CHAPTER 4

LITERATURE REVIEW: THEORETICAL UNDERPINNING AND HYPOTHESES DEVELOPMENT

4.0 Overview of Chapter 4

This study aims to investigate the relationships between entrepreneurial orientation dimensions, corporate venturing, organic structure, and firm performance. In addition, the effect of environmental factors on these relationships will also be explored. Thus, the primary objective of this chapter is to provide prior literatures that are related to this study to guide the conceptual development of the hypotheses. First of all, section one of the chapter outlines the theoretical underpinning of this study while section two discusses the theoretical framework. This is followed by reviews on the relationship between entrepreneurial orientation dimensions such as innovativeness, proactiveness and risk taking and firm performance. Part four describes previous research on the relationship between corporate venturing and firm performance while part five covers the literatures on the organic structure and firm performance. Part six describes the effect of the environmental factors on these relationships. Part seven, the literatures on firm performance used in this study are also presented in this chapter.

4.1 The Theoretical Foundation of the Study

Although research on entrepreneurship has existed for almost 40 years, yet, there are no specific theories that originate from the field of entrepreneurship.

Researchers have borrowed popular theories from other disciplines and adapted them to the study of various entrepreneurship phenomena (Zahra, 2006). Thus, in this research, the resource-based view, organizational learning theory, and contingency theory are used as the foundations of the study on corporate entrepreneurship as determinant of firm performance. According to the contingency theory, in order to determine predictors for firm performance, the contingent effect of the environment must be taken into account.

A theory can be defined as a set of interrelated constructs (concepts), definitions, and propositions that present a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomena (Kerlinger, 1973:9). This study is formed according to the resource-based view (RBV) of the firm, organizational learning perspective and contingency theory. The RBV is used as the underpinning theory which aids to explain the direct effect of entrepreneurial orientation on firm performance. On the other hand, the organizational learning perspective explains the corporate venturing contribution to firm performance. The third theory; contingency theory, is employed to investigate the contingent relationship of the firm's business environment.

4.2 The Resource-Based View of the Firm

The RBV of the firm was initiated by Penrose (1959) in her seminal works on firm growth and was first mentioned by Wernerfelt (1984). Since then, the RBV of the firm is one of the most widely used theoretical perspectives in strategic management literature (Newbert, 2007; Powell, 2001; Priem & Butler, 2001; Rause & Daellenbach, 2002). The RBV has gained much attention in strategic management research because understanding a firm's performance is the fundamental issue in the field of strategic management (Zott, 2003).

This research is strongly influenced by the RBV of the firm because it is particularly expedient in identifying the determinant factors of firm performance (Amit & Shoemaker, 1993; Peteraf, 1993). Notably, the RBV is a strategic management tool that determines the strategic resources that can create long term competitive advantages (Barney, 1991) which is seen as the ability to create more economic value than rival firms (Barney, 2011: 15). In order to acquire sustained competitive advantage, the firm's strategy must fully utilize the internal strengths, by responding to environmental opportunities and at the same time avoiding internal weaknesses and neutralizing external threats (Barney, 1991). The real sustainable competitive advantages are the core resources and capabilities of the firm (Barney, 1995; Carmeli, 2001; Conner, 1991; Grant; 1991; Petaraf, 1993).

There are two basic assumptions in RBV according to Barney (2001): first, building on Penrose's work, firms can be considered as bunches of dynamic resources and every firm has unique differences in terms of resources. In other words, the firms are heterogeneous in terms of resources and capabilities, thus each firm is different in their core competencies and possess different profiles of resources (Amit & Schoemaker, 1993). Therefore, each firm may not be able to understand the other's strategies. The second assumption is that, a firm's resources are not perfectly mobile across firms (Barney, 1991), meaning that if the firm is able to exploit the opportunities or neutralize threats by using its resources, and also these resources are limited to only a few number of competing firms, and at the same time they are costly to copy or inelastic in supply, then these resources are the firm's strength and thus potential sources of competitive advantage.

In general, firm resources include all assets, capabilities, organizational processes, firm attributes, information, knowledge and so forth that are controlled by a

firm (Barney, 2011). These resources can be divided into four main categories; financial capital, physical capital, human capital, and organizational capital. First, financial capital includes all money resources that can be used to conceive and implement strategies. For example, for public listed firms, financial capital can come from the shareholders, banks and the public that purchased the firm's shares. Second, physical capital refers to the technology used in a firm such as the plant and machineries, its strategic location, and its access to raw materials. Third, human capital includes the training, experience, intelligence, judgements, relationships, and insights of individual managers and workers in a firm. Fourth, organizational capital refers to the attributes of a collection of individuals. For example, the firm's organizational structure which involves formal and informal reporting, coordinating systems, culture and reputation. These resources will help to enhance efficiency and effectiveness of the firm's strategies (Barney, 2011; Daft, 1983). In other words, the firm's resources can be regarded as the strength and weakness of the firm (Wernerfelt, 1984). Certain types of resources have the potential to generate competitive advantage which eventually leads to superior firm performance (King, 2007; Miller & Ross, 2003; Morgan et al., 2004; Priem & Butler, 2001; Wernerfelt, 1984, 1995).

The most basic typology of a resource is categorized into two, namely; tangible and intangible resources. Tangible resources are the physical items that belong to the firm such as assets, raw materials, locations, facilities, access to capital, and equipments, among others (Barney, 1991; Carmeli, 2001) while intangible resources are entrepreneurial orientation, acquisition, proper organizational design, organizational culture, knowledge, reputation, skills and others (Runyan et al., 2006; Ferreire, et al., 2011). Usually, the intangible resources do not appear in balance sheets (Carmeli, 2001). While the tangible resources can be changed and easily be

imitated by competitors, the intangible resources are almost impossible to be copied. Therefore, this study used intangible resource-based view of the firm as an underpinning theory. The sustainable competitive advantage can only be achieved when the firm fulfils, partly or completely the four characteristics (Barney, 1991, Carmeli, 2001) of intangible resources. First, intangible resources must have some value that is capable of generating profits or prevent losses (Barney, 1991; Miller & Shamsie, 1996). Second; it should be rare; third; inimitability and fourth; it should be non-tradable or substituted (Barney, 1991). The firm is expected to be in a superior position when they possess sustainable competitive advantage.

The resources are valuable when the firm utilizes the resources and has the capability to implement strategies that can improve its efficiency and effectiveness (Barney, 1991). These strategies can lead to higher performance, because the firm will exploit opportunities and is able to anticipate the environmental threats. Therefore, the firm has the potential to be ahead of competitors and minimize its cost. In order to obtain a valuable resource, the firm must process its raw resources to make them more useful to produce better outcomes (Rubin, 1973) and an effective combination must be first in place in order to process such valuable resources (Penrose, 1959). Besides, the firm must employ resources better than its rivals and use its capabilities more effectively (Makadok, 2001). The more valuable the resources of the firm, the greater the firm's competitive advantage will be.

Valuable firm strategy can create sustained competitive advantage if it is not simultaneously implemented by many other firms. If the other firms use its resources and capabilities in the same way and thus produce similar strategies, no competitive advantage is gained by the firms (Barney, 1991). For this reason, the firm must use effective resource combinations to implement a strategy that is impossible for other

firms to implement. For example, the firm can use the combination of physical capital, human capital, and organizational capital resources to implement strategies (Barney, 1991). Thus, the mix of these resources will generate rareness of the resources that other firms may not or have difficulties to implement due to the lack of similar resources. The firm that has valuable and rare resources will definitely have advantage from the first mover advantage and strategic innovator (Barney, 1991).

The resources are imperfectly imitable when other firms are unable to obtain them (Barney, 1991; Lippman & Rumelt, 1982). There are three conditions that have to be fulfilled in order to create imperfectly imitable resources and at least one of these conditions must be followed. In order for the firm to gain competitive advantage, the resources must not only be valuable, rare and impossible to imitate, but it must also be difficult to substitute or is not equivalent to other resources (Barney, 1991). That means that other firms are unable to implement the exact same strategies.

It is vital that a firm must be able to create, acquire and implement strategies and use its capabilities to obtain sustainable competitive advantage to achieve higher firm performance. The source of this competitive advantage comes from the capability of the firm to fully utilize its resources in a strategic manner (Grant, 1991). The capabilities can be conceptualized as a firm's capacity to integrate, and coordinate various resources, usually in a combination using strategic processes to generate higher firm performance (Amit & Shoemaker, 1993; Grant, 1996; Prahalad & Hamel, 1990). The capability and resources of the firms are two different concepts. Capabilities are the specific characteristics of the firm, its processes and are embedded in the organization, while on the other hand, ordinary resources are not (Makadok, 2001). The capabilities would disappear if the organization is completely dissolved, as compared to resources, it could also survive in the hands of a new owner. For

instance, if an automobile firm closes its company, then the cars' designs or shape patents (a resource) could continue in the hands of a new owner, but the skills used in designing new generations of the car (a capability) would probably vanish. Thus, every firm must support the use of valuable, rare, and costly-to-imitate resources (Barney, 2011). The following discussion focuses on how entrepreneurial orientation relates to the RBV of the firm in order to achieve better firm performance.

4.2.1 Entrepreneurial Orientation and Resource-Based View (RBV)

As mentioned, the RBV sees the firm as a bundle of resources and capability polls that will create competitive advantage and eventually lead to superior firm performance. Entrepreneurship is defined as *'carrying out new combinations'* as stated by Schumpeter (1984) and a new way of combining internal and external resources such as new products, new processes and methods of production, new markets, new technologies, and a new form of organization. Therefore, the entrepreneurial firm will definitely have the advantage of being posed a bundle of resources that is capable of creating competitive advantage (Newbert, 2007; Wiklund & Shepherd, 2011). The dominating theory in competitive advantage is the RBV. Besides, compared to conventional firms, entrepreneurial firms are growth oriented and opportunities driven. With these aims, the entrepreneurial firm will be more innovative, proactive, and bold in taking up available opportunities in the market. With these capabilities and resources, the firm will have an advantage because the types of resources and capabilities of the firms (Wiklund & Shepherd, 2011) determine the performance of the firm.

From the RBV perspective, corporate entrepreneurship is a key means of accumulating, converting, and leveraging resources for competitive advantage (Floyd & Wooldridge, 1999) which innovates to rejuvenate and redefine its markets

and industries (Covin & Miles, 1999). Entrepreneurship activities such as innovativeness, proactiveness, risk taking, and corporate venturing focus on developing new resources and capabilities that offer growth opportunities (Covin & Miles, 1999; Bing, 2007). The combination of these strategies enhances sustainable competitive advantage and leads to higher performance and growth. Therefore, corporate entrepreneurship is the source of competitive advantage that cannot be perfectly imitated, substituted, or traded, and is a valuable resource of the firm (Bing, 2007).

4.3 Organizational Learning Theory

The history of organizational learning has its roots in the early 1950s in reference to the public administrations of births and deaths (Prange, 1999). The organizational learning ideas spread in the early 1960s through the works of Argyris (1964), Cangelosi and Dill (1965) and Cyert and March (1963). However, it was only in the late 1970s that the organizational learning theory became famous, with articles and books began to publish it (Argyris & Schon, 1978; Duncan & Weiss, 1979; March & Olsen, 1975). The fundamental idea of the organizational learning theory is that all organizational members must learn (Argyris & Schon 1974, 1978; Schon, 1983). There are also bold statements such as "the rate at which individuals and organizations learn may become the only sustainable competitive advantage, especially in knowledge-intensive industries" (Stata, 1989: 64). This is also supported by recent literature that the organizational learning might be the only sustainable competitive advantage of the firms (Crossan & Berdrow, 2003; DeGeus, 1988). As compared to land and natural resources which has provide firm the competitive advantage in the 18th Century, the following shows the change in the focus for firm's competitiveness (Kraleva, 2011):-

18th century: land and natural resources

19th century: Technology

20th Century: Finance

21st Century : Knowledge

Organizational learning theory has been widely acknowledged as being the predictor for a firm's performance as it defines how an organization should operate in this era when the business environment is ever-changing (Kraleva, 2011; Chan, Cooper & Tzortzopoulos, 2005). It is generally accepted that strengthening a firm's performance is an urgent and crucial priority in many developing countries (Grindle & Hildebrand, 1995). In this globalized era, only the organizations that have knowledge and encourage learning can succeed in the long-term (Yukl, 2009). Thus, in order to ensure that the learning process is smooth in an organization, firms should first undertake changes in organizational design (Kraleva, 2011). It is believed that when one organization encourages and facilitates learning, it will improve the whole organization because the constant acquiring of new knowledge entails learning from one's own experience and the experience of others (Kravela, 2011). The learning organization is also able to transform itself into an organization that operates at its optimum capacity.

Learning at the organizational level can be defined as the process through which the firm acquires processes and maintains new knowledge that is ultimately used in its business routine (Huber, 1991; Zahra et al., 1999). Another researcher defined organizational learning as a four-phase process, which include knowledge-sharing, which implies knowledge acquisition, second, information dissemination, third, information interpretation, and fourth organizational memory (Huber, 1991). The set of actions within the firm that will lead to positive organizational change,

whether intentionally or unintentionally is considered as the organizational learning process (Templeton et al., 2002).

Currently, organizational learning is so fashionable that most firms have given it considerable attention (Dodgson, 1993). There are two related aspects in organizational learning. First, adaptive learning or known as single-loop learning (Argyris & Schon, 1978), is about utilizing knowledge obtained to improve quality and efficiency of an existing operation. The second type is generative or double-loop (Argyris & Schon, 1978) learning, which goes further and involves creating new practices, perspectives and frameworks, thus, the capabilities can be expanded continuously. Looking at the definitions of both aspects, the first is about coping while the latter is about creating (Morgan et al., 1998).

According to Dodgson (1993) organizational learning is fashionable due to three factors. First, for the large firms, organizational learning is important as the firms attempt to develop systems and structures which are more adaptable and respond faster to change. Second, the uncertainty and complexity of new product development processes, rapid technological change, turbulent environments, and shortening product life-cycles, encourage the firms to increase the learning of new things and often, radically in different ways. Thus, it follows that the greater the uncertainties, the greater the need for learning. Thirdly, learning has a broad analytical value and is a dynamic concept that can be used to face the continually changing nature of the organizations. It can be concluded that the need to learn is the requirement for adaptation and improves efficiency in times of change (Dodgson, 1993).

According to March (1991), there are two types of learning which are exploratory learning and exploitative learning. Exploration is defined as experimentation with new alternatives having returns that are uncertain, distant, and

often negative while exploitation is defined as the refinement and extension of existing competencies, technologies, and paradigms exhibiting returns that are positive, proximate, and predictable (March, 1991: 85). The essence of exploration is experimentation with new alternatives whereas the essence of exploitation is the refinement and extension of existing competencies, technologies, and paradigms (March, 1991: 85). Therefore, exploitative learning is characterized by routine learning which adds to the existing knowledge and competencies of a firm without changing the nature of its activities (Hagedoorn & Duysters, 2002). In other words, exploitation is about making the best use of what one already knows. If the firm can avoid the mistakes by others in the past, their objectives can be achieved faster and at a lower cost. The exploitation of existing knowledge such as best-practices transfer and vicarious learning from more knowledgeable firms are among the activities in exploitative learning (Rodan, 2005). Explorative learning involves searching and experimenting with new technologies or entrepreneurial opportunities that involves changes in company routines and experimentation with new alternatives (Dodgson, 1993). Despite the diversity in function, both exploratory and exploitative learning are crucial to a firm's performance (Atuahene-Gima, 2005; Yalcinkaya et al., 2007). Corporate entrepreneurship activities especially the corporate venturing associated with organizational learning theory will be discussed in the next subsection.

4.3.1 Organizational Learning Theory and Corporate Venturing

Corporate venturing activities are often associated with organizational learning, with learning and innovation seen as the key benefits of such venturing activities (Keil et al., 2004). Both internal (McGrath, 2001) and external corporate venturing contributed to the increase in the learning process. The external corporate venturing activities that contribute to the learning processes are corporate venture

capital (CVC) investments (Dushnitsky & Lenox, 2002), alliances (Khanna et al., 1998), joint ventures (Shenkar & Li, 1999), and acquisitions (Ahuja & Katila, 2001; Vermeulen & Barkema, 2001). As a result, the firm`s ability to generate new revenue streams increases (Dodgson, 1993; Huber, 1991; Lyles & Salk, 1996; Zahra & Hayton, 2008). It is suggested in previous studies that the long-term survival of a firm is strongly influenced by organizational learning activities (Schildt et al., 2005).

In corporate venturing activities, the firm obtains new knowledge by learning from their partners or new ventures. This is due to the fact that the new ventures or partners have their own cultures, systems, technology, and practices (Dess et al., 2003). The diversity widens the new knowledge sources (March, 1991) and by learning from these ventures, it enables the firm to visualize and develop new ideas, systems, processes, and products (Henderson & Cockburn, 1994). It is widely known in the literatures that knowledge is one of the valuable resources for its expedience in organizing resources, determining a firm's new product offerings and its ability to execute technological development (Lai et al., 2010). These will possibly improve the firm`s profitability and growth (Zahra & Hayton, 2008).

The learning that takes place in corporate venturing activities includes the possession of new technical, social, and organizational skills (Burgelman, 1983; Stopford & Baden-Fuller, 1990). This acquisition of new knowledge through internal or external corporate venturing activities is then used to develop organizational competencies (Zahra et al., 1999). Basically there are two types of learning processes that occur in corporate venturing activities (Bogner et al., 1998). Firstly, the learning or the development of organizational knowledge is generated inside the firm or internal corporate venturing. This kind of organizational learning is generated from specific technologies, functions or tasks. These technologies then integrate and

transform into new creations such as innovative products or services and new business development. Thus, it becomes part of the firm's new competencies (Hamel & Prahalad, 1994) which lead to an increase in the firm's profit (Grant, 1996, 1997). The creation of learning and new knowledge within the firm is valuable especially to extend existing knowledge and inspire the firm to re-examine and redefine its mission, competencies, and competitive weapons (Zahra et al., 1999). A second process, which is akin to Nonaka and Takeuchi's (1995) "conversion" phase, augments a firm's knowledge base by transferring, and later exploiting, new knowledge in the marketplace (Zahra et al., 1999:173). This happens when the firms practice external corporate venturing such as alliances, acquisitions, joint ventures, and funding new ventures or corporate venture capital. The new knowledge is transferred from one company to another and is hereafter, transformed into new business development.

The role of corporate venturing activities in creating new knowledge is well documented (Burgelman & Sayles, 1986; Ravasi & Turati, 2005; Zahra, 1991) since corporate venturing activity always aims to produce valuable, noble, unique, and firm-specific knowledge. These creations can be used to develop new competencies or extend existing ones. All these can be done through the process of organizational learning (Zahra et al., 1999).

The large firms' initiatives in providing funding and related services to start-ups in return for an equity stake are known as CVC investments. By investing in start-ups that are highly entrepreneurial and advanced in technologies, the firms would have advantage of these technologies (Keil et al., 2003). The large firm can absorb new knowledge from the start-ups and internalize and exploit it for internal breakthrough innovations (Ahuja & Lampert, 2001). Sometimes, the CVC

investments allow the large firm to internalize some of the technology of its portfolio companies.

In alliances and joint venture activities, the large firm can acquire knowledge and skills from its alliance partners. These new knowledge can also be brought in and be used by the large firm by imitating its partners. Alliance activities facilitate the transfer of both articulated and tacit knowledge due to the vigorous communication between the companies (Keil et al., 2003). Joint venture activities favour the learning and transfer of tacit knowledge back to the parent firm (Osborn & Hagedoorn, 1997) because they allow for more interaction (Osborn & Baughn, 1990). In contrast, new knowledge can be acquired effectively from non-equity alliances because of the greater flexibility that they offer (Osborn & Hagedoorn, 1997).

In acquisition activities, the focal firm is permitted to absorb the knowledge base of the target firm. Thus, the combination and integration of the knowledge base between the firms allow the reaping of economies of scale (Ahuja & Katila, 2001). This integration can be the strength of the focal firm and may create a new business model that is beyond the reach of each firm (Gerpott, 1995).

4.4 Contingency Theory

The central premise of the contingency theory is that, there must be congruence between or 'fit' among key variables such as the environment, structure, and strategy in order to achieve greater firm performance (Burns & Stalker, 1961; Child et al., 2003; Lawrence & Lorsen, 1967; Schoonhoven, 1981; Venkatraman, 1989b). In other words, the relationship between two variables depends on the level of a third variable. For example, the relationship between entrepreneurial orientation and firm performance might be stronger in turbulent environments.

The contingency theory argues that greater firm performance or effectiveness can be achieved in more than one way, provided that the selection of variables must be suitable (Robertson & Chetty, 2000). Accordingly, the introduction of the third variable may help to reduce potential misrepresentations and gain a better understanding (Rosenberg, 1968). That is why it is recommended by theorists that any theory of corporate or business strategy must be a contingency based approach (Ginsberg & Ventkatraman, 1985).

The advantage of using the contingency theory in ascertaining the determinants of firm performance is that it provides guidelines on how to achieve superior performance by understanding that different work settings require different approaches and that efficiency is related to the continuing alignment of various contingencies (Bradshaw, 2009). Thus, each firm must build its own exclusive strategy based on the organization's environment, history, set of personalities, and culture (Brudney & Murray, 1997).

Consistent with these views, it is important to investigate the impact of a third variable on the relationship between a predictor variable and a criterion variable. This is because may be the relationship between the two variables are dependent on the level of a third variable which is the moderating variable. The impact of the predictor variable varies across the different levels of the moderators such as environment (Ventkatraman, 1989b). Basically, the moderator can be divided into two types which are categorical and characteristics. The types of environment, stages of product life cycle, and organizational types are in the categorical group. The second group, the characteristics, concerns the degree of business-relatedness, and degree of competitive intensity (Ventkatraman, 1989b).

4.4.1 Contingency Relationship: Corporate Entrepreneurship-Environment-Firm Performance

The environment is one of the most essential contextual factors in organizational theory and strategic management (Child, 1972). Thus, environmental uncertainty is widely used and is a valuable moderator in the corporate entrepreneurship-performance relationship as identified by Rauch et al. (2009) in their meta-analysis. For example, compared to non-entrepreneurial firms, highly entrepreneurial firms performed better in hostile and competitive environments (Covin and Slevin , 1989; Lumpkin & Dess, 2001).

In this study, it is relevant to include the environment as a third variable or moderator when investigating the impact of corporate entrepreneurship on firm performance because the moderator will affect the direction or the strength of the relationship between a predictor variable and a dependent variable (Ventkatraman, 1989b). Thus, the introduction of a third variable will provide a clear and precise picture of the actual relationship between the two variables. The debate on the fit between the environment and managerial action as determinants of firm performance has been a fundamental issue in strategy analysis (Hoskisson et al., 1999; Grant, 2002). To resolve this argument, the contingency approach comes into the picture as a resolution to achieve superior performance; the firm must adjust their strategies to fit the environment (Donaldson, 2001).

In fact, there have been increased empirical researches that stated the positive effects of corporate entrepreneurship on firm performance in terms of both, profitability and growth (Wiklund, 1999). Yet this relationship may be contingent on the external environment in which the firms conduct their businesses (Covin & Slevin, 1991; Lumpkin & Dess, 1996; Miller & Friesen, 1983; Zahra & Covin, 1995).

Therefore, the use of contingency theory is favorable in the study of corporate entrepreneurship and firm performance relationship (Lumpkin & Dess, 1996; Zahra & Covin, 1995). This is because it provides a stronger prediction of a firm's performance compared to a simple direct relationship between corporate entrepreneurship and firm performance (Lumpkin & Dess, 2001). Besides, the relationship between entrepreneurship and firm performance differs depending on the external environments (Zahra, 1993).

4.4.2 Contingency Relationship: Organizational Structure-Environment-Firm Performance

Organizational structure is the formal design of roles and administrative mechanisms to control and integrate work activities and resource flows (Olson et al., 1995: 49). In this study, organizational structure is viewed as two continuums, which is the organic versus mechanistic structure. These two continuums have been widely used in the past half century by researchers like Burns and Stalker (1961), Khandwalla (1977), McDonough and Leifer (1983), and Slevin and Covin (1997). According to Slevin and Covin (1997:193-194), briefly, mechanistic structures are characterized by such attributes as centralized decision making, strict adherence to formally prescribed rules and procedures, tight control of information flow, and carefully constructed reporting and workflow relationships. Conversely, decentralized decision making, organizational adaptiveness and flexibility, open communications, and emphasis on formal rules and procedures are typical of organic structures. Both types of organizational structures have their own advantages and disadvantages depending on the environments that the firms face and the tasks that need to be accomplished by the firms.

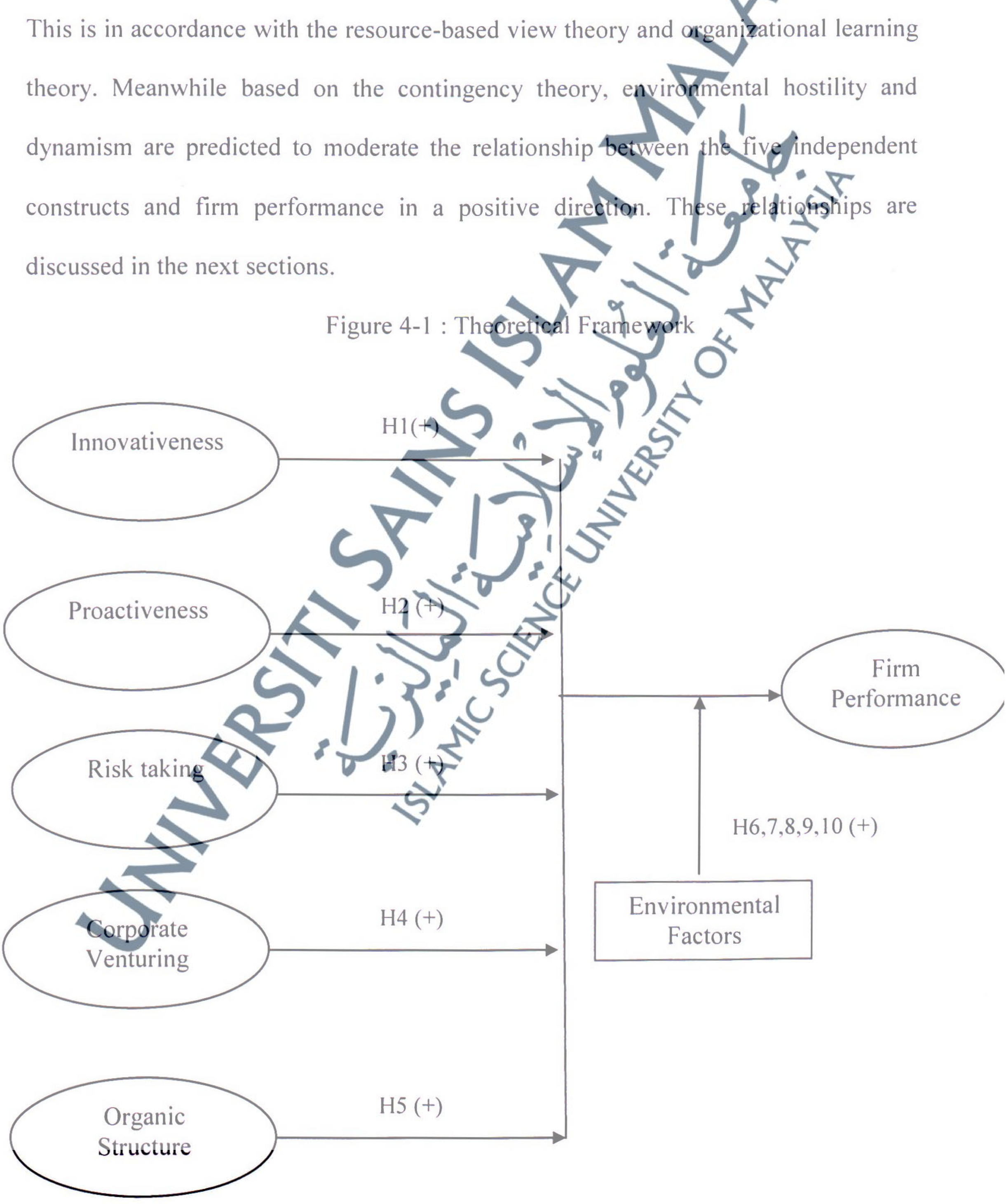
The proposition of the contingency theory is that, the organization is able to achieve superior performance when the organizational structure is well aligned with the external environments. From the perspective of the scholars, both the mechanistic and organic structures are effective (Burns & Stalker, 1961). However, the appropriate type of organizational structure depends on the external business situation in which the firm is operating. In other words, the organizational structure has a contingent relationship with firm performance where the most effective organizational structure is the one that 'fits' the particular environments in which it operates. In hostile, fast changing, uncertain, and complex environments, the organization is recommended to implement the organic structure. In contrast, during stable environments, the mechanistic structure is more appropriate. This proposition has generally been confirmed by previous studies (Aiken et al., 1980; Covin & Slevin, 1989). The mechanistic structure is designed to induce employees to behave in predictable and accountable ways whereby the employees must only perform the duties that are assigned to them and are prohibited to take on additional tasks unless they are instructed to do so by the management team (Ramezan, 2011). In other words, the appropriate organizational structure will depend on the external environment. Thus, the firm must find a 'match' between the organization structure types and the environment situation, in order to achieve better performance.

4.5 Theoretical Framework

The theoretical framework of this study is based on the three theories discussed previously; the resource-based view, organizational learning theory and contingency theory. Five constructs and their relationship to firm performance have been identified. One moderating construct has also been included based on the contingency theory, which is the environmental dynamism and hostility. The

relationships of these constructs illustrated in a research theoretical framework are illustrated in Figure 4-1. Based on this framework, all the constructs are expected to be positively related to firm performance. This framework predicts that each of the entrepreneurial orientation dimensions (innovativeness, proactiveness and risk taking), corporate venturing, and organic structure positively influences firm performance. This is in accordance with the resource-based view theory and organizational learning theory. Meanwhile based on the contingency theory, environmental hostility and dynamism are predicted to moderate the relationship between the five independent constructs and firm performance in a positive direction. These relationships are discussed in the next sections.

Figure 4-1 : Theoretical Framework



4.5 Entrepreneurial Orientation and Firm Performance

The relationship between entrepreneurial orientation and firm performance has received huge attention in the literature in various fields due to its influence on the firms' performance. Even though the researchers agreed that entrepreneurial orientation is part of corporate entrepreneurship, it is attracting more attention compared to corporate entrepreneurship itself (Covin & Lumpkin, 2011). There has been a significant increase in articles regarding entrepreneurial orientation and firm performance because it is believed that entrepreneurial orientation is essential for a firm's growth (Antoncic & Scarlett, 2008; Covin et al., 2006; Soinen et al., 2011), profitability (Antoncic, 2007; Lumpkin & Dess, 2001) and overall performance (Jantunen et al., 2005; Keh et al, 2007; Tajeddini, 2010). This is supported by the results of recent meta-analysis suggesting that entrepreneurial orientation is indeed a significant predictor of firm performance (Rauch et al., 2009). The past results also show that the entrepreneurial orientation-firm performance relationship is not only sustainable in the short term but also this relationship increases over a long term period (Wiklund, 1999; Zahra & Covin, 1995). This is due to the investments in entrepreneurial orientation that may be worthwhile for the firm not only in the short term but in the subsequent years (Wiklund, 1999). However, the link between entrepreneurial orientation and firm performance has remained inconsistent (Karacaoglu et al., 2013; Lumpkin & Dess, 1996) and a lot of questions remained unsolved (Moreno & Casillas, 2008).

The inconsistent results in entrepreneurial-performance relationship may be due to the different indicators used to assess performance (Lumpkin & Dess, 1996). Another reason for this is the cultural diversity across countries (Knight, 1997; Thomas & Mueller, 2000). Nevertheless, it is expected that all the dimensions of

entrepreneurial orientation have positive relationships with firm performance (Lumpkin & Dess, 1996). First, the different indicators used to assess firm performance means, for example, some empirical researches used the combination of financial measure such as profitability and growth (e.g. Hameed & Ali, 2011, Keh et al., 2007; Kraus et al., 2012) and non-financial measure such as the public image and market share (e.g. Gilbert & Reid, 2009; Kayhan & Tajeddini, 2010). There are also researches that used multidimensional construct of firm performance, such as growth and profitability (e.g. Antoncic & Scarlet, 2008; Lumpkin & Dess, 2001; Moreno & Casillas, 2008; Soinen et al. 2011). These variations would therefore produce different results. The underlying explanation of this is, the entrepreneurial orientation may influence the firm performance differently (Zahra & Garvis, 2000). For example, the entrepreneurial orientation may be positively related to firm growth but negatively or no relationship to firm profitability (e.g. Antoncic, 2007; Soinen et al., 2011).

Second, the cultural diversity across countries also influences the findings of the entrepreneurial orientation-performance relationship. For example, the study conducted in the US and Slovenia found that, the entrepreneurial orientation has a strong influence in both profitability and growth among the Slovenian firms. On the other hand, in the US, the entrepreneurial orientation only has a positive effect on firm growth (Antoncic, 2007). The differences in the business environment in each country bring about different effects in entrepreneurial orientation research. Studies also found that the national culture from which a firm originates moderated the relationship between entrepreneurial orientation and the growth of the firm (Marino et al., 2002). Additionally, the differences across countries will also affect the entrepreneurial orientation among the firms (Tan, 2002). This is supported by the annual survey conducted by The Global Entrepreneurship Monitor in more than 50 countries that

reported that entrepreneurial activities vary across nations (Bosma & Levie, 2010). Apart from cultural and national influences, the country's population also affects the perception of entrepreneurial orientation. For example, the United States and Ireland are highly favourable while in contrast, Hungary and Japan are less favourable of entrepreneurial orientation (Bosma & Leviw, 2010). Thus, there is a need to conduct an empirical research on entrepreneurial orientation-firm performance in a Malaysian setting.

Most of the researches on entrepreneurial orientation had been conducted in developed countries like the US, and the European Union. The business environments and management style for developed and developing countries were fundamentally different and thus, it is important to conduct research on this area (Karacaoglu et al., 2013). According to Rauch et al. (2009) in their meta-analysis, the entrepreneurial orientation construct is "robust" in Asia and therefore more institutional work is needed to be done, thus justifying more research on entrepreneurial orientation in Asia.

Although there has been a debate on the consistency of the entrepreneurial orientation-performance relationship but there is a consensus among the researchers that the entrepreneurial orientation is vital in a firm if they intend to adopt successful corporate entrepreneurship (Dess & Lumpkin, 2005). The importance of entrepreneurial activities to stimulate superior firm performance and the key element of competitive advantage has been recognized by the popular press and scholarly literature (Knight 1997; Lumpkin & Dess 2001). Besides, entrepreneurial orientation promotes initiatives (Burgelman, 1983) that require the involvement of all management levels in the formulation and implementation of entrepreneurial strategies (Richard et al., 2004). Previous researchers have identified that highly

entrepreneurial firms will lead to successful businesses (Tajeddini, 2010; Li et al., 2009; Keh et al., 2007; Zahra & Covin, 1995; Zahra, 1991). Firms that have higher entrepreneurial orientation tend to perform better than firms with more conservative management (Rauch et al., 2009; Lumpkin & Frese, 2009). In addition, long-term competitiveness will be achieved if the firm strengthens its entrepreneurial orientation (Hitt et al., 2002).

The study in emerging countries as in China's ventures found that the relationship between entrepreneurial orientation and firm performance was represented as a curvilinear or inverted U-shape relationship (Tang et al., 2008). Tang et al. (2008) conducted 2 different studies using both perceptual and objective measures of firm performance and concluded that in emerging economies, the increase in entrepreneurial orientation does not always add to the firm's capability to perform well. In other words, the best firm performance occurs at an intermediate level of entrepreneurial orientation.

In Malaysia, the majority of researches on entrepreneurial orientation focus on the SMEs as presented in Table A-1 (Appendix A). Most of the results found a positive effect of entrepreneurial orientation on firm performance. For example, Poon et al. (2006) found that there was a positive relationship between SMEs' entrepreneurial orientation and firm performance. The study conducted among the 162 SMEs in Klang Valley also found similar results (Fakhrul & Ayadurai, 2011; Fakhrul & Wan Norhayate, 2011). Other studies conducted among the SMEs in Malaysia supports these findings such as Amran et al. (2009), and Dewi Izzwi (2011), Rosli and Norshafizah (2013). In the same vein, Mohamed and Hassan (2007) conducted study among the construction companies listed in Bursa Malaysia also found that the entrepreneurial orientation of the firms have positive on the firm's growth.

As mentioned earlier, the entrepreneurial orientation affects firm performance in all aspects such as profitability and growth. First, the example of previous researches that found positive effect of entrepreneurial orientation and firm's profitability are discussed. The study among the non-oil sectors in Nigeria, found that entrepreneurial orientation influence the firm's profitability (Ezirim & Nwokah, 2009). The empirical cross-cultural study also found that the entrepreneurial orientation of the small firms in the US and Netherlands shows positive effect on profitability (Kemelgor, 2012). Another cross-cultural study among 1671 of small and medium enterprises also found that all three dimensions of entrepreneurial orientation were positively related to firm's profitability (Kreiser et al., 2002b). The profitability of the Korean micro and small firms was also higher when the firms increased its innovativeness, proactiveness and risk taking (Yoo, 2001). Recent study among the public listed companies in Istanbul, Turkey found that innovativeness, proactiveness and risk taking were positively related to financial performance (Karacaoglu et al., 2013). Zahra & Garvis (2000) found that the entrepreneurial orientation of the small and large firms in the US was positively related to firm's profitability.

Second, the entrepreneurial orientation also has a positive effect on firm growth. This is found in the previous researches such as the study conducted among the Spanish small firms (Moreno & Casillas, 2008), SMEs in north-east China (Zhang & Zhang, 2012), US micro, small and large firms (Covin et al., 2006), Slovenian large manufacturing firms (Antoncic & Hisrich, 2003) and Finnish small private limited companies (Soinen et al., 2011). Soinen et al. (2011) found that the entrepreneurial orientation was positively related to firm growth but has no relationship with firm profitability. However there are studies that found that entrepreneurial orientation was

positively related to both firm growth and profitability such as the study among large and small Romanian and Slovenian firms (Antoncic & Scarlett, 2008) and small to large firm in the US (Zahra & Garvis, 2000). Therefore, in this study, the effect of entrepreneurial orientation on the multidimensional and unidimensional of firms performance were assessed.

It can be seen in Table A-2 (small firms), Table A-3 (large firms) and Table A-4 (mixed) that most of the researchers use the three dimensions of entrepreneurial orientation namely innovativeness, proactiveness, and risk taking. It can also be seen from these tables that only a few were conducted among the large firms (15 out of 55 studies). Thus, there is a need to conduct the empirical study in a large firm setting to expand the literature.

As mentioned before, this study employed the three dimensions of entrepreneurial orientation namely; innovativeness, proactiveness, and risk taking in relation to firm performance. Each of the relationships between this three entrepreneurial orientation dimensions are discussed in the following sections.

4.5.1 Innovativeness and Firm Performance

The capacity to introduce new products or services is not only restricted to start-up firms, but large firms are also able to do breakthrough inventions by using novel, emerging, and pioneering technologies (Ahuja & Lampert, 2001). Besides, large and established firms always adopt innovation to seek growth by developing new products that lead to incremental changes in current product lines (O'Connor & DeMartino, 2006). Innovativeness at firm level aims for the survival of the firm and to adapt to the rapid changes in product life cycles, technologies, competitors, customer preferences and laws (Kamarudden et al., 2010). Other than creating, revising and adding of new products, processes and services, innovativeness can also be manifested

in a new business system, new market, new method, and new technology. These creations are important in order to compete and survive in this hypercompetitive market environment, whereby innovativeness is required to grow and survive (Damanpour, 1991). Through innovation, firms have the ability to capture customers' preferences by the introduction of new products or services and new technologies. Therefore, numerous studies on the determining factors of firm performance in strategic management field have included innovation as one of the predictors (Mone et al., 1998).

It is also believed that innovativeness is a major driving force for economic growth and wealth creation. By introducing new products or services in the market, which may eventually create totally new markets, it will help large and established firms to escape from the intense competition of today's global economy. Firms that have the ability to offer various lines of product and excellent technological support will obtain greater financial rewards (Soresecu et al., 2003). Therefore, innovative strategic posture is considered as having the greatest impact on firm performance and offers a source of competitive advantage by capitalising on emerging market opportunities (Hashia & Stojcic, 2012; Wiklund, 1999). Zahra (1996:189) argued that success in today's competitive environment requires a company to pursue a coherent technology strategy to articulate its plans to develop, acquire, and deploy technological resources to achieve superior financial performance.

Innovation within a firm is found to be positively related to overall profitability and the objective measures of firm performance are in terms of return on investment, return on assets, and return on sales (Calontone et al., 2002). The empirical research among the small to medium size firms in Spain found that innovativeness and firms' growth (sales, assets, and employment growth) are

positively related (Casillas & Moreno, 2010). There are also positive relationships between process innovation and sales performance and employment growth (Klomp & van Leeuwen, 2001). Moreover, studies on the effect of new products and market performance have shown to be significantly positive (Li & Calantone, 1998). Recent study conducted among Taiwanese SMEs in China also found that innovativeness was positively related to firm performance (Wang & Yen, 2012). The study conducted in Malaysia also found that the innovativeness among the Malaysian SMEs was positively related to firm performance (Amran et al., 2009). These findings were similar to the findings among SMEs in Pakistan (Hameed & Ali, 2011), Korea (Yoo, 2001) and the recent study among publicly traded firms in Istanbul (Karacaoglu et al., 2013).

Large and established firms always adopt innovation to seek growth by developing new products that lead to incremental changes in current product lines (O'Connor & DeMartino, 2006). Introducing newness in the market will help to apprehend the intense competition of today's global economy. The innovations may be new to the world and may create totally new markets. The firm that has the ability to offer various lines of product and excellent technological support within an organization will obtain greater financial rewards (Sorescu et al., 2003). Therefore, an innovative strategic posture is considered to have a positive impact on firm performance by capitalizing on emerging-market opportunities (Wiklund, 1999). Therefore, it can be hypothesized that,

Hypothesis 1a: There is a direct positive relationship between the entrepreneurial orientation dimensions of innovativeness and large firms' overall performance.

Hypothesis 1b: There is a direct positive relationship between the entrepreneurial orientation dimensions of innovativeness and large firms' profitability.

Hypothesis 1c: There is a direct positive relationship between the entrepreneurial orientation dimensions of innovativeness and large firms' growth.

4.5.2 Proactiveness and Firm Performance

Apart from innovativeness, proactiveness in entrepreneurial orientation dimensions offers a more intense positive relationship with firms' growth (Rauch et al., 2009). Proactiveness also has long been recognized as an essential element in strategy research. The role of proactiveness has been addressed in respective typologies by Miles and Snow (1978), Porter (1980), and Venkatraman (1989a). The prospector strategy in Miles and Snow (1978) is also similar to proactiveness in entrepreneurial orientation as the strategy constantly scans for market opportunities, and quickly identifies and responds to changes in customers' preferences and the actions of competitors. Thus, these organizations are often the creators of change and uncertainty to which their competitors must respond (Miles & Snow, 1978:29).

In the same vein, the differentiation strategy in Porter's (1980) typology also recognizes the importance of proactiveness. The differentiation strategy attempts to create new products or services that are high in quality, unique, efficient before competition sets in (Gilbert and Reid, 2009). In his study on the business enterprise's strategic orientation, Venkatraman (1989a) uses the term proactiveness to refer to the continuous search for market opportunities and experimentation with potential responses to changing environmental trends. Additionally, he suggested that proactiveness has three characteristics; seeking new opportunities that may or may not be related to the present line of operations, introducing new products and brands ahead

of competition, and lastly, strategically eliminating operations that are in the mature or declining stages of the life cycle.

Among the characteristics of proactive firms include the ability to anticipate future demands and being the first mover in the market (in introducing new products or services). They also have forward-looking perspectives, the ability to secure and protect market share, shaping the environments by influencing trends and, perhaps, even create demand, pioneer new methods, and techniques (Lumpkin & Dess, 1996, 2002; Ferreira & Azevedo, 2010; Hameed & Ali, 2011; Jantunen et al., 2005).

The proactive firm would enjoy advantages from its first mover status because it is able to capitalize on market opportunities. This is the best strategy to compete in the business world. As the first to introduce new products or services, the firm can capture extraordinarily high profits and have a head start in establishing brand recognition (Lumpkin & Dess, 1996). Being the first to introduce products or services would generate customer loyalty due to the high switching costs. Thus, it is important for the firm to anticipate future needs and demands. The ability to anticipate future problems, needs, or change allows the firm to shape the environment and direction of competition to its advantage (Morgan & Strong, 2003). However, according to the study by Coulthard (2007), start-up companies are more suited to use proactiveness compared to established firms in franchise industry. This may be due to the firm's size as larger firms have bureaucratic structures and lack the ability to capitalize on the first mover advantage (Burns, 2008).

Proactive firms are not only proactive in pursuing opportunities but also respond aggressively to competitors (Lumpkin & Dess, 1996). This behavior enables a firm to compete with its rivals and obtained superior performance. The characteristics of proactive firms such as being responsive to market signals, having access to scarce

resources, and strongly committed to improving product and service offerings enable high performance returns (Day & Wensley, 1988; Green et al., 1995; Wright et al., 1995). The more proactive the firms in developing aggressive move towards capturing of new business opportunities, reveal greater growth rates of the firms as found among the small and medium firms in Spain (Casillas & Moreno, 2010). In addition, the proactiveness also shows positive effect on the sales of the firms among small firms in the US (Becherer & Maurer, 1999) and Taiwanese SMEs in China (Wang & Yen, 2012). Therefore, it can be hypothesized that,

Hypothesis 2a: There is a direct positive relationship between the entrepreneurial orientation dimensions of proactiveness and large firms' overall performance.

Hypothesis 2b: There is a direct positive relationship between the entrepreneurial orientation dimensions of proactiveness and large firms' profitability.

Hypothesis 2c: There is a direct positive relationship between the entrepreneurial orientation dimensions of proactiveness and large firms' growth.

4.5.3 Risk Taking and Firm Performance

Risk taking behavior is defined as the willingness of the firm to make large and risky resource commitments (Miller & Freisen, 1978). The entrepreneurial firm is found to have a greater propensity to take risks compared to conservative firms (Miller & Friesen, 1982; Lumpkin & Dess, 2001). Firm activities that involve risk taking behaviour include opportunity seeking (Hills et al., 1997), decision making (Busenitz, 1999) and other risky situations (Gomez-Mejia & Balkan, 1989). For example, the introduction of new processes or technologies and marketing of new products or services involves high risk taking due to the large resources commitments (Lumpkin & Dess, 1996; Miller & Friesen, 1982; Petrakis, 2005). The tendency to

move from a predictable situation to a position where it can seize opportunities and commit large resources with less knowledge about the new situation also constitutes risk taking behaviour (Covin & Slevin, 1991; Wiklund & Shepherd, 2005). Empirical research using primary data in 167 large New Zealand firms found that a higher risk taking profile would lead to higher financial performance (β=0.22, $p < 0.05$) (Gibb & Haar, 2010). Recent study among Taiwanese SMEs in China also found that risk taking is positively related to firm performance (Wang & Yen, 2012). The meta-analysis results by Rauch et al. (2004) revealed that the risk taking dimension was positively related to firm performance even if it is significantly smaller than other entrepreneurial orientation dimensions. The positive effect of risk taking on firm performance is due to the fact that firms that have the courage to make a significant resource commitment to high-risk projects with high returns would definitely have the advantage of boosting their firms' incomes. Therefore, it can be hypothesized that,

Hypothesis 3a: There is a direct positive relationship between the entrepreneurial orientation dimensions of risk taking and large firms' overall performance.

Hypothesis 3b: There is a direct positive relationship between the entrepreneurial orientation dimensions of risk taking and large firms' profitability.

Hypothesis 3c: There is a direct positive relationship between the entrepreneurial orientation dimensions of risk taking and large firms' growth.

4.6 Corporate Venturing and Firm Performance

As mentioned before, corporate venturing is part of corporate entrepreneurship and refers to the entrepreneurial efforts of the established firm to invest and/or add new businesses (Sharma & Chirsman, 1999). The main agenda of the management in large firms to embark on corporate venturing is to achieve growth for future

performance (King, 2002; Lin & Lee, 2009). Superior corporate performance can be achieved through corporate venturing because it is the most productive tool when practiced in a strategic manner (Covin et al., 2007). For example, international companies such as Intel, 3M, GE, Motorola, and Microsoft, have successfully used corporate venturing initiatives as their innovation strategies (Takashi, 2000; Ip, McWilliams & McGee, 2000).

There are various reasons for corporate venturing in large and established corporations. Among the reasons include the bureaucratic structure or inflexibility in large firms that seem to hamper the internal development of the firm's own entrepreneurial potential. Internal corporate venturing enhances the firm's competitiveness due to its capability to exploit the internal innovation potential by combining resources in a new and unique way. However, this internal innovation potential has not been fully tapped by large firms (Burgelman, 1984; Zahra, Nielsen & Bogner, 1999). A prime example of the successful launch of internal corporate venturing can be seen in Sony. Ken Kutaragi, a member of their staff who was appointed as the head of the development team, ignited the idea of inventing the PlayStation in the 1980s and successfully launched the product in 1994. He has outsold Sega and Nintendo, with over 70 million unit sales and provided 40% of Sony's profits (King, 2002).

To minimize the risk involved in developing new businesses or internal corporate venturing, the large firms implement external corporate venturing as an alternative to research and development (R & D). This is in order to learn about future approaches in the market place and recognize the potential products that may be highly in demand. The three activities of external corporate venturing which are

acquisitions, joint ventures, and corporate venture capital have a positive effect on firm performance.

First, by doing acquisitions or investing in small and highly entrepreneurial firms, the parent company will achieve its competitive advantage to speed up the process of producing new products or services to market (Miles & Covin, 2002). The large firm usually buys the small firm that has high technology. Besides this, the acquisition also broadens their business definition by entering new markets speedily as well defeating the entry barriers to the new industries (Vermulen & Barkema, 2001; Zahra & Hayton, 2008). Another advantage of acquisitions is that the parent companies can acquire new skills, knowledge, resources and technological capabilities (Ahuja & Katila, 2001). The communication and interactions between the parent company and the acquired firms will encourage the transfer of tacit knowledge (Lane & Lubatkin, 1998). All these advantages will have a positive effect to the firm's radical innovation that progressively improves the firm's performance, especially its growth (Zahra & Hayton, 2008).

Secondly, in the same vein, many large firms opt for alliances such as joint venturing in order to spread business risks, accelerate the start-up processes, or overcome the lack of expertise in the parent company (Kambil et al., 2000). Generally, the firms frequently use corporate venturing to gain access to ideas, discoveries, technologies, innovations, business practices, and enhance business growth and profitability (Narayanan & Zahra, 2009). As with acquisitions, this mode of venturing also facilitates the large firm to enter new markets or industries. However, learning is the primary reason why large firms conduct alliances (Hamel, 1991; Makino & Delios, 1996) as in so doing, the large firm can learn from its partners' experiences, systems and managerial practices (Lyles & Salk, 1996). Not

just the ability to have access to new knowledge, the large firm can also learn about new technologies so that they can meet the customer's expectations. This will lead to improving the firm's profitability and growth as according to the organizational learning theory, the acquisition of new knowledge or the diversity of knowledge in the firm's operation will enhance the firm's businesses processes.

Thirdly, the investment in start-ups also known as corporate venture capital will increase the sales and improve profit margins (Gompers & Lerner, 1999; Takashi, 2000). This is because the large firm can stimulate innovations and new business creations using the same strategies that the start-ups used to fuel the growth of the new ventures (Hamel, 1999). Intel Corporation is a prime example of a company using the CVC program to raise the development and growth of unrelated business lines (Takahashi, 2000). Additionally, in order to complement and replace existing businesses, Nokia also uses its CVC to monitor worldwide technological developments in a broad range of fields. Other examples of companies that use CVC are Merck, Ciso, Dell, Lucent Technologies, Eli Lily and Millennium Pharmaceuticals (Zahra & Hayton, 2008).

Previous research shows that corporate venturing activities generate economic benefits for the parent corporation and improve its financial performance (Antoncic & Bostjan, 2001). Research by Antoncic and Hisrich (2001) showed strong relationships between corporate venturing and financial performance (return on assets, return on equity and relative profitability).

Research by Miles and Covin (2002) revealed three reasons why firms engage in internal and external corporate venturing. Firstly, to build innovative capability as the basis for making the overall firm more entrepreneurial and acceptive of change. Second, it is to expand the scope of operations and the firm's knowledge into possible

strategic importance areas and thirdly, to generate quick financial returns. The firms often chose external corporate venturing modes when they seek quick financial returns (Morris et al., 2008).

Corporate venturing is a means of increasing the firm's profitability by speeding up the process of introducing new products and services into the market, reducing the failure risk, and minimizing the research and development budget (King, 2002). For example, the technological company, Cambridge Technology Partners (now part of Novel Networks) based in USA and Europe, acquired IOS Group AB, a Swedish-based provider of information technology and software development services in 1994 to capture the market demand ahead of competitors and to increase the parent firm's financial returns. They also invested in other ventures such as Epiphany, Interwoven, and Web Logic (King, 2002). The research-based Japanese pharmaceutical company, Eisai Corporation, forms another example. Joint ventures with big players like Pfizer and investments in small innovative biotech companies to enter global markets in the USA, UK, Germany and France, enabled them to produce and promote their product, Aricept. Subsequently, Aricept became Eisai's major product and primary treatment for Alzheimer's, and conquered about 90% of the market as at 2001 (King, 2002).

Corporate venturing is also often used as a strategy in declining businesses that transform their corporations into new core businesses with better opportunities for growth (Donahoe et al., 2001). Nokia is a prime example as they have successfully transformed their core business from manufacturing to telecommunications.

As proposed by the organizational learning theorists, corporate venturing can improve the learning of new skills and competencies and thus, will facilitate and accelerate the firm's competitiveness and increase its profitability. It is believed that,

new and diverse knowledge can be implemented in the business operations and transform the idea into new products or services. Thus, it can be hypothesized that;

Hypothesis 4a: There is a direct positive relationship between the corporate venturing and large firms' overall performance.

Hypothesis 4b: There is a direct positive relationship between the corporate venturing and large firms' profitability.

Hypothesis 4c: There is a direct positive relationship between the corporate venturing and large firms' growth.

4.7 Organic Structure and Firm Performance

An efficient organizational structure is crucial for the firm to achieve its goals and objectives (Campbell & Craig, 2005). It forms one of the management's top priorities (Child, 1977). Besides, the organizational structure is the basic foundation of an organization and influences the behavior of the organization's members (Dalton et al., 1980). Thus, optimum firm performance can be achieved with proper adjustment of the organizational structure. In other words, the organization must find the ideal structure for their organization.

In this highly competitive business environment where customer's preferences change rapidly and technology is advancing at an unprecedented rate, the organization must be able to respond and adapt to the changes faster than their competitors. Thus, the main quality of the new organizational structure is the ability of being flexible and acclimatizes to the fast changing environment (Sekalas & Ventskus, 2007; Farhanghi et al., 2013). This is the key to succeed in today's business world. Therefore, from the corporate entrepreneurship perspective, the firm structure must always be organic (Kuratko, 2007) to enable firms to be more flexible and adaptive, aggressive, faster

and better at generating novel products, services, and process improvements (Morris et al., 2009).

An appropriate organizational structure has been identified as a must for achieving a highly entrepreneurial firm that is able to recognize new opportunities and transforms ideas and creativity into realities (Covin & Slevin, 1990; Hostager et al., 1998). The mechanistic structure is not suitable for today's entrepreneurial firms because of their rigidity that stifles communications (Kanter, 1983). Besides, the centralization or high level autonomy practiced by the higher levels of the organization will affect the success of the firm (Thornhill & Amit, 2000).

In addition, the organic structure is most likely associated with the broad and future oriented information behavior (Gordon & Narayanan, 1984). In other words, the firm must avoid the bureaucracy or mechanistic structure presented in a large organization (Falbe, et al., 1999). Many large firms have lost the entrepreneurial spirit due to their size and success because as they grow larger, their ability to be flexible and innovative has been paralyzed (Echols & Neck, 1998). Thus, their flexibility and creativity are reduced and this is why the organizational structure must be modified from time to time to enable revitalization (Ramezan, 2011). According to Kuratko (2007) and Kuratko et al., (2014), an entrepreneurial firm's structure must be always organic to enable firms to become more flexible and adaptive, aggressive, faster and better at generating novel products, services, and process improvements

As current environments become more and more dynamic, threatening and complex, organizations have to be more competitive and entrepreneurial. Therefore, the organizations must find ways to move the company towards a more organic structure (Kuratko, 2007). In the past four decades, many researchers have agreed with Burns and Stalker's proposition that a firm with an organic structure in dynamic

environments will outperform others (Aiken et al., 1980; Covin & Slevin, 1989). Previous research indicates that organic structures facilitate the entrepreneurial strategies to enhance a company's financial performance, while mechanistic structures do not (Covin & Slevin, 1989). Additionally, high levels of performance achieved by many entrepreneurial firms are with flexible and non-bureaucratic structures (Jogaratnam & Tse, 2006).

According to Ramezan (2011), among the advantages of the organic structure is that firstly, it is able to adapt to the changes faster and easily due to the simple structure characterised by decentralized decision making, lack of rigid rules and procedures, open communication and fluid job descriptions. In other words, the organic structure is the most adaptive form of organizational structure. Second, the multi-talented employees are allowed to do multi-tasking works. The employees are encouraged to work in a team where the decision making is horizontal and flat in structure. Thus, it is less time consuming and encourages risk taking. Third, the divisions only consist of the top management, strategic groups, and project teams. This is to avoid departmental barriers and facilitate the cross-functional teams and integration of specialized sources of knowledge. Fourth, the authority and decision making are decentralized, thus, empowerment of the employees promotes proactiveness, openness and trust amongst them. Fifth, the informality is higher in an organic structure, thus the employees have more freedom, face to face communication, practice the two loops of communication; upward and downward, and employees are included in the decision making process. This facilitates the creation of knowledge in the organization.

A loose organic situation enables the firm to be more flexible in order to be creative, innovative, take risks, explore, and to do experiments. The mechanistic

structure has rigid rules, policies and routines that inhibit the employees from exploring new ideas and their behavior and communication is based on standardized rules. Thus, it is difficult to integrate the available information, resources and knowledge (Menguc & Auh, 2010).

Organizational structures have been associated with firm performance over the years. However, the precise nature of the relationship between the two constructs is not clear (Stank et al. 1994: 41). In addition, the literature on the relationship of these two constructs is among the most vexing and ambiguous in the field of management and organizational behavior. Evaluations and generalizations concerning the nature and direction of these relationships are tenuous (Dalton et al., 1980). Thus, the need for empirical research on the organizational structure-performance relationship is encouraging.

There are three dimensions of the organic structure that are often associated with firm performance; less formalization, decentralization, and low specialization. Decentralization exists when the decision-making authority and control is not only concentrated at the top level management in an organization but also that the middle and lower levels of management are given the authority to make decision. Formalization concerns the rules and standard procedures of the decision-making and working relationship. Less formalization means the employees are given the freedom to perform tasks (Willem et al., 2007). Specialization is the division of tasks and activities according to the employee designations in the organization (Stank et al., 1994). Low level of specialization exists when each employee performs a variety of and regularly changing tasks (Willem et al., 2007).

The element of decentralization in an organic structure is found to be conducive to organizational effectiveness (Burns & Stalker, 1961; Dewar & Werbel,

1979; Floyd & Wooldridge, 1992; Rapert & Wren, 1998; Schminke et al., 2000). Decentralization encourages employees to act faster in the complex, and rapidly changing environments and also respond to market conditions (Liao et al., 2010; Schminke et al., 2000). The centralization of decision-making limits the flow and speed of communication within the business units (Lawrence et al., 1967) which leads to delays in recognizing business opportunities.

Decentralization increases job satisfaction, and motivation (Dewar & Werbel, 1979). This is because the middle and lower level managers have more autonomy and greater participation in the decision-making process (Hall & Saias, 1980). It also encourages innovative behaviour and thus leads to the fulfilling of the customer's preferences. This is supported by the seminal meta-analytic works of Damanpour (1991). Further, decentralization enables the employees to initiate and experiment more innovative ventures (Miller & Arnold, 1991; Russell, 1999). In addition, the participation of team members in decision making empowers employee to innovate more. The costs will also be reduced because decisions are made faster (Claver-Cortés et al., 2012).

Example of previous researches on mechanistic versus organic structure are shown in Table 4-1. From Table 4-1, it is found that, there are inconsistent findings of the organic structure on the firm performance. This may be due to the industry types, firm's size and the external environments. Recently, the study conducted in Iranian consultant firms shows that the organic structure has positive influence on firm performance (Farhanghi et al., 2013). According to this study, in today's business environment the firms' organizational structure must be more flexible and adaptive. This also supported the study conducted on large Spanish firm that the firms, in which firms that have decentralize decision making influenced the firm performance

positively (Claver-Cortés et al., 2012). This is also similar to the study among the restaurant franchisees in the United States where, the firms with organic structure have positive effect on firm performance (Sul & Khan (2006). However, the organic structure was negatively associated with the performance of the Hotels in Mainland China, Hong Kong, Malaysia and Singapore (Jogaratnam & Tse, 2006). This finding is similar to the study on new venture in the United States (Sine et al., 2006). This contradicts with the earlier study by Covin and Slevin (1990), where, the new ventures with the organic structure positively influenced the firm performance. Despite all these arguments, the organic structure is more preferable in today's business environment to enable flexibility, adaptive, and responsive to the changing environments. Thus, it can be hypothesized that;

Hypothesis 5a: The organic structure has a direct positive relationship with overall firm performance than the mechanistic structure.

Hypothesis 5b: The organic structure has a direct positive relationship with firm profitability than the mechanistic structure.

Hypothesis 5c: The organic structure has a direct positive relationship with firm growth than the mechanistic structure.

Table 4-1: Selected Previous Studies on Mechanistic versus Organic Structure and Firm Performance

Item	Author, Year	Research Design	Findings
1.	Altinay & Altinay (2004:334)	Case Study : Over 45 in-depth interviews were conducted with relevant organisational members both at host country and corporate levels in Germany, France, Benelux, Turkey, the UK, Spain, Italy, Central	A centralised decision-making structure not only slowed down the decision-making process and limited international expansion, but also resulted in frustration and de-motivation among the market-based organisational members who were responsible for international expansion.

Item	Author, Year	Research Design	Findings
		Europe and Middle East and Africa.	
2.	Claver-Cortés et al. (2012:1)	164 Spanish large firms from different sectors. Crossectional Quantitative method	Decentralization has a positive influence on hybrid competitive strategy, and the latter positively influences firm performance.
3.	Covin & Slevin (1988)	80 large firm (U.S) Crossectional Quantitative method	Entrepreneurial top management style has a positive effect on the performance of organically-structured firms and negative effect on the performance of mechanistically-structured firms.
4.	Covin & Slevin (1990)	344 manufacturing and service firms, and independently owned firms	The organic structure of new venture have positive relationship with firm performance.
5.	Farhanghi et al. (2013)	246 owner of Consultant Engineers Firms	The organic structure is positively related to firm performance.
6.	Jogaratnam & Tse (2006)	187 general managers of hotel located in Mainland China, Hong Kong, Malaysia and Singapore Quantitative method	Organic structures were negatively associated with firm performance
7.	Khandwalla (1977)	103 large Canadian firms Crossectional Quantitative method	During hostility the firms adopted organic structure in order to perform well. In contrast, in stable environment, the firms adopted mechanistic structure to outperform others.
8.	Sine et al. (2006)	1,024 internet service in United States (New venture) Longitudinal (5yrs)1996-2001-High volatile and turbulence Quantitative method	In dynamic, turbulent, and uncertain environments, new ventures' mechanistic structure is positively related to firm performance.
9.	Sul & Khan (2006)	243 restaurant franchisees in the business-format franchising system in the United States Quantitative method	The mechanistic-organic structure is no direct effect on financial performance. The organic structure are positively influence the entrepreneurial strategy for its financial success.

4.8 Entrepreneurial Orientation-Performance and the Moderating Variables

It is widely discussed in prior researches that the entrepreneurial orientation-performance relationship is influenced by the third variable, which is related to the organizational and industrial environment (Vij & Bedi, 2012). In addition, the literatures suggest that the inconsistent results can be resolved through the inclusion of a third variable in the entrepreneurial orientation-performance relationship. Besides, the literature recommends that since the entrepreneurial orientation-performance relationship is not that straightforward, the interaction effect of moderating effects should be taken into account (Martin & Rialp, 2013; Wiklund & Shepherd, 2005).

The contingency relationship is important because the strength of the entrepreneurial orientation-relationship varies with the presence of a third variable such as organizational structure, environment, and others. For example, empirical research found that there is no positive direct effect of entrepreneurial orientation on firm performance but, when the environmental uncertainty was included as a moderating factor, entrepreneurial orientation was positively related to firm performance (Li et al., 2005). Thus, in this study the hostility and dynamism of the environment are used as moderating variables. Previous researches that had included the environment as a moderator of corporate entrepreneurship and firm performance are illustrated in Table 4-2.

From Table 4-2, the environmental dynamism and hostility moderated the relationship between entrepreneurial orientation and firm performance among the SMEs in China (Li et al. 2005; Mu & Benedetto, 2011), Spain, (Martins & Rialp, 2013), and Netherlands (Kraus et al., 2012). This is also supported by cross-cultural study conducted by Kreiser et al. (2002a) among 1671 SMEs in Australia, Costa Rica, Finland, Greece, Indonesia, Mexico, the Netherlands, Norway, and Sweden. It is also

believed that the external environment may have a strong impact on the small firms' viability and growth (Yamada & Eshima, 2009).

The impact of the external environments on firm performance not only limited to the small firms but also, it has moderated the relationship between the entrepreneurial orientation and firm performance among the large firms (Zahra & Covin, 1995; Zahra & Garvis, 2000). It is agreed that the effect of corporate entrepreneurship is stronger when the environment is highly dynamic and hostile. The discussion on the effect of environmental dynamism and hostility on each of the entrepreneurial orientation dimensions are discussed in the subsequent subsection.

4.8.1 Environmental Dynamism and Hostility as a Moderating Factor of the Innovativeness-Performance relationship

Research on the effects of the dynamic environment on innovative practices within an organization has been quite dramatic. The previous studies also concluded that the dynamicity of environment encourages firms to take part in new product innovation activities than those operating in stable environment (Miller, 1983; Miller, 1988; Zahra, 1993b). The consequences of the firm's failure to respond to the dynamic environment are a loss in market share and sales, and consequently, to be competed out of the business (Miller, 1988). By pursuing new radical technologies and pioneering activities as a way to respond to the dynamic environmental setting, the firm will have an advantage over its competitors (Zahra & Bogner, 2000; Zahra, 1996). Environmental dynamism affects new product commercialization in two ways: firstly, it precipitates unpredictability in markets demands, consumer needs and competitor strategies, and secondly, technological turbulence leads to even greater uncertainties about new technological innovations (Mu & Benedetto, 2011).

The firms must strengthen their R & D and introduce new products or services more often during environmental dynamism because fast technological changes can significantly reduce the life cycle of existing products (Li & Calantone, 1998). Thus, firms must be able to seize opportunities by creating new technologies to advance next-generation products. In order to capture customer preferences and needs during environmental uncertainty, the firms need to interact proactively with consumers to obtain information regarding their preferences. This is to enhance its ability to predict, identify, and anticipate customer needs and subsequently, create customer demands (Porter, 1980; Hamel & Prahalad, 1994). The firms can also commercialize their new products by entering new market segments and serving new customers (Porter, 1980). Thus, the focal point is the ability of the firms to align its innovativeness with new product commercialization and its environment to achieve higher firm performance (Ma & Benedetto, 2011).

Large and established firms face difficulties to survive and flourish in hostile environments (Hall, 1980). Thus, entrepreneurial efforts and innovations must be increased during such uncertain times which is characterised by high change rates in the markets (Miller, 1983a). The firm's innovativeness is crucial for creating new products or services in adjusting to the dynamic environments where customer preferences, product-service technologies and competitive postures often change unpredictably (Miller, 1983). Thus, it can be hypothesized that;

Hypothesis 6a: The dynamism and hostility of the environment will positively moderate the relationship between innovativeness and the overall performance of the firm.

Hypothesis 6b: The dynamism and hostility of the environment will positively moderate the relationship between innovativeness and the profitability of the firm.

Hypothesis 6c: The dynamism and hostility of the environment will positively moderate the relationship between innovativeness and the growth of the firm.

4.8.2 Environmental Dynamism and Hostility as a Moderating Variable of the Proactiveness-Performance Relationship

Proactive behavior is also crucial in dynamic environments as the ability of the firm to capitalize on market opportunities ahead of its competitors and to capture the fast changing customer's demands is heavily dependent on the firm's proactive behavior. Lumpkin and Dess (2001) argued for the importance of proactive behavior in dynamic environments. They discovered that as environmental conditions are consistently and rapidly changing, with fewer opportunities in the market, proactive behavior would enable firms to better capitalize on available opportunities. Therefore, by being proactive in dynamic environments, the sales growth and profitability of the firm will be higher (Lumpkin & Dess, 2001). The proactive firm will have competitive advantage with the ability to adapt faster with the dynamic environment.

It is imperative that firms are more proactive during hostile environments because there are limited businesses opportunities during turbulent times. Proactive behavior ensures that firms have strong tendencies to be ahead of other rivals in introducing new products or services, administrative techniques, operating methods or new technologies (Covin & Slevin, 1986, 1989; Covin & Covin, 1990; Lumpkin & Dess, 1996; Lumpkin & Dess; 2001; Miller & Friesen, 1983;). Thus, only proactive and innovative firms will survive and prosper in hostile environments. Proactive behavior enables firms to grasp whatever opportunities are available in the market

because such behavior takes quick competitive actions towards its competitors. Thus it can be hypothesized that;

Hypothesis 7a: The dynamism and hostility of the environment will positively moderate the relationship between proactiveness and the overall performance of the firm.

Hypothesis 7b: The dynamism and hostility of the environment will positively moderate the relationship between proactiveness and the profitability of the firm.

Hypothesis 7c: The dynamism and hostility of the environment will positively moderate the relationship between proactiveness and the growth of the firm.

4.8.3 Environmental Dynamism and Hostility as a Moderating Variable in the Risk Taking-Performance Relationship

There has been much debate about the most suitable level of risk taking in firm performance (Gibb & Haar, 2010; Hughes & Morgan, 2007; Zahra, 1993). Risk taking behaviour that goes beyond a particular level may be unfavourable to firm performance (Miller & Friesen, 1982). Thus, it is recommended that the risk taking-performance relationship requires a contingent than direct relationships to lead to higher firm performance (Lyon et al., 2000).

Empirical support of risk-taking behavior in dynamic environments shows higher levels of risk-taking in decision making. Rapid changing environments require organizations to make decisions and take faster action to be more adaptive and responsive (Khandwalla, 1977). Therefore, the firm should avoid passive behavior and increase decision-making speed in responding to environmental changes. If the firm is unable to adopt risk-taking behavior in dynamic environments, they will lose the market share and fall behind competitors (Covin & Slevin, 1991; Miller, 1983a). Thus, it can be hypothesized that;

Hypothesis 8a: The dynamism and hostility of the environment will positively moderate the relationship between risk taking and the overall performance of the firm.

Hypothesis 8b: The dynamism and hostility of the environment will positively moderate the relationship between risk taking and the profitability of the firm.

Hypothesis 8c: The dynamism and hostility of the environment will positively moderate the relationship between risk taking and the growth of the firm.

4.9 Environmental Dynamism and Hostility as a Moderating Variable for Corporate Venturing-Performance Relationship

Dynamic environments trigger the firms' efforts to venture into new businesses in responding to the challenges and changes in the business environment. In dynamic environmental settings, the industry conditions are unstable and continuously changes. The social, political, technological, and economic changes bring new ideas for the firms to venture into new markets and broaden the firm's niche (Zahra, 1991). The change in the environment creates more opportunities that enable the firm to pursue new innovative ventures so as to benefit from these environmental characteristics. Thus, in order to pursue ventures, the firm will employ newer technologies and innovative marketing practices (Oster, 1990). In addition, the firm diversifies its business to cope with intensifying environments and to avoid failure. Therefore, venturing into new businesses helps the firm to respond to intense competition whilst taking on the opportunities for growth.

The firm's survival decreases in hostile environments due to the increased competition, and depressing demands (Miller & Friesen, 1984). Thus, the firms are encouraged to venture into additional businesses to mitigate major losses in the firm's primary business. The firm can opt for internal ventures or external joint ventures

(Keats & Hitts, 1988). A prime example of firms that have successfully diversified during hostile environment is the H.J. Heinz Company, well-known for its ketchup business and baby foods. In hostile environments, where the demand was decreased due to increased in health awareness and the slowing birth rates, H.J. Heinz acquired other companies such as the pet food companies and other companies related to health and wellness to strengthen its position in the United States of America and also in their overseas operations. With these acquisitions, the company continuously captured customer demands and succeeded in expanding their business and increased the firm profitability (Zahra, 1991).

Building on the above arguments, the following hypotheses suggest the positive moderating influence of environmental hostility and dynamism on corporate venturing and firm performance. Thus it can be hypothesized that;

Hypothesis 9a: The dynamism and hostility of the environment will positively moderate the relationship between corporate venturing and the overall performance of the firm.

Hypothesis 9b: The dynamism and hostility of the environment will positively moderate the relationship between corporate venturing and the profitability of the firm.

Hypothesis 9c: The dynamism and hostility of the environment will positively moderate the relationship between corporate venturing and the growth of the firm.

4.10 Environmental Dynamism and Hostility as a Moderating Variable in the Organizational Structure-Performance Relationship

Fundamentally, the effectiveness of mechanistic and organic organizational structures is dependent on the nature of a firm's external environment (Burns and

Stallker, 1961; Khandwalla, 1977). In dynamic and hostile environments, the organizational structure of the large firms must be more organic or flexible (Khandwalla, 1972, 1973) in order to respond to the changes in the business environment.

The effect of environments on the organizational structure has also been found in the classical works of Burns and Stalker (1961), Thomson (1967) and Perrow (1970). To deal with complex environments, firms must adopt organic structures to ensure that they are more responsive to the challenging environments (Miller, 1983a). When the external business environments are risky, hostile, very stressful and the rate at which products and services are becoming obsolete is very high, the firms must implemented loose, informal and decentralize decision making. This is to ensure faster decision making and action to adapt with the fast changing environment.

Thus, building on the arguments, the following hypotheses suggest a positive influence of environmental dynamism and hostility on the organic structure in relation to firm performance. Therefore it can be hypothesized that;

Hypothesis 9a: The dynamism and hostility of the environment will positively moderate the relationship between the organic structure and the overall performance of the firm.

Hypothesis 9b: The dynamism and hostility of the environment will positively moderate the relationship between the organic structure and the profitability of the firm.

Hypothesis 9c: The dynamism and hostility of the environment will positively moderate the relationship between the organic structure and the growth of the firm.

Table 4-2: Selected Previous Research on Environmental Factors as a Moderating variable between Corporate Entrepreneurship and Firm Performance

	Authors	**Company Size / Industry**	**Measurement of Environment**	**Results**
1.	Li et al. (2005)	China's new technology ventures	Environmental uncertainty Miller (1983)	Environmental uncertainty moderated the relationship between entrepreneurial orientation and Firm Performance
2.	Hameed & Ali (2011)	Pakistan's SMEs	Environmental dynamism by Miller and Friesen (1982)	Environmental dynamism did not moderate the relationship between entrepreneurial orientation and firm performance.
3.	Martins & Rialp (2013)	121 manufacturing SMEs in Spain	Environmental hostility Khandwalla (1977)	Environmental hostility moderates the relationship between entrepreneurial orientation and SMEs profitability.
4.	Mu & Benedetto (2011)	China's leading innovation companies	Environmental dynamism by Jaworski and Kohli 91993)	Environmental dynamism moderates the relationship between entrepreneurial orientation and new product commercialization performance.
5.	Wiklund & Shepherd (2005)	Swedish small business	Environmental dynamism Miller (1987a,b). Miller's (1987a,b)	Environmental dynamism was not moderated the relationship between entrepreneurial orientation and small business performance.
6.	Moreno & Casillas (2008)	Spanish small firms	Combination of environmental hostility and dynamism by Lumpkin and Dess (2001) and Lumpkin (1998)	No moderating effect
7.	Kreiser et al. (2002a)	1671 SMEs in Australia, Costa Rica, Finland, Greece, Indonesia, Mexico, the Netherlands, Norway, and Sweden.	Separate measure of environmental dynamism (Khandwalla, 1977; Miller and Friesen, 1982) and munificence (Schultz, Slevin, and Covin, 1995)	The environmental dynamism moderates the relationship between the all three sub-dimensions of entrepreneurial orientation and firm performance. The environmental munificence moderates the relationship between the all three sub-dimensions of entrepreneurial orientation and firm performance.

	Authors	Company Size / Industry	Measurement of Environment	Results
8.	Kraus et al. (2012)	164 Dutch SMEs	Miller and Friesen (1982) is used to measure the level of perceived market turbulence (unpredictability and dynamism)	The environmental turbulence moderated the relationship between innovativeness and risk taking and firm performance. Firms with higher levels of innovativeness and risk taking perform better in environments with higher levels of turbulence. In contrast the environmental turbulence did not moderate the relationship between proactiveness and firm performance.
9.	Hult et al. (2004).	181 large firm in US	Market turbulence by Jaworski and Kohli (1993) and Miller (1987)	The market turbulence was not moderated the relationship between innovativeness and business performance.
10.	Zahra & Covin (1995)	59 large firms in US	Environmental Hostility (Secondary Data) – Own instrumentation	The corporate entrepreneurship is more effective in hostile environments and leads to higher firm performance.
11.	Zahra & Garvis (2000)	98 Small to large firm in US / various industries	Hostility by Miller and Friesen (1984)	The impact of international corporate entrepreneurship on ROA was greater under higher levels of environmental hostility The positive association between international corporate entrepreneurship and revenue growth was stronger under higher international environmental hostility. The positive association between international corporate entrepreneurship and foreign revenue growth was stronger under higher international environmental hostility.

4.11 Firm Performance as Used in the Study

In order to investigate the impact of entrepreneurial orientation, corporate venturing, and organic structure on the large companies, this study used both growth and profitability performance as indicators of firm performance. This is because both measurements give a richer explanation of actual performance (Wiklund, 2006; Zahra, 1996; Zahra & Garvis, 2000). Besides, firms usually aim to undertake corporate entrepreneurship to improve and strengthen their overall financial and growth performance (Antoncic, 2007; Baden-Fuller & Stopford 1994; Kantur & Iseri-Say, 2013; Pinchot 1985; Stopford & Baden-Fuller 1994).

In this current study, the average sales growth, ROA, and ROS are the three dimensions used to represent the performance. These three measures of performance have been widely used in the corporate entrepreneurship-performance empirical researches (Davis et al., 2010; Wiklund & Shepherd, 2003). Firstly, the relationship between predictors and overall firm performance (unidimensional) has been tested. Next, firm performance was divided into two groups; firm's profitability (ROA and ROS) and firm's group. It is important to integrate the multidimensional nature of the performance indicators (Chakravarthy, 1986) as high growth firms may not necessarily perform well financially (Wiklund, 2006). The reasons for using sales growth, ROA and ROS in this research are discussed in the next subsection.

4.11.1 Sales Growth (Proxy for a Firm's Growth)

The sales growth measure is used because it was agreed by previous researchers that sales growth is the common and best measure of firm growth (Hoy et al., 1992; Wiklund, 2006). In theory, the increase in sales over time may reflect the ability of the company to capture an increase in market demand, or rather, it may be due to improvements in the quality of products, processes or methods of production

(Delmar, 1997). Not only is it easily accessible, but also reflects both short and long-term changes in the firm. Usually, sales will increase before the firms are able to acquire additional resources such as employees and others (Flamholtz, 1986). However, the increase in sales is not necessarily accompanied by increased in the number of employees. The firms may opt for external sources to increase production (Delmar, 2006). Thus, the sales growth has a high generality of firm performance (Delmar, 2006). The increase in sales also indicates that the firm's products and services are in high demand due to the successful implementation of business strategies. Additionally, increased sales showed the market's acceptance of a firm's commercialization of new products, process, technologies, or methods. In this case, innovativeness, proactiveness, risk taking, and corporate venturing strategy will lead to higher sales growth. In this research, sales growth was used because corporate entrepreneurship activities such as corporate venturing involves great costs as in buying and sponsoring new ventures, launching new branches, alliances cost and acquisitions. Thus, corporate venturing might increase a company's sales even though profits may lag. The growth measurements act as indicators of the firm's success in venturing activities (Zahra & Garvis, 2000). Corporate venturing activities such as acquisition of other firms, joint ventures, launching new businesses, and buying new ventures will increase the firm's sales as all these activities add to current product offerings.

4.11.2 Return on Assets (ROA) (Proxy of a Firm's Profitability)

Return on assets or ROA was used as a second performance measure. This indicator is used extensively as a financial performance measure in strategic management research (Zahra, 1991; Zahra & Covin, 1995; Zahra & Garvis, 2000). The ROA or often called as ROI is a financial ratio that reflects the firms' efficiency

in using the total assets to generate profits (Gitman, 2005). As a rule, the higher the ROA, the more profitable the company is because the company is earning more money on less investment. The decision to use ROA in this research was based on corporate entrepreneurship activities that entail the redeployment of the firm's assets in innovative ways. In this case, the use of ROA to gauge the effects of corporate entrepreneurship allowed an evaluation of the company's innovative use of its assets (Zahra & Garvis, 2000).

4.11.3 Return on Sales (ROS) (Proxy of Firm's Profitability)

ROS or known as operating profit margin is a ratio that is widely used to evaluate a company's operational efficiency. This performance indicator serves the management by providing insights into how much profit is being produced per dollar of sales. Compared to other ratios, this is the best way to compare a company's ROS over time in looking for trends, and as comparison to other companies in the industry. As a rule, increasing ROS reflects the firm's efficiency in growing. In contrast, if the ROS is low or decreasing, it indicates looming financial troubles (Investopedia.com). In this study, the ROS is used to gauge the effect of corporate entrepreneurship activities such as innovativeness, proactiveness, risk taking and corporate venturing on the firm's efficiency (Zahra & Garvis, 2000)

4.12 Source of the Firm Performance Data in this Study

This present study collected both actual and perceptual measures of firm performance as suggested in entrepreneurship literature (Covin & Slevin, 1991; Lumpkin & Dess, 1996). The actual data were gathered from the financial reports of the firms. 'The objective of the financial statement is to provide information about the financial position, performance and financial adaptability of an enterprise that is useful to a wide range of users for assessing the stewardship of management and for

making economic decisions' (Bishop et al., 1996: 10). The financial data of the public companies are readily available, so it was possible to gather the financial performance measures.

Table 4-3: Summary of Key Studies

Research Questions	**Hypotheses**
Question 1 : To what extent do the dimensions of entrepreneurial orientation influence firm performance?	Innovativeness ⇒ Overall firm Performance Innovativeness ⇒ Firm's Profitability Innovativeness ⇒ Firm's Growth Proactiveness ⇒ Overall firm Performance Proactiveness ⇒ Firm's Profitability Proactiveness ⇒ Firm's Growth Risk taking⇒ Overall firm Performance Risk taking ⇒ Firm's Profitability Risk taking ⇒ Firm's Growth
Question 2 : To what extent does corporate venturing influence firm performance?	Corporate venturing ⇒ Overall firm Performance Corporate venturing ⇒ Firm's Profitability Corporate venturing ⇒ Firm's Growth
Question 3 : How does the organizational structure influence the firm's performance?	Organic Structure ⇒ Overall firm Performance Organic Structure ⇒ Firm's Profitability Organic Structure ⇒ Firm's Growth
Question 4 : To what extent do environmental factors moderate the relationship between independent variables and dependent variables?	Innovativeness * Environment ⇒ Overall firm Performance, Firm's Profitability and Firm's Growth Proactiveness * Environment ⇒ Overall firm Performance, Firm's Profitability and Firm's Growth Risk Taking * Environment ⇒ Overall firm Performance, Firm's Profitability and Firm's Growth Corporate venturing * Environment ⇒ Overall firm Performance, Firm's Profitability and Firm's Growth Organic Structure * Environment ⇒ Overall firm Performance, Firm's Profitability and Firm's Growth

4.13 Summary of Chapter 4

This chapter reviewed the underpinning theory, theoretical framework and also provides an investigation of previous studies on corporate entrepreneurship dimensions, organic structure, and environmental factors such as dynamism and hostility, in relation to firm performance. In particular, there were three underpinning theories used in this research; the resource-based view, organizational learning and contingency theory. There were also 10 main hypotheses in this study as shown in Table 4-3. The following chapter is dedicated to the research methodology employed in this study.