1) it is the first of its kind that identifies a set of organizational orientation that needs to be in place to drive new product success, (2) we build on prior research (Choi and Chang, 2009) that studies the influence of organizational enablers on organizational orientation, (3) we are trying to link new product success to the long term organizational performance considering the effect of environmental turbulence and most importantly, (4) we account for the business strategy on long term business performance that results from new product success.

The rest of the paper is organized as follows: the second part shows the theoretical background related to the new product success, market orientation, and entrepreneurial orientation. The third part shows the conceptual model and hypothesis development. We will then move to the research methodology in part 4. The last part is the conclusion.

**THEORETICAL BACKGROUND**

According to Trott (1998), products can be generally classified into: “new to the world products” which are inventions that contain a dramatic technological development and create a new market; “new to the firm” which are not necessarily new to the marketplace, however, they are “new” in a way that enables a firm to enter a new market through additions, improvements, revisions and repositioning of the existing products (Trott, 1998). In line with this perspective, Callahan and Lasry (2004) identify “newness” of a product in terms of “market newness” and “technological newness.” Market newness identifies new products that have not been known before by existing customers, or products that target a whole new market. Technologically new products were identified using three different measures: newness of the technology embodied in the new product, newness of the product architecture, and newness of the core components or software modules in the new product (Callahan and Lasry, 2004).
Ernst (2002) clearly refers to market orientation as one of two major influencers of new product success, “1- activity proficiency specially those activities carried out in development, test marketing and market introduction, 2- market orientation.” In addition to that, he discussed the capability of market research as another factor that leads to new product success through enabling the company to determine a clear product concept (Ernst, 2002).

**Market Orientation**

Market Orientation is about the implementation of its three major dimensions: customer orientation, competitor orientation and inter-functional coordination as developed by Narver and Slater (1990). Day (1990) defines market orientation in terms of two main dimensions: customer orientation and competitor orientation. In 1994, Day emphasizes the idea of “market-driven culture” which basically relies on comprehending customer needs and preferences as well as coordinating the cross functional activities among the different units within the organization (Day, 1994).

Customer orientation implies listening to the voice of customer (Deshpande et al., 1993). Firms can successfully achieve customer orientation through: gathering information about the business environment, and disseminating such information within the organization (Narver and Slater, 1990). Literature has distinguished between being customer oriented and customer led (Bower and Christensen, 1995; Callahan and Lasry, 2004). It should be mentioned that being customer oriented is different from being customer led. Over listening to the customer and focusing only on satisfying their current needs might lead to failure of the company because of engaging of over exploitation of their resources. But being market oriented implies a futuristic focus of what customer might demand in the future as well as what level of competition exists and is expected to exist in the market.

Competitor orientation implies that the organization understands the competitors’ real level of existence in the market, their weaknesses and their strengths as well as their expected capabilities and growth (Day and Wensley 1988). Accordingly, organizations would be better able to position themselves in the market.

Inter functional coordination is the reflection of the other two components of MO within the firms boundary, without it, all the innovation ideas and information of serving the customers cannot be turned into organization-wide actions. (Zhao and Cavusgil, 2006).

Kumar et al. (2011) mention how early adopters of market orientation can better identify customer needs before the competition. Pursuing this idea further, we will find that in a highly dynamic market environment with consistently changing customer needs, MO will be considered as a capability necessary to sustain the success of new product developments introduced by the firm (Slater and Narver, 1995). Han et al. (1998) find how necessary it is for firms to be market orientated to be able to cope with the ever changing customer preferences especially under the high level of technological turbulence.

Researchers have also viewed MO as a capability formed of a bundle of tangible and intangible processes and resources that are firm specific and that are developed over time through complex
interaction (Bhuain et al., 2005; Avlonitis and Salavou, 2007). Market oriented firms try to orchestrate and leverage their resources. Market oriented firms are trying not just to cope with the market needs through being reactive but also try to be proactive and exceeding the market expectations.

**Entrepreneurial Orientation**

Entrepreneurial orientation refers to the processes, practices, and decision-making activities that lead to new market entry (Lumpkin and Dess, 1996, p. 136). Keh et al. (2007) identify three main components pertaining to EO, risk-taking, innovativeness, and proactiveness. Risk-taking refers to the willingness to exploit opportunities or engage in new uncertain entry (Lumpkin and Dess, 1996; Keh et al., 2007). Innovativeness describes a firm's propensity to engage in and support new ideas, and experimentation which may lead to new products, services, or processes (Lumpkin and Dess, 1996). Venkatraman (1989) defines proactiveness as looking for new opportunities which may or may not be related to the stream line of operations, introduction of new products and brands ahead of competition, and the long term elimination of operations which are in the mature or declining stages of life cycle. Miller et al. (1993) identify entrepreneurial firm as one that engages in product-market innovation, and is first to come up with ‘proactive’ innovations, beating competitors to the punch.

EO is also viewed by researchers, like Bhuain et al. (2005) and Avlonitis and Salavou (2007), as a dynamic capability that can continually reconfigure itself to cope with the rapidly changing environment through being innovative, proactive, and risk taker. Specifically, Avlonitis and Salavou (2007) mention that since innovation is a condition inherent in the domain of entrepreneurship, a company's ability to launch successful product innovations should be considered in parallel.

**CONCEPTUAL MODEL AND HYPOTHESES DEVELOPMENT**

**The Effect of Organizational Enablers on Market Orientation and Entrepreneurial Orientation**

We refer to organizational enablers as organizational factors that support certain organizational behavior through providing financial resources and top management support (Choi and Chang, 2009) relying on the fact that entrepreneurial orientation together with market orientation will be facilitated by the availability of resources and the top management behavior that encourages experimentation and learning spirit (Hurley and Hult, 1996).

Collecting information about the customer and the market as a whole and disseminating this information among the different departments are mandatory to the collective task of the new product development. Clearly, these are costly activities that entail availability of firm resources. Availability of financial resources will also reflect the organizational commitment towards new product success and as a result intrinsically motivate the employees within the organization (Choi and Chang, 2009).
Top management support is necessary to surmount the obstacles that might be faced during the new product development through providing the supportive climate for innovativeness and proactiveness among the employees within the organization as a whole and the new product development team in particular (Swink, 2003; Chen et al., 2010). Similarly, successful introduction of new product will depend for the most part on the speed with which the product will be launched (Chen et al., 2010) which will be strongly supported by entrepreneurially oriented organizations. In the current study, we argue that EO and MO interaction, together with organizational learning, will be the main driver of new product success. Promoting such organizational orientation that emphasizes reactiveness and risk taking behavior will be enhanced through resource availability and top management support that we refer to as organizational enablers. Therefore, we hypothesize that:

**H1 (a):** The greater the top management support, the greater the EO.

**H1 (b):** The greater the top management support, the greater the market orientation.

**H1 (c):** The greater the resource availability, the greater the EO.

**H1 (d):** The greater the resource availability, the greater the MO.

**Effect of Market Orientation and Entrepreneurial Orientation Fit on New Product Success**

Han et al. (1998) find that market orientation enables an organization’s innovativeness, which, in turn, positively affects its business performance. Additionally, they empirically find that the three components of market orientation- customers’ orientation, competitors’ orientation and the interdepartmental coordination- have in fact facilitate innovation especially under high levels of technological turbulence in the business environment.

In order for a firm to act entrepreneurially in terms of being engaged in product-market innovation, taking risk, introducing proactive innovations, and competitive aggressiveness (Miller et al., 1993), they need to be aware of what market they are in, who their competitors are, which customers they need to serve and in what capacity. Accordingly, a firm needs to be market oriented in order to be able acquire, disseminate and communicate such information in a timely manner. Within this context, it should be mentioned that it is the availability of information gathered through market research, and the high level of coordination that would stimulate confidence with decisions regarding innovation, risk taking and being proactive as mandated by being entrepreneurial.

The ability of a firm to meticulously identify customer needs, competitor weaknesses and strengths and to utilize and coordinate such information will form a competitive capability for the organization needed to be in place together with entrepreneurial behavior to achieve a sustainable competitive advantage. More specifically, focusing on MO is necessary for a firm to discover new opportunities; however, seizing such opportunities can be realized through being proactive, innovative and risk taking (i.e., to be entrepreneurial oriented).
To date, research that studies organizational orientation in terms of EO and MO effect on new product development has shown mixed results. In one stream of literature, MO is claimed to be an antecedent to EO. In another stream EO is found to be as an antecedent to MO (Baker and Sinkula, 2009). The last stream of literature surprisingly shows that the complementary effect between both constructs is in fact what influences the pioneering behavior of the organization towards innovation and new product development (Baker and Sinkula, 2009).

Taken together, both MO and EO are necessary for new product development and success (Baker and Sinkula, 2009). In this present study our focus is on the success of new products that could never be realized without clearly identifying customers’ needs and the market condition along with a firm orientation towards responding to the current needs and to the potential needs (Lumpkin and Dess, 1996).

In the current research, we claim that MO and EO cannot work independently. Rather, they are both needed by the firm to achieve a competitive advantage. However, the level of each will be dependent on the business strategy adopted by the firm. We believe that, higher level of both EO and MO will be embraced by prospectors. For a defender, much lower level of both is expected to be adopted. Analyzers who lie in the middle of the continuum, a moderate level of both MO and EO that is lower than the prospector but higher than the defender should be in place. Clearly, reactors will be oriented towards market with little to no emphasis on entrepreneurial behavior.

Baker and Sinkula (2009) refer to the correlation between MO and EO. They view EO and MO as complementary to one another in small business. The authors view the complementarity as a driver for firm profitability.

**H2: The complementarity effect of MO and EO will be positively influence new product success.**

**The Moderating Effect of Organizational Learning**

According to March (1991, p.71), organizations need to pursue both exploration and exploitation learning. Organizations that over exploit might fall in the “success trap”, and those that over explore might fall in the “failure trap.” March noted that “Adaptive systems” that only focus on exploration will eventually suffer from the high costs of experimentation without securing many of the benefits. Engaging in too much experimentation with too many new ideas will eventually limit the firm ability to focus on its distinctive competence. On the contrary, “systems that engage in exploitation only to the exclusion of exploration are likely to find themselves trapped in suboptimal stable equilibria.” March’s (1991, p.71). In the current research, we assume that the organization is able to pursue both exploitation and exploration whether at the same time, if it has slack resources, or in cycles to overcome any resource availability issues.

The ability of the firm to utilize the information gathered through market research is highly contingent on the organizational learning as explained by Narver and Slater (1995), Hult and Ketchen (2001), and Baker and Sinkula (2009), who find a significant correlation between MO and learning within organization. Baker and Sinkula (2009) show that firm’s learning orientation
is likely to affect organizational performance by facilitating the type of “generative learning” that causes innovations in products, procedures, and systems.

Zahra and George (2002) identify the following dimensions for exploiting knowledge within organizations: **Acquisition** refers to a firm’s capability to identify and acquire externally generated knowledge that is critical to its operations. **Assimilation** refers to the firm's routines and processes that allow it to analyze, process, interpret, and understand the information obtained from external sources (Kim, 1997; Szulanski, 1996). **Transformation** denotes a firm's capability to develop and refine the routines that facilitate combining existing knowledge and the newly acquired and assimilated knowledge. **Exploitation** as an organizational capability is based on the routines that allow firms to refine, extend, and leverage existing competencies or to create new ones by incorporating acquired and transformed knowledge into its operations. The primary emphasis is on the routines that allow firms to exploit knowledge (Bhatt and Grover, 2005).

Building on this line of thinking, it is clear that the stronger the market orientation, the more the organizational motive towards scanning the environment to gain more information about the customer, and the competitors; and disseminating this information among the different departments in an effort to refine the routines existing within the organization as well as creating new ones build new competencies. The capability of the firm to “exploit” this information towards new product manufacturing will be strongly tied to the firm absorptive capacity. It should be noted that the closer the acquired information to already existing information regarding, for example, product characteristics, demand, and technology; the higher the possibility that this information will be successfully deployed by the organization towards developing new products (Zahra and George, 2002).

In line with this perspective, the stronger the market orientation, the greater the organizational motivation towards scanning the environment to gain more information. The capability of the firm to “exploit” this information towards new product manufacturing will be strongly tied to the firm absorptive capacity. It should be noted that the closer the acquired information to that information already existing within the organization regarding product characteristics, demand, and technology; the higher the possibility that this information will be successfully deployed by the organization towards developing new products.

Learning necessitates firms to have properly aligned absorptive capacity and resources so that firms can seize different opportunities through acquiring, accumulating and sharing and implementation of knowledge. According to Zahra and George (2002), learning guides acquisition, assimilation, transformation and exploitation of valuable knowledge necessary for the firm to achieve competitive advantage.

Firms with greater absorptive capacity will be able to refine and build organizational capabilities through improving their problem solving abilities. Absorptive capacity will also help firms to get involved in more exploratory and exploitative activities that will ultimately shape its competitive advantage (Bhatt and Grover, 2005).

Now it is clear that in order for a firm to benefit from the information gathered from the market and to deploy it towards a the development of successful new products, it needs to adopt an
organizational learning style that allows the firm to search for the appropriate information needed to develop the new product together with the absorptive capacity to acquire knowledge relevant to the new product, assimilate it and apply it towards product development. Stated differently, the combined effect of organization learning together with the interactive effect of market orientation and entrepreneurial orientation will provide a competitive advantage of the firm particularly in new product development context.

To sum up, firms that have strong learning capabilities are able to leverage feedback cycles of experience more effectively, thereby building stronger new product development capabilities. Therefore, we hypothesize that

**H3:** Organizational learning will positively moderate the relationship between the MO and EO fit and new product development success.

The Effect of New Product Success on Long Term Firm Performance

New product success drives market success is measured in the literature in terms of financial indicators like profitability, sales, return on assets (ROA) and market share achieved through customer acceptance of the new product (Chen et al., 2010). New product profitability can be increased through cutting down cost and it will reach its ultimate value through increasing the sales volume (Garcia et al., 2008), a condition that can be reached through excellence at the operational (process level) level. We argue that if new product success is achieved through excelling internally via operational excellence and externally through market excellence that are captured through relative profitability, relative sales, and relative market share; sustained long term performance will be achieved. However, the long term firm performance might be partially realized if market turbulence is paramount.

In addition, over time customers might change their preferences as to what product to buy and change their quality criteria, especially if an unanticipated competitor disrupted the market. This in turn will lead to a diminishing effect of the success of the new product on long term performance (Kumar et al., 2011). Therefore we hypothesize that:

**H4:** New product development success is positively related to long term firm performance.

**H5a:** Market turbulence will negatively moderate the relationship between new product success and long term firm performance.

**H5b:** Market turbulence will negatively moderate the combined effect of EO and MO on new product success.

Business Strategy

Miles and Snow (1978) hypothesize that firms, in general, exhibit patterns of four basic strategic types: (1) defenders, (2) prospectors, (3) analyzers, and (4) reactors. The fundamental component underlying this typology the way through which the organization responds to dynamically changing environment, stated differently, how and when an organization changes its products or markets to cope with the external environment and to maintain business sustenance. Miles and
Snow identify defenders by having narrow product-market realms and they are more inclined towards not searching for newer new opportunities as a result we expect them to have a minimal level of EO and MO. Prospectors constantly search for market opportunities and they are creators of change in the business; that is, they have high level of MO that facilitates gathering and disseminating market related information as well as high level of EO since they are innovative and have the risk taking propensity. Analyzers are a blend of both, that are capable of operating both stable and one changing product-market domain. Reactors do not adopt any strategy and they only “react” to environmental forces and as a result we exclude them from our analysis. Within this context it should be mentioned that the extent of EO might differ by context of application and the strategy pursued as a result (Lumpkin and Dess, 1996). Avlonitis and Salavou (2007) find through empirical testing that different organizations pursue different levels of EO based on their business strategy (Avlonitis and Salavou, 2007). Therefore we hypothesize that:

**H6: There is a significant difference among firms level of MO/EO fit with respect to the business strategy adopted (prospectors, analyzers, and defenders). Prospectors are expected to exert highest level of fit followed by analyzers and then the defenders.**

### RESEARCH METHODOLOGY

This section is intended to describe the research methodology that will be deployed to test the research model in Figure1. Constructs definitions are shown in Table1. A survey instrument will be used. Analysis will be conducted at the firm level.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Definition</th>
<th>Literature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational enabler</td>
<td>Organizational factors that promotes the process of innovation implementation in organizations: structure (e.g., complexity, decentralization), leadership, resources, supportive climate (e.g., risk taking, incentives), and knowledge utilization practices (e.g., learning, knowledge sharing).</td>
<td>Choi and Chang (2009)</td>
</tr>
<tr>
<td>Market orientation (MO)</td>
<td>An adaptive capability by which firms react or respond to conditions in the market environment.</td>
<td>Atuahene Gima and Ko (2001)</td>
</tr>
<tr>
<td>Entrepreneurial orientation (EO)</td>
<td>A dynamic capability that can continually reconfigure itself to cope with the rapidly changing environment through being innovative, proactive, and risk taker.</td>
<td>Bhuain et al., (2005) Avlonitis and Salavou (2007)</td>
</tr>
<tr>
<td>New product development success</td>
<td>Ability of the developed new product to achieve high relative profitability, high relative sales, and high market share.</td>
<td>Atuahene Gima and Ko, (2001)</td>
</tr>
<tr>
<td>Organizational learning</td>
<td>Involves accumulation, sharing, and application of knowledge. It emphasizes the ability of a firm to search, acquire, assimilate and apply new and relevant knowledge.</td>
<td>Bhatt and Grover, (2005)</td>
</tr>
<tr>
<td>Market turbulence</td>
<td>Change in the market due to changing customer preferences regarding product quality, or the emergent of unanticipated competitor that disrupt the market.</td>
<td>Kumar et al., (2011)</td>
</tr>
<tr>
<td>Long term firm performance</td>
<td>Ability of the firm to sustain profit, sales and market share.</td>
<td>Kumar et al., (2011)</td>
</tr>
</tbody>
</table>
Figure 1. The research model
Control Variables

The business strategy pursued by the firm will be controlled for.

Independent Variables

Organizational enablers as an independent variable that will manifest themselves through different items presented in Table 2.

Table 2 The Independent variables and their related measurement items

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Instrument Items</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational enablers</td>
<td>Top management support, resource availability</td>
<td>Choi and Chang (2009)</td>
</tr>
</tbody>
</table>

Dependent Variables

The dependent variables and their related measurement items are shown in Table 3.

Table 3 The dependent variables and their related measurement items

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Instrument Items</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market orientation (MO)</td>
<td>Customer orientation, competitor orientation, and interdepartmental coordination</td>
<td>Narver and Slater (1990)</td>
</tr>
<tr>
<td>Entrepreneurial orientation (EO)</td>
<td>Proactiveness, innovativeness, and risk taking</td>
<td>Covin and Slevin (1991)</td>
</tr>
<tr>
<td>New product success</td>
<td>Relative profitability, relative sales, and relative market share</td>
<td>Griffin and Page (1993)</td>
</tr>
<tr>
<td>Long term firm performance</td>
<td>Profitability, sales, and market share</td>
<td>Kumar et al. (2011)</td>
</tr>
</tbody>
</table>

Moderator Variables

The dependent variables and their related measurement items are shown in Table 4.

Table 4 The moderator variables and their related measurement items

<table>
<thead>
<tr>
<th>Moderators</th>
<th>Instrument Items</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational learning</td>
<td>Exploitative learning Style, explorative learning style</td>
<td>Azadegan and Dooley (2010)</td>
</tr>
<tr>
<td>Market turbulence</td>
<td>Change of product preference, demand of new customer.</td>
<td>Kumar et al. (2011)</td>
</tr>
</tbody>
</table>
CONCLUSION

Since the path to new product success is not clearly identified in the literature (Olson et al., 2005), we try to identify that path through involving the organizational enablers in terms of resource availability and top management support as antecedents to organizational orientation represented by MO and EO which are necessary to realize new product success. We argue that both MO and EO will be affected by the availability of financial resources as well as the top management support for cultivating innovativeness and risk taking behavior that eventually leads to generating an encouraging environment for bringing in and developing new ideas.

Organizational learning exemplified by both exploitative learning style and explorative learning style is expected to play a critical role on the relationship between the combined effect of MO and EO and the new product success. This effect can be seen through facilitating searching and acquiring new relevant knowledge as well as through analyzing, processing, interpreting and understanding information obtained from the market. Success of new products on the long term organizational performance is expected to be negatively influenced by the market turbulence that might result from changing customer preferences regarding product quality, or the emergent of unanticipated competitor that disrupt the market.

Further analysis, discussion and conclusion will follow after the data are gathered.
REFERENCES


