

## **Chapter 4**

### LITERATURE REVIEW AND THEORETICAL FRAME WORK

#### **4.1 Introduction**

This chapter provides previous studies and the theoretical framework that was used in the study. The objective of the chapter is to concentrate on the linkage of the relevant findings, mainly on the impact of distribution channel on firm performance and the impact of innovation on firm performance, so as to realize the gap in the literature. The roles of competitive environment, firm size, age of company, and industry sectors upon firm performance as control variables are also highlighted. The intention of finding the literature gap was settled on the objectives of the study that contributes to knowledge and other relevant interests. Afterwards, the main variables from previous findings were used to guide the design of the conceptual framework, which built the hypotheses in order to achieve the objectives of this study.

#### **4.2 Literature review**

##### **4.2.1 Distribution channel and firm performance**

It has been evidenced for years that distribution channel is important for its ability to reduce the expenditure of economic transaction (Williamson, 1981). Its capability of effectively supporting the competitiveness of firms, namely manufacturers, distributors, retailers, and customers, due to the distance that separates them apart, making distribution channel a significant function to enhance export performance (Leonidou, 1996; Zou, & Stan, 1998). Other studies that found similar result of its essential role of distribution channel to be a determinant factor for export improvement can be found in Shouming (1998) and Carlos *et al.*, (2008), besides product, price, and promotion strategy.

Many scholars have shown great interest in studying further about distribution channel due to its crucial role in improving firm performance. Leonidou (1989), Moore (1991), Heide (1994), and Morgan, and Hunt (1984) indicated that the growth of export oriented firm was significantly associated with the effectiveness of the relationship and cooperation between producers and the overseas importer. A study by Anderson *et al.*, (1997) also found that the effectiveness of channel members' coordination and communication among manufacturers, agents, distributors, and retailers improved channel member performance. According to the finding by Rose, and Shoham (2004), it was demonstrated that practical conflict that happened among channel members would not strengthen the affiliation, but on the contrary, it would reduce the effectiveness of strategy used, which, would in turn, alleviate their performance. An empirical study by Frazier *et al.*, (1989), which focused on industrialized manufacturers, found that the need of dealer to maintain an effective channel relationship in a seller's market was usually determined by the contribution of the manufacturers to the dealers' benefit.

Nevertheless, in terms of the members of distribution channel arrangement, it has been known that the motivation of making integrated channel is to improve better distribution channel performance. Mc Naughton (2002) examined the structural channel integration decision among 2,000 Spanish export oriented firms. It was found that the establishment of multiple distribution channels was motivated by serving overseas markets or importers in order to sustain the assets and service quality of exporters to maintain a good relationship with the customers.

Besides,

Weigand (1991) noted that the application of unofficial channels could partially cause 'unfair behaviour' and pricing by monopolistic channel members. A recent study by Kim (2009) also found significant results in the case of Korean firms, whereby efficient supply chain integration played an essential role for the competitiveness of sustainable supply chain management (SCM).

The conducted study by Ely (2009) on manufacturers in Thailand indicated that worldwide oriented firms would be able to develop innovative competencies to participate in different and new environments. As a result, these companies were able to achieve greater growth. It was also further found that the companies which were involved in higher worldwide operations showed higher level of exports.

In addition, the characteristic of distribution channels is that when once established, it is usually difficult to change. Ramaseshan, and Patton (1994), and Zdenko (2011) argued that the channel members' position also took part in determining the performance. Rialp *et al.*, (2002) examined the integration of structural channels over firms in Spain that were engaged in exporting, and invented obvious evidence that establishing linkage to importers could enhance export process. Interestingly, Kumar (2000) found that non integrated channels were recommended as well. Bret (1995) confirmed further that information exchange among members played crucial role in the relationship. The finding was also in line with John's (2006), which showed that trust became an essential element to maintain the relationship. Jennifer (2008) and Jiu (2009) further asserted that commitment and trust are the key mediators in determining performance.

**Table 4.1 Product distribution channel and firm performance**

<b>Authors</b>	<b>Topic</b>	<b>Method</b>	<b>Findings</b>
Carlos M.P. Sousa,1 Francisco J. Martínez-López & Filipe Coelho (2008)	Determinant factors of export performance	Survey	Distribution was found crucial to enhance export performance besides product, price, and promotion strategy.
Leonidou (1989); Moore (1991); Heide (1994); Long (2003); Morgan & Hunt (1994)	Relationship of distribution channel	Survey	The success of an exporter was significantly affected by an effective management relationship with the overseas importers.
Anderson, Day, & Rangan (1997)	Coordination relationship of distribution channel	Survey	An effective coordination among channel members improved channel member performance.
Frazier, G .L & Summers, O. J. (1984)	Distribution channel relationship	Survey	The need of dealers to maintain a channel relationship in a seller's market was primarily motivated by the contributions of manufacturers to the benefit of dealers.
Weigand (1991)	Structural arrangement of distribution channel	Survey	The use of unofficial marketing channels could partly cause the existence of unfair intermediaries.
McNaughton (2002)	Structural arrangement of distribution channel	Survey	Multiple distribution channels were often used to satisfy foreign markets.
Wook Kim, S. (2009)	Structural arrangement of channel members: Integration and non integration	Survey	In Japan, efficient supply chain integration could play more crucial roles to sustain a competitive supply chain. Plus, a close interrelationship between the level of supply chain practices and competition capability was found significant on the competitiveness as well.
Dionysis Skarmneas & Matthew J. Robson (2008)	Determinants of relationship quality in importer–exporter relationships	Survey	It was found that the role of performance, asset specificity, and cultural sensitivity became significant precursors of relationship quality in international distribution channels and cultural sensitivity was a meaningful driver of role performance.

Keysuk Kim (2001)	On the effects of customer conditions on distributor commitment and supplier commitment in industrial channels of distribution	Survey	Channel members' commitment was affected by not only the internal factors of the firms, but also by the market changing conditions.
B. Ramaseshan & Mark A. Patton (1994)	Factors Influencing International Channel Choice of Small Business Exporters (Structural arrangement)	Survey	Product, country specification, and the size of the firm were found essential as international channel choices.
Ely Laureano Paiva & Luciana Marques Vieira (2009)	International distribution operation orientation	Survey	International operations orientation was positively related to exports performance.
Rose & Shoham (2004)	Channel members' relation ship	Survey	It was found that task or functional conflict among channel member could reduce the quality of strategy employed, which, in turn, alleviate performance.

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Source: Authors from literature review

#### 4.2.2 Innovation and firm performance

For many years, previous studies related to innovation on its relationship with firm performance have existed. In general cases, numerous previous studies have found that firms that adopted and implemented innovation would successfully achieve several potential benefits. According to Edosomwan (1989), by generating new ideas, firms would increase productivity that would, in turn, lead to higher firm performance. Edosomwan (1989) also further asserted that competitive advantages were obtained effectively all the way through the use of new organisational ideas, which could enable a firm to generate an encouraging environment that leads to innovativeness, which in sequence, leads to benefit.

Interestingly, other previous studies had, in contrary, indicated that the impact of innovation on firm performance itself was found to be miscellaneous. A study by Geroski

*et al.*, (1993) pointed out that firm profitability was influenced by product and production process innovations in diverse ways. An additional dissimilar finding by Hirsch, and Bijaoui (1985) in Israel found firms that engaged in export activities had much higher growth and were far more innovative, unlike firms uninvolved in export activities. This indication, furthermore, was asserted by Love (2001) on the relationship of innovation and export performance between the United Kingdom and Germany in manufacturing plants also showed great significance. The findings demonstrated that innovation had a strong effect on the tendency to export in both the above mentioned countries. The finding further indicated that innovation activities were related positively to export propensity in the United Kingdom, while in Germany where the degree of innovation intensity was significantly higher, export probability also increased (Love, 2001).

Among others, Harris, and Li (2006) added that innovation also played a crucial role in overcoming difficulties to globalization. In terms of product and process innovation, Ozçelik, and Taymaz (2004) showed that in Turkey, product and process innovations had a positive effect on export intensity. Similar findings were also found by Roper, and Love (2001) that product innovations had a positive effect on export intensity in manufacturing firms in the United Kingdom and Germany. Basile (2001) also corroborated that product and process innovations preface had a positive effect on export behaviour.

However, there are other studies on product and process innovation with firm performance, which were found to have dissimilarities with studies highlighted earlier. The conducted study by Kongmanila *et al.*, (2009) on the relationship between innovation and export performance found a positive effect between product innovation and profitability, but not

between the process innovations. The study indicated that in terms of process innovation, the negative signs of the path coefficient was found among production process innovation. This led them to argue that non production process innovators tended to have higher profitability than production process innovators. This result also supported the study of Geroski, and Machin (1993) that process innovations had impact on firm profitability in different ways.

Other similar work, which was carried out by Eitan (2006) on administrative innovation application on firm performance study, also verified that the influence of administrative innovation implementations on firm performance was curvilinear. In other words, both too little and too much implementations had a negative effect on performance.

For many years, researches conducted on SMEs competitiveness have become interesting for the role in the economy. The emerging market provided SMEs new challenges to manage various available resources in order to increase their capability for growth (Zhang Bo, & Tao Qiuyan, 2012). Interestingly, as innovation has been known as the main drive to improve performance, other previous studies of SMEs have, additionally, showed that the effect of innovation on SMEs performance can be diverse as well.

Studies on innovation in the domestic oriented food industry of Indonesian SMEs indicated innovations in product, process, and marketing gave significant impacts on SMEs' performance (Mukhamad *et al.*, 2011). While similar finding was also found on the commercial retail fast food SMEs in Pakistan that a significant positive relationship existed between entrepreneur and innovation when measured independently, while a significant positive relationship existed between success and innovation when measured as a group

(Ansir, 2011). A recent study by Rosli *et al.*, (2012) asserted that product innovation had a significant impact on firm performance among SMEs in Indonesia.

On the other hand, there are other studies which showed rather significant or no relationship between innovation and SMEs performance. Besides, a study was conducted by Freel, and Robson (2004) that looked into the impact of novel and incremental innovation on SMEs in Scotland and Northern England. By using 1347 respondents, the study found a negative relationship between product innovation (both incremental and novel) and growth in sale volumes or productivity at least in the short term, while sale volumes and productivity growth were positively associated with incremental process introductions innovation in service sectors.

Next, a study by James, and Timothy (2006) on small firms also indicated that product improvement was significantly connected with greater growth of the firm, while process improvement was not associated with this relationship. According to Lin *et al.*, (2007), SMEs indicated that 80% of the surveyed firms' functional technological innovation did not give any influence in the growth of sales. While further similar study by Mandy (2010) on 121 SMEs in the Malaysian manufacturing sectors using structured questionnaires, found a rather significant relationship of innovation on firm performance. The study found that there was insignificant relationship of distinctive capabilities, innovativeness, and strategy on the export performance of SMEs. Other service sectors of SMEs innovation study was conducted by Daniel (2011). Using samples of 180 managers in Australian service enterprises, it was found that ambidextrous innovation was positively correlated with firm performance.

**Table 4.2 Innovation and performance**

<b>Authors</b>	<b>Topic</b>		<b>Findings</b>
Ansir Ali Rajput (2011)	Innovation impact and resources in entrepreneurial success in Pakistan	Survey	There was a significant positive relationship found among success, entrepreneur, and innovation when measured independently and significant positive relationship found between success and innovation when measured as a group.
Eitan Naveh, Ofer Meilich, & Alfred Marcuss (2006)	The effects of administrative innovation implementation on performance	Survey	It was found the effect of administrative innovation application on firm performance were curvilinear. It showed both too little and too much innovation might cause a negative effect on firm performance.
Geroski, P. & Machin,S (1993)	Innovation, profitability, and growth	Survey	Product and process innovation had a various degree effect on firm productivity.
Stephen Roper & James H Love (2001)	Innovation and export performance	Survey	Innovation activity had a positive relationship with export tendency.
Mukhamad Najib & Akira Kiminami (2011)	Innovation, cooperation, and business performance of Indonesia SMEs	Survey	Product, process, and marketing process had a significant relationship with firm performance.
Mark S Freel & Paul.J.A. Robson (2004)	Small firm innovation, growth, and performance	Survey	There was a negative relationship found between product innovation (both incremental and radical) and growth in sales or productivity.
Mandy Mok Kim Man (2010)	The relationship between distinctive capabilities, innovativeness, strategy types, and the export performance of small and medium-size enterprises (SMEs)	Survey	There was no significant relationship between characteristic capabilities, innovativeness, and the strategy types on export performance of SMEs.
Mile Terziovski (2010)	Innovation practice and its performance, implication in small and medium enterprises in manufacturing	Survey	SMEs' performance was likely to progress as they enhanced the degree to which they identified that innovation culture and strategy were closely related during the innovation process.
Pla-Barber & Alegre (2007);Moini (1995);Wagner(2001) Wakelin (1998); Özçelik & Taymaz (2004); Galende & Fuente (2002)	Product and production process and export performance/behaviour/activities	Survey	Product and production process had direct significant relationship on export performance of the firms.
Pia Hurmelinna Laukkanen, Lisa Maija	Appropriate regime for radical and incremental innovations	Survey	R&D concentration was found positively related to innovation performance.

Sainio & Tina Jauhiaine (2008)			
James A.Wolff & Timothy L.Pett (2006)	Small firm performance, modeling the role of product and process improvements	Survey	Product improvement was found significant associated with greater growth of the firm, while process improvement was not found associated with the relationship.
Gunday <i>et al.</i> , (2011).	Effects of innovation types on firm performance.	Survey	Result of the study indicated that innovation in product, marketing, and organization did not explain the financial performance.

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Source: Authors from literature review

### 4.2.3 Firm size and firm performance

The relationship of firm size on firm performance revealed diverse. Literatures suggested that economies of scale in production, export marketing, higher capacity, better opportunities to enhance financing, and sufficient managerial, financial, research and development, and marketing resources have been usually critical as a positive impact of firm size, especially on firm export performance. However, Wagner (1995) argued that u-shaped relation was found between size and export. The relationship indicated that advantages of size only hold to a certain entrance point when coordination costs cause further expansion to be non profitable. This non linear relation between exports and firm size was further pointed out by Wakelin (1998). “Although size of the firm is an advantage in exporting, this may not apply to very large firms, which can be more orientated towards the domestic market, for example, a domestic monopoly giving them no incentive to export” (Wakelin, 1998, p. 833).

On the other hand, a study of Aaby *et al.*, (1989) mentioned that firm size was taken as controllable factor and became an important determinant of export performance, while Zou, and Stan (1998) found its mixed effects; firm size had positive effect on export performance if measured in terms of total sales, and negative effects were found on export

profits if measured by the number of employees. There was a study among 7,899 Korean manufacturing's that indicated a decrease in growth along with firm size (Younsuk *et al.*, 2010).

#### **4.2.4 Age of company and firm performance**

Literatures have showed experiences have a significant affect to get succeeded. Experienced businessmen most probably get more experience than new comers. Kristiansen *et al.*,(2003) found that the length of time in operation was significantly associated with the success of business. In their new small firms study, Duchesneau, and Gartner (1990) found what lead entrepreneurs in successful firms tended to be raised by entrepreneurial parents. Under such conditions of low asset specificity, with greater experience in foreign market activities, there was a positive incentive for exporters to integrate (Klein, & Roth, 1990).

In addition, Cavusgil, and Zou (1994) invented global experience activities of the firm as one of the key determinants to improve export. The reluctance of firms not to export was natured by a substantial amount of ambiguity, mostly due to the scarcity of overseas markets information. A competent firm, thus, for its worldwide experience, knows the differences in environmental conditions and is more likely to choose the most attractive markets and gets used to the marketing strategy to contain the precise needs of those markets. Empirical studies indicated the relationship between global experience and export performance was mixed (Dean *et al.*, 2000), whereas some studies indicated negative association between global experience with export performance (Baldauf *et al.*, 2000; Brouthers, & Nakos 2005).

The justification for the negative relationship between international experience and export performance is that new firms are strained to go abroad for cost compensation and inadequate access to resources in their domestic markets (Ursic, & Czinkota, 1984). The less experienced firms have, thus, larger pressures related to the accomplishment of higher export performance (Baldauf *et al.*, 2000), and might view international sales as more central to the long-term profitability of the firm (Brouthers, & Nakos 2005).

#### **4.2.5 Industry sector and firm performance**

A significant influence of different types of industry on firm performance can be found in Gadenne (1998). Among others due to different marketing strategies and management practices (Gadenne,1998). The resource-based view argued that heterogeneous firm resources, which are difficult to imitate, are not traded on factor markets and could only be developed over time to drive firm performance (Wernerfelt, 1984). In this view, industry structure is a result of firm choices and firms could adapt and change industry structure through their resource-based strategies. Furthermore, empirical evidence provides robust support for the resource-based view that firm performance is driven more by internal factors than structural elements (Rumelt, 1991).

According to Pangakar *et al.*, (2011), their study focused on the period between 1996 and 2001 and they tracked the globalization levels for six different Chinese industries, as well as the performances of 166 public listed firms among these industries. The results validated major premise: high levels of industry globalization positively gave impact the performance of Chinese firms. They also found that when their industries were globalized, firms with slack resources experienced greater performance improvement than other firms without

these resources. Other study by William (2011) found that the industry sector did give impact on the ability to export. By using survey data of 92 exporters and non exporters to estimate a logistical regression model of the firm's export behaviour, the results revealed that industry sector, firm size, and the nature of the firm's product were all important factors that influenced export behaviour.

#### **4.2.6 Competitive environment and firm performance.**

Over the years, many studies have been carried out investigating the impacts of environments on firm's performance (Mintzberg, 1990; Venkatraman, 1990; Prescott, 1990). Studies have found that the environment is the most important force in improving firm performance (Mc Larney, 1997) and plays a key role to support an organization's triumph (Griffin, 1987).

According to Mintzberg (1994), environment is mostly referred to the force of competition that affects its industry activities. Griffin (1987) stated that the external force of firm environment consisted of competitors, customers, suppliers, regulators, and other related associations. The force of competition refers to the level of competition in price, product, technology, distribution, manpower, and raw materials. These changes would later expand through value chains and sectors providing a new environment for SMEs. Therefore, SMEs would be required to fit into the environment and find their place if they intend to survive. Raymond, and Croteau (2006) also suggested that SMEs in the industrial environment required proper strategic choices in product innovation, market expansion, and network extension in order to grow.

Besides, Wheelen, and Hunger (1995) noted that the external environment consisted of variables, such as opportunities and threats, that are usually beyond the control of the organizations. Griffin (1987) indicated that environmental factors play a key role in the decisiveness of an organization's triumph or failure. Hashim's (2001) study on the environment's moderating effect on the association between strategy types and performance of SMEs showed that environment influenced the strategies employed, as well as the overall performance of SMEs.

Furthermore, economic and social entities address that distribution channels are sensitive to environmental variance (Stern, & Reve,1980) and research in inter-organizational settings indicated that in general, variance in environmental dimensions, such as capacity or heterogeneity, needed more flexible decision structure and communication (Aldrich, 1979). Another study relating environment upon distribution channels was also conducted by Kim (2001). This study concluded that commitment in channel relationships were also triggered by the environmental conditions. Another study found that the greater the level of demand uncertainty, the stronger the relationship between supply chain (SC) relationship quality and SC performance; while the greater the level of supply uncertainty, the stronger the relationship that existed between SC relationship and quality SC performance (Brian *et al.*, 2004). Further study by Dionysis *et al.*,(2008) concluded that cultural sensitivity played a significant positive role in building sound relationship quality. Environmental variable used as control variables on firm performance were also conducted by Sandvik *et al.*, (2003), in terms of competitive environment-strategy, Hurmelinna-Laukkanen *et al.*, (2008), in terms of environmental dynamism, and Yi, and Hughes (2012) in terms of environmental instability.

#### **4.2.6.1 Competitive hostility environment and firm performance**

Kirpalani, and Macintosh (1980) observed that the tumble of environmental variables could seriously hinder the understanding of the determinants of exporting. Grant (1995) further emphasized that a firm's capability to deal with environmental ambiguity was important to its continued feasibility. The implication of this is that if firms are unable to forecast or manage its external environment, uncertainty emerges then could intensely influence the firms' operations (Miller, 1993). The external environment also stimulated managerial consideration to the intimidation and opportunities-influences the venture's strategic choices (Keats, & Hitt, 1988). Exporting could be a spontaneous measure in the features of uncertainty competitive environmental conditions. New firms enlarge their exports because of the declining opportunities in their domestic markets. Rigorous competition in the new venture's domestic market can also motivate exporting activities (Miles, 1980; Porter, 1980).

However, competitive environment and hostile environment are external conditions as their changes are apparently crucial to the firm's job or outcome (Edelstein, 1992; Miller, & Friesen, 1984). According to Edelstein (1992), this environment might be categorized into powerful rivalry, low margins, harsh governmental regulations, and limited growth opportunities. Hostility generally forces the new firms to expand its exports (Root, 1994), rather than initiate a radical reorientation of product offerings. Miller, and Friesen (1984) pointed out that an enterprise-compete in a hostile environment tended to come in new markets both in domestic and overseas. Anyhow, Cooper, and Kleinschmidt (1985) found firms that recognized their domestic environment had few opportunities-hostility that were

more likely to export than companies who consider the growth opportunities could be achieved in their domestic environments only.

According to Root (1994), when firms' owners or managers recognized the domestic environment turned out to be hostile, they would surely get a way out to skip from it and achieve higher performance instead. Usually, under these uncomfortable hostile conditions, firms have two strategic choices: either change the markets where it competed or change the way it competed. This tendency was also empirically evidenced by McDougall (1989) as when firms encounter hostility, they might change the way they compete. A study in comparison between domestic and global new enterprises by McDougall (1989) found that the degree of competitive intensity between domestic and global was different. Domestic environment, however, appeared to respond the competitive intensity by adopting unique production expansion and following customer interest strategies. McDougall (1989) suggested that these strategies would reflect a close relationship between firms and their customers and make domestic ventures to be competitive against global counterparts. McDougall (1989) also found that enterprises that competed in worldwide markets alleged higher levels of governmental regulations and limited within their environments than simply domestic ventures. Thus, the hostility linked to law-making regulations might have expected these firms to look for less regulated and hostile worldwide markets. Finally, Cavusgil (1994) found that increased competition in the firm's domestic market (i.e., growing hostility) and other hostile domestic competitive conditions (e.g., market maturity) were related with enlarged exporting efforts.

**Table 4.3 Competitive environment and performance**

Authors	Topic	Methodology	Findings
Azizi Hj. Abdul Adis & Samsinar Md. Sidin (2008)	Impact of environmental factors as moderator on export marketing performance in wooden furniture industry	Personal interview, mail, and phone interview	Certification was found to moderate a few relationships between product and promotion adjustment, distribution and design strategy as well as target market measurement on export performance.
Nicolae Bibu, Ștefea Petru, & Diana Sala (2009)	External and internal environment influences on SMEs Competitiveness	Survey	The external environment was strongly influenced on SMEs performance.
Amonrat Thoumrungroje, Patria Tansunghaj (2001)	Entrepreneurship, perceived environment, and diversification strategy: Effects on export performance	Survey	Environmental factor was not sufficient to estimate export performance
Keysuk Kim (2001)	On the effects of customer conditions on distributor commitment and supplier commitment in industrial channels of distribution	Survey	Commitment in channel relationships were also affected by the environmental conditions
Brian Fynes, Seaín de Buíca, Donna Marshall (2004)	Environmental uncertainty, supply chain relationship quality and performance	Survey	It was found when the level of demand uncertainty grew greater, the relationship between SC relationship quality and performance grew stronger.
Aron O'Cass & Jay Weerawardena (2010)	The effects of perceived industry competitive intensity and marketing-related capabilities: Drivers of superior brand performance	Survey	The study indicated that uncertainty environment would motivate managers to force their strategic assets to better comprehend their customers and competitors.
Hashim (2001)	Firm Characteristics, Competitive Strategy, Environment, and Business Performance: Survey Evidence from SMEs in Malaysia	Survey	Environment influenced the strategy types and performance of SMEs.
Dionysis Skarmas & Matthew J. Robson (2008)	Determinants of relationship quality in importer–exporter relationships	Survey	Cultural sensitivity was found to be a significant positive role in building sound relationship quality.
McLarney (1997)	An exploration of the strategic planning environment performance linkage.	Survey	Studies indicated that the environment was a major force in firm performance.

### **4.3 Theoretical framework and hypotheses**

Bowesox *et al.*, (1986) define distribution channel as an alliance of mediators that takes designate to a product throughout the process of marketing, from the first owner to the last customer. As the nature of distribution channel is that when they are once established, it is usually difficult to change (Ramaseshan, & Paton,1994), hence, it is important for firms to consider the distribution channel carefully to keep away from long lasting unfavourable costs (Ahmed, 1977).

Due to the distance between producers and last customers, bridging the gap between them has become the main function of distribution channel in order to reduce transaction cost in achieving better competitiveness, which, in turn, would enhance firm performance. Competitiveness in these points supports the process of goods' flow to the consumers at the right time, place, and efficient ways in order to fulfil customers' demand. Moreover, when the physical gap would be the first gap to be known if the producers and customers are split in remoteness, mediators will be able to enhance place and time utility. The reward will grow better when larger distances get involved between them. Therefore, one or the other ones should have an initiative to link the gap among them, as well as presume the cost of flowing the goods would exist (Peter, 1980).

Some examples of the distribution channel function are retailers or wholesalers, in which may be able to generate time utility by holding stocks of goods available to be pinched by buyers. Without the responsibility of retailers in this process, the buyers must place an order with the producer and wait until the product could be produced and delivered (Peter, 1980).

Besides, as goods flow from producer to consumer, the goods will be handled by a variety of distributors. During the handling, transportation and handling costs emerge that make the goods increase in price. Under this condition, the task of distributors is fulfilling an essential function to give the consumer easy entrée to goods with acceptable price. The result of the distribution system presents a wide variety of goods and service be readily available to every consumer (Peter, 1980).

Furthermore, it has been believed that innovation firmly explains firm performance. As Heide *et al.*,(1994) confirmed the victory of an exporter (manufacturers) in a developing country was significantly related to how the behavioural of the affiliation with the overseas clients were managed, the empirical study of using IT in distribution channel- internet, also was found to be able to assist the internationalization process, as well as to enhance the affiliation with other firms within the same value chain of SMEs (Fern'andez, 2006). The use of information technologies among supply chain members had also been shown to encourage organizational coordination and had positive impacts on performance. According to Nada (2008), using IT directly promotes a precise type of synchronization activity, in which, would be able to achieve both tactical and working benefits. Hence, in order to achieve an absolute set of benefits, suppliers should eventually use IT for both investigation and utilization within the channel.

However, further instance mentioned that the developed method of inventory and scheduling integration in distribution channel also improves effectiveness and efficiency performance (Varimna, 2009). In accordance with the use of IT frame work, tracking of returnable packaging and transport units can be supported by IT implementation to improve

efficiency (Martinez *et al.*, 2009). On the other hand, increasing sales can be improved by enhancing the effectiveness and efficiency of assortment by product configuration technology buildings, and these methods have the capability in customizing, which, in turn, present the products to be more competitive to the customers (Fabricio, 2004). A study of Turkish and Bulgarian SMEs in food products and beverages also indicated that by implementing IT practice and supply chain strategy, SMEs could gain competitiveness (Bayraktar *et al.*, 2010).

The following conceptual framework derived from Walters (1977) was built to look into innovation in distribution channel activities of export oriented SMEs that led to their firm performance. As other scholars also found evidence of a positive impact of product and/or process innovation on the export behaviour of firms (Pla-Barber & Alegre, 2007; Wagner, 2001; Wakelin, 1998), the conceptual frame work and hypotheses are as follows :

#### **4.3.1 Innovation in assortment and distribution performance**

The concept of an assortment is “a group of two or more types of goods which either harmonize each other directly or in total acquire some degree of potency for future contingencies” (Glenn Walters, 1977, pp.199). Poynor *et al.*,(2010) suggested that consumers could be more satisfied when choosing an option of goods from a small assortment than a large assortment. Here, customers could easily shop the advantageous products in larger assortment than in smaller ones. According to Roger (1990), assortment activities in retailing industry could generate one stop shopping in an effective and efficient way when purchasing goods.

Moreover, studies have indicated that the new modification of assortment empirically found significantly effective and efficient way to improve customers' satisfaction. According to Cadenat (2003), in order to reach efficient assortment in retailing industry, the retailers should estimate the perception of purchasers' assortment first so that what the stores actually recommended could be modified to meet the clients' needs and prospects. Fabricio (2004) further asserted that advantages of assortment innovation also could be examined in product configuration technology building. In this method, innovation could provide the ability in customizing product into a variety of assortment in order to meet customers' first choice. Then, the method leads to productivity,, which in turn, enhances sales due to the efficient and effective ways of presenting the products to the customers. Nevertheless, Jun-Kuan Chong (2009) added that a forecasting order of new products and a method of evaluation in replacement patterns in assortment could also bring decision making to a whole new level of efficiency. These are due to the optimal assortments that are laid in the right demand characteristic for each product and the substitution patterns across products. It has indication that innovation in assortment would improve performance, hence, the first hypothesis is:

H1a and H1b: Innovation in assortment is positively associated with distribution performance in terms of effectiveness (H1a) and efficiency (H1b).

#### **4.3.2 Innovation in order processing handling and distribution performance**

According to Bowersox *et al.*, (1986), order processing is mainly known as a main logistic activity. The activity would initiate the products' flow and service delivery. Order processing also could create command status that provides the logical system to become flexible. Information flows in handling assisted forecasting in order to handle departments. The message that is found in order management is the driver device for the whole logistical

system. Hence, the quality and speed of information flow in order management facilitation integration of basic logistical system component is considered as essential. It could be implied that a poor communication network could cause order bottlenecks or unidentified information errors that could generate problem within the logistical system. Such malfunctions, then, cause problems in inventory, production schedules, and inventory accumulation patterns (Bowersox *et al.*, 1986).

In addition, supported by Bowersox *et al.*, (1986), the order fulfilment process (OFP) have been recognized as one of the crucial factors of business processes in most profit oriented companies (Kritchanchai *et al.*,1999). The process is usually initiated by receiving customer orders and they end up with delivering final products. The process includes order handling activities, for instance, order processing, stock checking, make or buy decision making, supplier selection, purchase order (PO) planning, final product assembly, and delivery, in order to fulfil two common objectives: a) delivery of products to satisfy customers' expectations at the right time, right place, right quantity, right price, and b) the achievement of agility to handle uncertainties from internal and external environments (Christopher, 1992).

Besides, several previous studies in order handling modification found to be significant to improve performance. Innovations in order handling could help the whole order handling communication circulate smoothly. For instance, technologies support, such as radio-frequency identification and global positioning systems, provides improved real-time tracking information for products and replacement orders along the chain (Gary, 2008). While re-engineering or using simulation in order processing enables a firm to add more

value along the chain is likely to improve channel effectiveness and efficiency performance and lead to firm performance (Linda, 2009). The use of enterprise resources planning (ERP) solution, as a method of modification in order processing, can also improve effectiveness and efficiency of operational performance in delivering orders on time and general satisfaction in ERP solution (Elliot, 2004). As most firms realise, innovation in order handling affects performance, and therefore, the next hypothesis is:

H2a and H2b: Innovation in order handling is positively associated with distribution performance in terms of effectiveness (H2a) and efficiency (H2b).

#### **4.3.3 Innovation in information sharing and distribution performance**

Effective information sharing has been found vital in achieving distribution channel performance (Zou *et al.*, 2007). Coordination among independent channel members, such as raw-material suppliers, manufacturers, distributors, and agents-logistic providers, is the key to attain the necessary flexibility that would enable them to progressively advance logistics processes in response to changing market conditions. Unfortunate synchronization among channel members then could cause dysfunctional operational performance. The negative impacts of poor coordination cause higher inventory costs, longer delivery times, higher transportation costs, higher levels of loss and damage, and lowered customer service (Lee *et al.*, 1997). According to Fern'andez (2006), the application of IT, like the internet, was also found to be able to enhance effectiveness as it enables the firm to progress in market knowledge and in the relationship with clients and suppliers or other firms within the same value chain. This application enables firms to facilitate the internationalization process of SMEs, as well as to improve the relationship with other firms within the same value chain.

Besides, the use of IT among value chain organizations also have been shown to encourage managerial coordination and have a positive impact on performance. Using data from 241 suppliers in the computer industry, Nada (2008) directly promoted a precise category of coordination activity, in which, would be able to accomplish both strategic and operational profit. Hence, in order to attain a complete set of profit, suppliers must use IT for both exploration and exploitation within the channel. Similar with other innovation addressed earlier, the information system sharing innovation positively influences performance, and hence the next hypothesis is addressed:

H3a and H3b: Innovation in information sharing system is positively associated with distribution performance in terms of effectiveness (H3a) and efficiency (H3b).

#### **4.3.4 Innovation in product and distribution scheduling and distribution performance**

Product and distribution scheduling is logistic activity concerning to the group quantities of good that cover when and where to be formed and delivered or it is one decision on when, where, and in what quantity the production should take place (Ballaou, 1978). Production and distribution scheduling could optimize income and source utilization at the product and distribution stages individually. The delivery consignment cost generally consists of a fixed and variable cost that is comparative to the total distance of the way taken. For instance, the number of shipments used and the specific routes taken determine the total distribution cost. Hence, in order to accomplish shorter lead times, more delivery shipments should be used, which would lead to higher distribution costs. Therefore, optimizing the trade off between the distribution cost and the customer service level has been often a main goal among the decision makers of the trade system (Bowersox *et al.*, 1986).

Furthermore, a study by Wang *et al.*, (2009) found that product scheduling is also simultaneously considered production scheduling, material supply, and delivery, which have been proven effective to improve speed problem. The determination of the optimal production quantities, the time to start producing and the vehicle routes by computerized methods were also found to be effective and efficient that could drive total profit (Chen *et al.*, 2009). Hence, innovation in integrated scheduling of inventory and distribution scheduling significantly found to be able to improve efficiency (Varimna, 2009).

A new method of polynomial-time algorithms in solving distribution and product scheduling was found to be able to reduce process inventory and transport cost (Wang *et al.*, 2009). Other study related to the use of a new method of scheduling was conducted in electronic industries by Tadeusz (2009). Using what it was called monolithic and hierarchical approach for coordination of the supply chain product flow, gave similar results, in which, both approaches were be capable of finding good coordinated supply chain schedules for large size problems in a logical computation time using commercially available software to integrate scheduling (Tadeusz 2009). While related with integrated system, the study of using integrated scheduling system also can obtain operational performance in terms of effectiveness and efficiency in supply chain network (Subramanya, 2009).

H4a and H4b: Innovation in product and distribution scheduling system are positively associated with distribution performance in terms of effectiveness (H4a) and efficiency (H4b).

#### **4.3.5 Innovation in inventory and distribution performance**

Inventories is an important element for any business enterprise (Kruger, 2005). Inaccuracies in an inventory can generate a series of problems, cause loss in high efficiency, increase unwanted items, lessened the degree of customer dedication, create costly material inventories, and disappointment (Meyer, 1991). The cost savings that are accumulated from superior practices in inventory management (IM) are significant (Meyer, 1991). Hence, avoiding mismanagement of viability inventory risk control is considered crucial (Sprague, & Wacker, 1996).

Commonly, it is impractical for firms to be able to manufacture products, and then, deliver them immediately to the customers. In this case, inventory adds time utility to attain product availability level. Hence, inventory needs to be maintained as a connection between supply and demand. An effective inventory management practice would allow an enterprise to minimize inventory costs and avoid the direct consequences from scarcity of material resources. This series of proceedings have special significance in the circumstance of SMEs and inventory management. Chikan (1990) observed that a sound inventory management system is a decisive factor in a firm's success.

Natarajan (1991) discussed the linkages between inventory management (IM) and competitive advantage, bringing into focus the integration of strategic and competitive factors, such as cost, delivery, and quality. Natarajan (1991) argued that reducing time by faster value addition to the materials provides a firm with a distinct edge in competitive environments. However, inventory costs are determined not only by their level of inventory, but also by the time the materials spent in the system.

However, while the critical role of inventories to a firm's survival is well recognized in theory, IM does not necessarily drive practice in many SMEs. When business strategies are formulated, IM is not generally treated as a critical or strategic activity (Sprague, & Wacker, 1996). It is considered that firms would store the products as inventories before delivering to their customers, hence, it is also estimated that innovation in inventory will enhance distribution performance.

H5a and H5b: Innovation in inventory is positively associated with distribution performance in terms of effectiveness (H5a) and efficiency (H5b).

#### **4.3.6. Innovation in transportation/shipment coordination and distribution performance**

Transportation systems have been found to be a crucial part in providing better logistics efficiency, reducing operation cost, and promoting service quality in order to increase both the competitiveness of government and enterprises (Yung-yu Tseng, 2005). Moreover, according to Chang (1988), around one third to two thirds of the logistics costs were spent on transportation. This cost proportion was assured further by the investigation of National Council of Physical Distribution Management (NCPDM), in average, accounted for 6.5% of market revenue and 44% of logistics costs. Hence, poor coordination in transportation could stimulate higher costs, longer delivery time, higher levels of loss and damage, and lowered customer service (Lee *et al.*, 1997).

Moreover, Stefansson (2009) introduced the method on how to use transportation coordination. The model included three major components of smart transportation management: smart goods, smart vehicles, and smart infrastructure, which could affect

supply chain performance. Besides, using IT in coordination among channel members in product flow could improve channel members' performance too (Nada, 2008).

H6a and H6b: Innovation in transportation is positively associated with distribution performance in terms of effectiveness (H6a) and efficiency (H6b).

#### **4.3.7 Innovation in packaging and distribution performance**

Packaging plays is a tool for product promotion and protection. Other than that, packaging is an instrument for improved distribution efficiency. Designing in packaging requires consideration. The status of packaging in many firms and noted logistic responsibility towards it: "Marketing management sees packaging limitedly from sales' point of view. Packaging engineers see packaging only as a protective device, whilst physical distribution management can look at packaging broadly and conceive of changes in design, size, media of transportation, etc., which will contribute to the effectiveness of the distribution system" (Walter, 1968, P.38). Walter (1963) assured that the objective of packaging, as a protection, is to reduce the occurrence of damage, loss through theft or misplaced goods, or spoilage in order to incur the added expenses. The greatest concern of the logisticians for most of the products that must be handled is to avoid damage.

A recent study conducted in 2006 by Young on 800 U.S. consumers showed that new packaging systems can directly affect consumers' price opportunity and product selections. Thus, the study obviously recognized that if packaging changes were finished correctly, it would offer a positive return on investment (ROI) during amplified market share. However, the study also indicated that the volume of sales could be decreased if a new packaging does not meet consumers' expectations and practical needs. According to Morgado (2008), the use of plastic materials for packaging could provide several benefits. Besides the

protective functions, from the environmental point of view, it had advantages as they provide the goods to be packed using less material, and also permits recycling. Using plastic materials, the possibilities for colouring, decorating, and printing, also allow the packages to receive not only all the necessary information for the consumers, but also all the essential aspects that either product or brand could be easily recognized by the customers.

H7a and H7b: Innovation in packaging is positively associated with distribution performance in terms of effectiveness (H7a) and efficiency (H7b).

#### **4.3.7. Innovation in warehousing & finished good handling and distribution performance**

The role of warehousing is to create time utility in terms of raw material, industrial material, and finished products. In the customers' perspectives, according to Koyle, and Bardi (1976), establishing market oriented of warehousing could lead customers' satisfaction in terms of both physical supply (raw material) and physical distribution (finished goods).

Even though the warehouses become a permanent node in the logistics system whereby raw material, semi-finished goods or finished goods are stored and maintained in the diverse periods of time, the halt of goods within over periods give indications of bottleneck of the flowing goods that could add cost on the products (Koyle, & Bardi, 1976, Pp.100).

According to Koyle, and Bardi, (1976), a second function of warehouse is assortment of activities for customers' orders. Companies regularly produce product lines, which have thousands of sorts of products (colour, size, shape, and others). Another function is to

provide service. The readiness of goods in terms of time and quantities when an order is received from customers could accelerate customer fulfilment and give more future sales. Other function of the warehouses could be protecting against contingencies of transportation delays, vendor stock out, strikes, and so forth.

On the other hands, material handling in the warehousing system becomes an essential aspect of the facilities. As there were some cases that goods were flowed several times in each of the area mentioned, hence, to improve the effectiveness of working conditions, all materials system should be designed to minimize the possibility of danger to people who are working around the area and improve logistic service, for instance, support handling system more quickly to respond customers' requirement (Bowersox *et al.*, 1986).

From the literature addressed earlier, it was implied that effectiveness and efficiency are the main targets of warehousing and finished good handling in distribution. Innovation by adopting technology and typical method enable firms to improve the distribution performance, which, in turn, leads to firm performance. The following empirical studies embrace how innovation in distribution channel-warehousing and material handling would bring distribution performance advancement. Automatic and simulation in warehousing and material handling supported by computerized hardware and software could be a solution for improving effectiveness and efficiency in the operation. A simulation programme, known as lotus 1-2-3, could be an alternative choice to gain improvement in existing system in the warehousing and material handling (Diaz, 1988). On the other hand, Satya (2009) shared that the involved human and technical implementation factors in improving material handling operation performance did matter for effectiveness and efficiency. Heragu (2009)

added further, in accordance with innovation in technology, the use of technology application- autonomous vehicle storage and retrieval systems (AVS/RS) and a web based design conceptualization tool for AVS/RS let warehouse effective and efficient on the operational cost. This method also could control costs, extended capacity, and improved service to consumers.

H8a and H8b: Innovation in warehousing is positively associated with distribution performance in terms of effectiveness (H8a) and efficiency (H8b)

#### **4.3.8. Innovation in acquisition and distribution performance**

“Acquisition is logistic activity that makes the product available to the logistic system- the selection of supply source locations, quantities to be acquired, the timing of purchases, and the form in which the product is to be acquired” (Bowersox *et al.*,1986, p.12-13). As buying policy has geographical and time dimension that influence logistic cost, acquisition is then considered essential to logistic. “Acquisition or purchasing refers to those activities that take place between the organization and its suppliers” (Ballou 1978, p.298)-In this department, besides product and prices, precise delivery becomes the key element of the flow system.

Usually, firms spend between 40% and 60% of its sales to purchase materials, therefore, the efficiency of this flow stage should be managed carefully. Considering the important decision of acquisition with their impact on logistic cost, purchasing quantities, timing of purchasing, source location, and form of the goods become some factors to be importantly considered. The effectiveness of acquisition could be considered as a wanted goal in order to achieve the scheduled time of material delivery that would give impact to the flow of goods to customers. Therefore, choosing single or multiple suppliers, hedging price due to

the changing currency value, pricing, and so forth would become concerns to be looked into further (Ballou, 1978). Using technology in acquisition would enable a firm, as a buyer, to obtain strategically valuable resources, achieve market power, or generate strategic renewal (Graebner *et al.*, 2010).

H9a and H9b: Innovation in acquisition is positively associated with distribution performance in terms of effectiveness (H9a) and efficiency (H9b).

#### **4.3.9. Distribution effectiveness and firm performance**

Effectiveness as non economic performance or non financial measure has been concerned by Morgan *et al.*, (2004) as long term firm orientation. Meanwhile, Kaplan, and Norton (1992) measured non financial performance based on complement financial statements, such as “effective operational measures on customer satisfaction, internal business processes, and the organisation’s innovation and improvement activities” (p.71). Effectiveness had been known as indicators for customer satisfaction, conventionally considered to be an essential determinant factor for long term customer behaviours (Oliver, 1980) and a significant predictor of positive performance in inter-organizational relationship (Inkpen, & Curren, 2004). Furthermore, according to Dossi, and Pateli (2010), non financial indicators are likely to be used for identifying the best practices within cooperative relationships. This has also been emphasized clearly by Johnson, and Kaplan (1987) that non economic instrument could be significantly used as an expansion indication of a firm's long term goals. According to Kaplan, and Norton (1992) and Ferri *et al.*, (2012), profitability and other financial measures actually occur due to non financial activities and accomplishments.

Non economic measures- improvement of effectiveness activities are considered to be the trigger of future financial utility. Malgharni (2010) emphasized that non financial performance is crucial to foresee the company's future performance as it could offer extra and increased data, separately from economic one, in which could be used for users' decision making. In distribution channel, according to Pfeffer, and Salancik (1978), suppliers are effective if they deliver what was asked for, no matter if they are bound to fill their warehouses to manage-if they managed the task inefficiently. Meanwhile, Rhea *et al.*,(1987) gave some examples of distribution effectiveness referring to customers' satisfaction in that if customer expected delivery order in two weeks and the firm can fulfil in less or punctual than in two weeks, meaning the customers' satisfaction is fulfilled. On the contrary, it is ineffective if customers expect delivery order in two weeks, but the firm could not fulfil the demand in less than in two weeks or punctually.

As highlighted in the literatures, effectiveness is heavily significant in financial performance (Ataollah Mohammadi Malgharni, 2010; Ferri *et al.*, 2012). Innovation in distribution channels: Assortment (Fabricio, 2004); Order handling (Linda, 2009); Information system sharing (Nada, 2008); Inventory (Rajeev, 2008); warehousing and material handling (Heragu, 2009); packaging (Morgado, 2008); and transportation (Gunnar, 2009) are significantly positive in leading firm performance economic indicator, and therefore:

H10: Distribution effectiveness mediates the association between distribution channel innovation and the SMEs performance economic indicator.

#### **4.3.10. Distribution efficiency and firm performance**

The definition of efficiency is perhaps rather multidimensional as several various terms exist relating to its definition. According to Borgstrom (2005), efficiency from a resource is a dependent perspective. It is an independent measure for evaluating organizational productivity. Anyhow, in terms of distribution channel activities, he describes efficiency as a multipart evaluation of quality, cost, and overall capability that is not only intended and reviewed in the relationship, but also as a measure of the relationship. Efficiency definition, in terms of products' flow, covers how price and expenses are being paid in the lower level. Here, in these terms, it is referred to internal organizational oriented on profit (Borgstrom, 2005). According to Abdulai *et al.*,(1998), the concept of efficiency could be categorized into technical, price or locative efficiency. It could be further explained that a firm is technically efficient if it produces more outcome or output from the same quantity of inputs than other firms could do or in other words, a firm is able to use minimum feasible level of inputs to produce a given level of output.

Hence, efficiency performance could be reflected by the ratio of output to how best proportion of input allocation, hence the measurement is also placed in distribution efficiency. As the theory of transaction cost in distribution channel explains a cost is incurred in making an economic exchange. Meaning, whenever a good or service is transferred from a producer to a user, transaction costs occur (Williamson, 1989), and therefore, it could be said that the purpose of transaction cost is to pursue efficiency in distribution channel by reducing cost during the transaction. In that sense, competitiveness can be achieved that would lead to economic performance within organization. Besides, many studies have empirically found that efficiency in distribution channel gave significant

impact on firm performance, which also support the theory. Using efficiency as a parameter also influences a firm's innovative output that would lead to competitiveness (Lee, & Kim, 2010).

While a study on Hungarian SMEs also indicated that the Hungarian SMEs' technical efficiency, a locative efficiency and profitability were intimately interrelated. The study showed that profit maximisation was compatible with a deliberate reduction of the firm's technical efficiency (Major, 2008). Further study of clothing firms in China also showed that firms with high degree of sales in domestic or high degree export oriented tended to have high degree of technical efficiency in their operation (Mok *et al.*, 2010). Practicing efficient human resource management also improves profit in an organization (Sanchez *et al.*, 2011).

The recent study of distribution efficiency conducted by Ferri *et al.*, (2012) in export oriented SMEs agriculture based industry in Java Indonesia found that distribution efficiency had positive significant relationship with firm economic performance. Many empirical studies also found efficiency gave significant impacts on firm performance. Seen in Lee, and Kim (2010), Major (2008), Mok *et al.*, (2010), and Ulaga (2003).

However, innovation in distribution channel Assortment (Fabricio, 2004), Order handling (Linda, 2009), Information system sharing (Nada, 2008), Inventory (Rajeev, 2008), warehousing and material handling (Heragu, 2009), packaging (Morgado, 2008), and transportation (Gunnar, 2009) are significant positively in leading to firm performance economic indicator.

H11: Distribution efficiency mediates the association between distribution channel innovation and the SMEs performance economic indicator.

#### 4.4 Conceptual framework

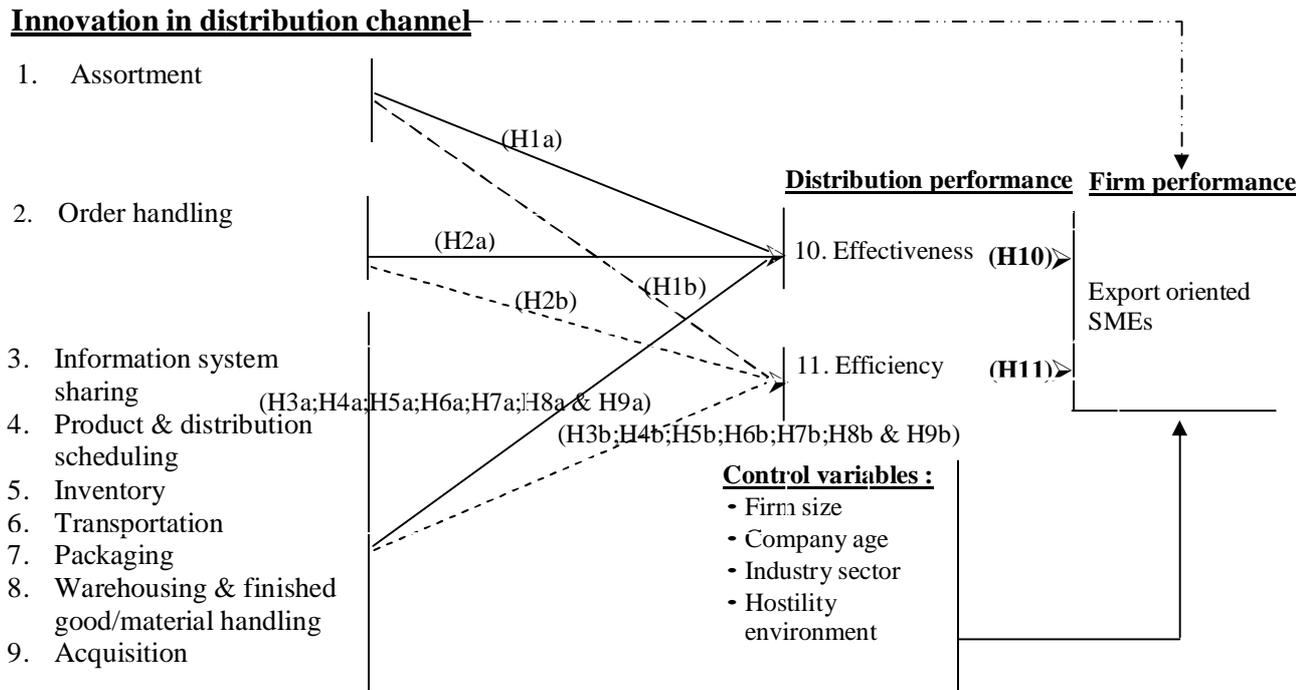


Figure 4.1 Conceptual framework of the study

**Table 4.4: Literature**

Authors	Topics	Findings
Fabricio Salvador & Cipriano Forza (2004)	Innovation by technology in assortment	The study found that technology usage enabled firms to assort products into sorts of assortment. This would fulfil customers' satisfaction by presenting products efficient and effective ways which in turn improved sale volumes.
Juin-Kuan Chong (2009)	Modification/new different method in assortment	It was indicated that adopting forecasting for new assortments for new products' demand would also improve new level of efficiency.
Gary M.Gaukler (2008)	Using technology in order processing	The finding showed that the use of radio frequency recognition would provide effective information for products and replacement orders along the chain. This in turn would improve the performance.

Linda L.Zhang (2009)	Modification/new different method in order handling	Simulation in order processing activity could show a more effective and efficient process along the chain.
Elliot Bendoly (2004)	Modification/new different method in order handling	The use of enterprise resources planning (ERP) solution in order processing would lead to improved general satisfaction.
Wang & Cheng (2009)	Modification/new different method in product and distribution scheduling	Product scheduling method that simultaneously was combined by production scheduling, material supply and delivery showed to be effective to improve speed problems.
K.N.Subramanya (2009)	Modification/new different method in product and distribution scheduling	It was indicated that the use of integrated scheduling system enabled firms to improve operational performance in supply chain network.
Varimna Singh (2009)	Modification/new different method in product and distribution scheduling	Integrated scheduling of inventory and distribution scheduling significantly found to be able to improve efficiency.
Fern'andez (2006)	The use of information technology (IT) in information sharing system	Study demonstrated that using internet, empirically found enabled firms to smoothen the internationalization process of small and medium enterprises (SMEs). It also indicated that internet improved the relationship with other firms within the same value chain.
Gunasekaran, A. Ngai, E. W. T. (2004) & Nada R (2008)	The use of IT in information sharing system	It was found that IT, among value chain organizations, improved an effective and efficient coordination.
Alberto Felice De Toni & Elena Zamolo (2005)	A new method or modification in inventory-vendor managed inventory	Considering sale volumes forecasting in inventory management was found to enable firms in reducing the greatest source of errors and inefficiency that strongly influenced the settlement of stock level.
Alev Taskin Gumus, Ali Fuat Guneri, Fusun Ulengi (2010)	A new method or modification in inventory using multi-echelon inventory management	Increasing efficiency.
Scott Young (2006)	A new method or modification in packaging	The study found that new packaging systems could directly impact shoppers' price expectations and product selections. If packaging changes were done properly, it was to provide a positive return on investment (ROI) through increased market share.
Morgado (2008)	Plastic packaging	It was found that the use of plastics for packaging could provide the goods to be packed using less material and also permitting recycling. It also allowed the

		possibilities for colouring, decorating, and printing and allowed the packages to receive not only all the necessary information for the consumer, but also for all the essential aspects. These made customers easier to recognize the product.
Gunnar Stefansson (2009)	A new method of transportation	The use of transportation coordination could affect effectiveness particularly smart goods, smart vehicles, and smart infrastructure.
Satya (2009)	A new method or modification	Another study of improving material handling operation performance in order to be effective and efficient involved human and technical implementation factors.
Heragu Xiao (2008)	The use of computer software programming	The use of vehicle storage and retrieval systems (AVS/RS) and a web based design conceptualization tool for AVS/RS efficiently designed warehouse effective operational cost of inventory and to be able to control costs.
Michael J.sullivan (2009)	A new method or modification in acquisition	Helped contractors and others, more rapidly responded to the need and met production requirements.
Kenneth(2005); Rhea(1987); Brian(2010);	Effectiveness	Effectiveness has significant relationship with firm performance.
Brian(2010); Ferri <i>et al.</i> ,(2012); Abu(2009)	Efficiency	Efficiency has significant relationship with firm performance.

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Source: Author from Literature review

## 4.5 Background theories

### 4.5.1 Resource based view (RBV)

According to Penrose (1959), a firm is unique because of its typical services offered and asset belonging. In this point of view, the resource collection, therefore, includes the skills of managerial and entrepreneurship. Wernerfelt (1984) asserted further that firms had collected resources in the form of tangible or intangible possessions, which were semi-permanently integrated to the firm. The idea concluded that in order to gain competitive advantage in implementing the product-market strategy, the tangible and intangible assets

were crucial propositions for achieving competitive advantage. Further arguments by Rumelt (1984) stated that the collection of resources provided by firms could generate economic value that depended on the circumstances in which the resources were used. Some users of the RBV differentiate resources which were completely suitable by the firm, like physical capital or brand names, from fewer tangible assets, for instance governmental routines and capabilities (Teece *et al.*, 1997).

Other scholars, such as Lippman *et al.*, (1983), Nelson *et al.*, (1982), Barney *et al.*, (1986), and Itami (1987), recommended on investigating the typical resources that could be enhanced to a sustainable competitive advantage. They recognized it was the resources, such as human resources (Amit *et al.*, 1993), response lags (Lippman *et al.*, 1982), organizational routines (Nelson *et al.*, 1982), organizational culture (Barney, 1986 b), and indistinguishable assets, which are hard to duplicate (Itami, 1987) that actually improves the sustainable competitive advantage. According to Barney (1991) resources and capabilities of the firms are heterogeneously distributed among firms and inappropriately static. Hence, he suggested that resources and capabilities, which are either valuable or unique, would generate competitive advantage.

Furthermore, according to Conner (1991), in RBV, in order to achieve competitive advantage, the firm has to generate greater economic value to the customers compared to its competitors, for instance in efficiency (Peteraf, 1993; Peteraf, & Barney, 2003). In RBV, the competitive advantages could be created from efficient resources that would facilitate firms to generate superior benefits at the same cost. Therefore, in RBV, firms could

compete in the product market either by contributing differentiated products or by achieving low cost situation compared to others.

According to Siddhartha Brahma, and Haimanti Chakraborty (2011), a resource might be precious, but abundant as long as the achieved competitive advantage of the firm derived from being effective and efficient compared to the competitors or the other way around. In other words, if competitive advantage is not generated because of the use of such resources, RBV could not be implemented.

#### **4.5.2 Innovation theories**

To comprehend further process of innovation in society, three main theories of innovation are addressed in the following. These theories are known as the individualist perspective, the diffusion theory, and the culture perspective of innovation.

##### **4.5.2.1 The individualist perspective**

A lot of near the beginning theorists on innovation argued that innovation is initiated by certain individuals in the civilization with essential characteristics to make it happen (Schumpeter, 1934; Rogers,1962). Other scholars, such as Bennis, and Nanus (1985), and Nam, and Tatum (1997) also supported this appoint of view that entrepreneurs are the ones who are principally responsible for initiating changes and novelties in the society.

The explanation addressed for the theory is that entrepreneurs have certain characters, for instance, they tend to be risk-tendency and eager to struggle for better things.

Entrepreneurs also have accountability to train the civilization to possess the capacity to solve life problems in a new way. This entrepreneur might achieve it by changing the present equilibrium and creating a new one through novelties (Schumpete, 1934). While another theory mentioned that entrepreneurs are actually completely rational and had all the essential information and skills to execute innovations by themselves (Saren, 1987). Van de Ven *et al.*, (1989) posit that it is rather presumptuous to conclude that innovative decision within organisation or society would involve a single individual. In reality, these individuals have to deal with resistant environment forces and secure the cooperation of others before they could actually innovate.

#### **4.5.2.2 The diffusion theory**

The diffusion theory is also a concept spurred by Schumeterian perspective (Freeman, 1998), but opposed to the individualist perspective, it is to the front an environment factor, for instance, the market respond given to the initial novelty introduced by an entrepreneur-as the main determinant of innovation.

Hall (1994, p.91) summarized diffusion theory as the “Spread of innovation through the population” and that a theory of diffusion is referred to two stages of market response: a) non users turn to potential users, and b) potential users became adopters. Besides, diffusion is primarily linked to economic factors, such as per capita income, cost of manufacturing, and prices (Utterback, 1994). In general, it appeared that the rate of diffusion increased with higher income and manufacturing cost and lower prices (Hall, 1994)-By affording higher income and lower prices, consumers have greater purchasing power, while a higher manufacturing cost persuades producers to innovate in effort to reduce it.

The strength of diffusion theory lies in its ability to take into consideration the role of society in the innovation process. Meanwhile, acknowledging the entrepreneurs' original contributions, the theory asserts that continuity and ultimate success of innovation depend on the market (Freeman,1998) -which provides not only the financial return, but also technical feedback that facilitate the development of future innovation. Furthermore, the spread of the novelties within a particular society is attributed to the communication (Cosmas & Sheth, 1980)- among its members, instead of the role of entrepreneurs as agents of change. However, the theory fails to explain adequately why a society is more inclined to innovations.

#### **4.5.2.3 The cultural perspective**

The twentieth century saw business activities becoming more globalized and multinational firms scrambling to enhance their competitive advantages closely associated with innovation, and scholars (Herbig & Palumbo, 1996; Brown & Ulijin, 2004) have begun to seriously question why firms from different nations or societies have different innovative behaviours. In particular, comparisons have been drawn between Japanese and American firms (Gregory, 1984; Herbig *et al.*, 1996; Herbig *et al.*, 1997). Gregory (1984) suggests that Japanese values, such as knowledge-seeking and rapid acceptances of change, have inspired Japanese entrepreneurs with high propensity to innovate.

Referring to the works of previous researchers, Shane *et al.*,(1994) posit that for societies with similar economic and political background, differences in innovation are due to cultural gaps. He demonstrates that by controlling for differences in industrial structure and

per capita income, the cultural value-particularly uncertainty avoidance—indeed have significant effect on per capita number of trade mark. Shane *et al.*,(1994) demonstrate in a study involving thirty countries that uncertainty avoidance, individualism, and power distance affected the choice of innovation championing strategies. For example, in high uncertainty avoidance societies, members prefer leaders to work in organizational norms, rules, and procedures to promote innovations.

#### **4.5.3 Transaction cost economy theory in distribution channel**

Arrow (1969) defines transaction cost as running cost in the system of economic. Different from Arrow (1969), Coase (1937) defines transaction cost as actual and opportunity costs of transacting under various authority structures. Williamson (1989) further defines transaction cost, in economics and related field, as a cost in making an economic exchange. Hence, whenever goods or services are transferred from a producer to a user, transaction costs occur. They could occur within or outside an organization.

“Economists assume that firms always prefer to transactions that minimized coordination costs. In this assumption, transaction costs are similar to production costs. The Economic Transaction Cost (ETC) examines functions of a firm or a market from an efficient contracting and/or comparative organizational perspective (Williamson, 1996, p.25). Coase (1937) further stated his vision of transaction costs that to perform a market transaction, it is essential to investigate who would contract with, carry out deal, leading up to negotiate, prepare the contract, accept the examination needed, to make sure that the terms of the agreement are experimental, and so forth.

Williamson's theory of ETC considers the structure seriously. He specified variables that could determine if a market or a hierarchy would have lower transaction costs under different conditions. The building blocks of these assumptions are firstly "bounded rationality", which assumed human beings are not perfectly informed in the economic system (thus operating under uncertainty), and consequently, have limited cognitive processing power. When these cognitive limitations are applied to managers' decision-making procedures, managers could only consider how competitors would react. Secondly, "opportunism", which refers to people who are not being totally honest or truthful about their intentions (Williamson, 1989).

Three factors, frequency, uncertainty and asset specificity, determine if transaction costs would be the lowest in a market or in a hierarchy (1985). Firms could simply use these three factors to decide if they should integrate a transaction vertically to lower transaction costs. Frequency refers to how often a firm needs a good or service. Naturally, if the service is rarely needed, the firm might consider using an outside consultant instead of keeping the service in house (1989).

Transaction costs and uncertainty are interrelated. To minimize transaction costs, the uncertainty of a transaction must be as low as possible. When a transaction does not involve predicting the future-e.g., when it happened in the spot market, then the transaction would have little uncertainty (1975). The general rule is that the higher the uncertainty, the higher the transaction costs. Besides, uncertainty has a direct relationship with "bounded rationality". Obviously, no one could estimate all possible eventualities. A good instance is

that there is no way to exhaust all possible factors influencing the performance of the stock market. Uncertainty also causes problems because of the danger of opportunism (1989).

However, the most important element in the ETC theory is asset specificity. Asset specificity refers to the transferability of assets intended for use in a given transaction to other users (1981)-Highly specific assets represent sunk costs that have relatively little value beyond their use in the context of a specific transaction. Improving efficiency of certain transactions requires investments in specific assets. There are different types of asset specificity. Other things being equal, when transactions involve highly specific assets, transaction costs are likely to be lower in a hierarchy than in a market.

#### **4.5.4 The depot theory of distribution**

The essence of depot theory in distribution channel is that goods tend to flow towards the point of final consumption or end users. The theory is concerned with the performance of all direct and supporting storage, handling, and transportation activities performed by middlemen in the channel of distribution, on actual cost of service base, and eliminating merchandising profit. The depot theory of distribution envisions a steady flow of goods from the point of producer to the point of end users or consumers. The intermediary institution that facilitates the flow of goods are actually the depot. Depot is a military term and refers to the storage of supplies purely as a service function for the goods' flow (Leo, in Bruce, 1967).

The current competitive situation points to the depot concept and forecasts the trends in the distribution of products. The depot identifies a function of marketing, which performs all storage and handling cost on a cost basis so as to put goods in retailer's hands at possible

costs. The competitive retail market demands is to keep goods' flow into consumption at the rate dictated by consumers. The essence of the depot theory is that goods tend to flow to the point of final consumption at a rate dictated by the final consumer. The consumption rate is governed by cost. Whenever the factory entrance price of product, plus the depot function cost, plus the retailing cost are greater than the estimated utilities received from the product by consumers, the entire flow of the items stop (Leo, in Bruce, 1967).

#### **4.6 Summary**

It has been empirically acknowledged that SMEs are capable of generating employment creation, poverty alleviation, value added, and economic growth around the globe. The emerging market phenomenon has escorted SMEs to search natural growth. Studies have found that effectiveness and efficiency of distribution performance play essential part to improve firm performance in export, while the impact of innovation, particularly on SMEs, including innovation in distribution channels, play the main drive of performance is found inconclusive, as most previous findings of distribution channel showed indications that firm performance is also governed by cooperation among channel members on managing coordination, avoiding conflict, achieving sales and profit, exchanging information, trusting and holding commitment, as well as how the applications of non formal channels, position of channel members, multiple distribution channels' establishments, importers linkage establishments, and decentralization.

Therefore, this study examined the impact of distribution channel innovation on the activities upon firm performance and further examined the mediating role of distribution

channel performance in the relationship between distribution channel innovation and firm performance of export oriented manufacturing SMEs agriculture based industry.