



The Nexus between Types of Innovation and Marketing Performance of Small Medium-sized Enterprises in an Emerging Economy

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ABSTRACT

Nowadays the practice in which businesses find themselves becomes unknown, innovation types have been seen as a critical element in an organizational growth of companies. This paper intends to cross examine the interrelation between innovation types and small medium-sized enterprises (SME) marketing performance (MP) in a growing economy of Ghana. The research used quantitative methods, in which four research hypotheses were formulated and tested using partial least squares structural equation modelling. In all, 437 respondents of SME composed data through a questionnaires survey sight in the cities of Kumasi and Accra respectively in Ghana. The study outcomes identified the usefulness of a strong and meaningful impact between the types of innovation namely Product, Process, Marketing and Organization and SME MP of a developing economy. The paper explores to add to the limited knowledge of SME in the perspective of innovation types literature relationship to the MP in a developing economy. Studies conducted, consistently endeavor to determine the connection between the types of innovation and the firm performance and neglecting the MP viewpoint. Hence, this research offers a specialized focus on the types of innovation and its relationship via SME MP in a developing economy. Furtherance, executing critical issues to business managers/owners when devising approaches to organizational firm performance.

Keywords: Marketing Performance, small medium-sized enterprises, Innovation Types

JEL Classifications: M31, O32

1. INTRODUCTION

In both the developed and developing countries of the world, policy-makers at local, regional and national level have come to realize the significant role that small medium-sized enterprises (SME) play in generating employment, wealth and innovation development (Nyoni and Bonga, 2018). This sector has been bedeviled with clear cut definition of SME. Abor and Quartey (2010) argued that SMEs can be traced through capital assets, use of skilled personnel, turnover level, legal status and number of permanent and casual laborers. Further, some expounders also use the number of employees to define SME which differ in national statistical system. In Ghana, SME are grouped into Micro (<5 employees); small (5-29 employees); and medium (30-99 employees) (Teal, 2002). According to Craig et al. (2014) and

Kobe (2007) research, they also identified the strong relationship between SME and economic development especially in the space of employment and taxation to an economy.

Moreover, in developing economy like Ghana, SME contribution cannot be de-emphasize in tenure of GDP and employment (Abor and Biekpe 2006) and (Keskin, 2006). In Ghana, SME have been recognized as an agent for the economic growth of the country as they make major input into the generation of employment and poverty reduction (Agyapong, 2010); (Abor and Biekpe, 2006). The sector of SME therefore plays a major task in economic growth and enhancing the living standard of the Ghanaian people (Abor and Quartey 2010). Every business's survival dwells on profit making and marketing centers on ensuring this intention. Hence, marketing performance (MP) interrelationship to innovation

activities of organizations needs critical evaluation to ensure organizational growth. Ghana and other growing economies in Africa have been facing some difficulties in MP of SMEs. According to Dalitso and Peter (2000), 24.9% of Malawian business owners denoted they had marketing constraints, whilst a study by Aryeetey et al. (1994) also mentioned that 5% of respondents in Ghanaian SME had marketing challenges. Moreover, there is inadequate evidence and conceptual research on types of innovations and the firm MP among Ghanaian SME. This may have adverse consequences on policy development and implementation in SME. Consequentially, business owner/managers of SME may not appreciate the relevance of MP in their operations. This study seeks to bridge this gap and contribute to the literature by focusing on nexus between types of innovation and the firm MP in developing economy.

2. LITERATURE REVIEW

2.1. Innovation

Intense competition in the contemporary business in the global markets has given credence to the innovation and continues alteration in technology and fierce competition has eroded the value added of existing products and services. Innovation culture has been described as a pre-condition for enhancing organizational, marketing and managerial blue chip in a competitive market (Aksoy, 2017). Moreover, for the past two decades, researchers have tried to explain, group and examine innovativeness and performance relevance slated to its practicalities (Gunday et al., 2011). Innovations make firms to achieve defendable competitive advantage due to its strategic directions to overcome the challenges they face e.g. (Drucker, 1985; Hitt et al., 2001; Kuratko, 2005).

Innovation can be characterized as freshness, new things being done, or old things being done in new ways to boost performance in terms of sales, profitability and market shares in an organization. Innovation could be classified into various perspective (Crossan and Apaydin 2010; Jiménez-Jiménez and Sanz-Valle, 2011). Innovation process is described as a procedure in which new ideas or practices within organization can do through generation, adoption and implementation (Wan et al., 2005). Tidd et al. (2005) consider innovation process as a favorable combination of situation into new thought and creating it wide usage applicable. The groupings that regard innovation as a process have some familiar perspectives. Crossan and Apaydin (2010) define the perspective as follows: Driver, source, locus, view, and level Damanpour (1991) opined that types of innovation might be radical, incremental, product, process, administrative, or technical. A referred outcome of innovation can be classified into different disciplines, namely referent, form, magnitude, type, and nature (Crossan and Apaydin, 2010). The preeminence between innovation as a process and outcome is occasionally complicated (Crossan and Apaydin 2010). Therefore, in this paper, two definitions of innovation is used to describe innovation. Damanpour (1991) employed a conjectural framework where innovation is the take up thought or action new to the adopting substance, which embraces all scopes of firm activities, such as a new product or service, a new production process technology, a new structure or administrative system, and a new plan or program within the firm.

2.2. Innovation Types

Innovation has several thoughtful and may be categorize into immeasurable perspectives especially in harmony to the substance of innovation, for example, innovation of socio-cultural systems, of ecosystems, of business models, of products, of services, of processes, of organizations, of institutional strategy, of the movers of innovation (technologies, markets, design, users, etc.), or to the fervency of innovation. Again, incremental (continuous) and radical (discontinuous) innovations are widely familiar partitions of innovation types (Bessant and Tidd, 2009). Wirtz et al. (2010) denote that innovation is the advancement and thriving enterprise of a technical, organizational, business analogous, institutional or social solution of a predicament, as regards introducing new ideas and methods, approved by appropriate users and followed by innovators in expectation of an accomplishment. In accord with the Oslo Manual (Oecd, 2005), innovation types are classified into four distinctive types: Product, process, marketing, and organizational innovation. These as follows: Product innovation can be considered as the features or purposive use of the outset of a good or service that is novel or meaningfully enhanced. There are different typologies that are associate with innovativeness levels, such as extreme and progressive. Process innovation is explained as the execution of a new or remarkably improved scheme of production, delivery method, or administrative process. Marketing innovation (MI) is a new or distinctive difference in nonfunctional attributes such as product design or packaging, place, promotion, and pricing. For example, modification of a product design is akin to changing its semblance, not its function or user. Organizational innovation is a situation whereby an organization enforces new styles or practices in conformity to the firm's business pattern, workplace organization, or external associations.

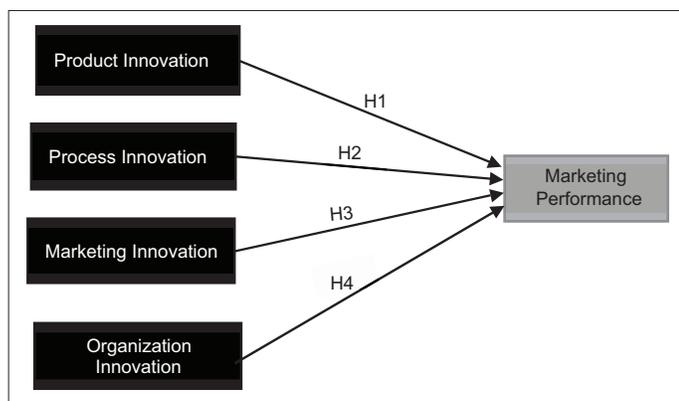
Distinctively, enhancing work structures such as providing flexible work arrangements and cooperating with partners is the original concern of organizational innovation. In probing, innovation method would be centered on the innovation types as portrayed by Oslo Manual (Oecd, 2005), in which innovation in SMEs business can be explained as a product, process, marketing and organization innovations in order to boost firm MP. SMEs involvement in innovation activities in an economy serves as a catalyst for economic growth that directs and improves fair development of nations. Implementing the concept of innovation and its interrelation to the firm MP would ensure that SMEs activities are improved or increased drastically.

2.3. Theoretical Background

Barney (1991) posits the theory of resources based view. Resource based views elucidate the organizations purpose for internal resources is able to produce and create competitive edge for business performance. In achieving the firm MP in the study, extant literature review is conducted about this theory, hence testing the model through four hypotheses (Figure 1) has been advanced to consider the determinants of these variables of this study.

2.4. SME MP

Performance is the results acquired in meeting inward and outside goals of a business (Lin and Huang, 2012). Performance has several names, including growth (Wolff and Pett, 2006). Owen (2006) believes that organizational performance encompasses

Figure 1: Theoretical framework

Sources: Author constructs

three specific areas of firm outcome: (a) Financial performance; (profitability, assets turnover etc.), (b) product/market performance; (sales, market share etc.) and (c) shareholders values etc. Financial or nonfinancial is likewise performance indicators. Return on asset, return on investment, return on equity, return on capital employed, net profit margin, cross profit margin, profit after tax, profit before tax and market share are all examples of financial performance indicators profit maximization through satisfying customers is ascribed to marketing (Kotler and Armstrong, 2003) hence the need to recognize, invest and generate more profit through customer's satisfaction. Undeniably, marketing has been perceived as a cost center and without any performance accountability. Ambler (2003) opined that the investment in marketing is calculated as a waste of resource if its impacts cannot be appraised. In agreement to Ambler (2003), MP through the utilization of marketing metrics inevitably to be estimated and this was enforced by the control theory which explains that managers endeavor to reduce performance outcome variances by identifying performance predictors. These interrelated predictors and performance can be diagnosed and observed.

Control theory as described by Barwise and Farley (2004) illustrate the integration of unexpected occurrence (both good and bad) and threatening an assumed implementation that cause the eventualities to be outstanding than purposed. According to Kotler and Armstrong (2003), control theory mentioned the necessity for ex-post or retrospective intelligence on marketing approaches as an important section of the pattern of diagnosis, arrangement, execute Sare controls of marketing, (Ambler and Roberts, 2008) refer to Merchant (1998) who defines control as being both reactive and proactive in foretelling issues out of embracing performance, and explained that control of an organization's objectives and strategies that are associated with people's manners and opinions are through the deposition of managers. Ambler (2003) general approach advocates the use of three financial and six brand equity measures to measure MP namely (ROMI, Sales, Brand Equity etc.).

Marketing scholars have observed that the incapability of marketing to authenticate its assistance to firm performance has failed its impact within firms (Ambler and Roberts, 2008; Stewart, 2009). The only concurrence that has been reached in both the strategic e.g. (Chakravarthy, 1986; Morgan and Strong, 2003) and literature in marketing (Clark and Ambler, 2001; Morgan, Clark et al., 2002; Vorhies and Morgan, 2003) is that performance of

marketing is multi-facets in disposition. Homburg and Pflesser (2000), defined MP as: "...The effectiveness and efficiency of an organization's marketing strategy interrelated to market-related goals, such as earnings, advancement, and market share..." Thereupon, given the best consideration to MP assessment which would assist marketing exponents to measure their portion to organization financial performance.

2.4.1. MP indicators

Katsikeas et al. (2016) categorically identified four ways of evaluating MP outcomes in 998 empirical studies published in the top 15 marketing journals from 1981 to 2014, namely; customer mindset, product-market performance, accounting performance and financial market performance. The inquest has revealed the performance resultant of marketing supremacy in accounting and product-market facets of performance. Consequentially, accounting indicators of profit, sales revenue and market share are the most widely acceptable measures of MP. Besides product-market measures, market share is widely admissible as a performance indicator as compared to the product-based on sales or brand related measures (Farris, 2006). Nonetheless, the inquisition also discloses market share has been less popular performance for the past decades. Accounting measures related to profit and sales revenue are the mostly widely used performance indicator as compared to using return on profit and lastly, the financial market measures expose a speedy rise in the use of stock market-related measures of performance, driven largely by the top three marketing journals of the past decades. Further, customer satisfaction is find as the dominant measures as compared to brand equity and others is used to customer based measures. The extant literature above gives an indicative prominence to use ultimate acceptable indexes to measure MP in coherent to innovation types of SME. This investigations would espouse the profitability as accounting measure, sales as a product market measure and lastly, customer satisfaction as customer based measures respectively. Ismail (2012) suggested that profit, sales and customer growth are the realm to measure MP.

In this study, we tend to aim to explore innovations types and their effects on firm MP. By examining product, process, marketing and organizational innovations and firm MP such profit, sales and customer satisfaction. So the most contribution of this study is that the comprehensive innovation types and MP analysis supported empirical knowledge that not solely disclosed the positive effects of innovation types on firm performance, however, conjointly yielded a path of relations among these variables using structural equation modeling (SEM) partial least squares (PLS) approach. This paper has five sections. Following the introduction section 1, we tend to be in brief given, in section 2 the analysis background and our hypotheses. In section 3, the empirical knowledge and analysis methodology are given. The section 4 introduces the findings. Finally, in section 5 the discussion of findings, conclusions and final remarks are given.

3. RESEARCH MODEL HYPOTHESES

The research architecture is put up following earlier important literature as depicted in Figure 1. It exhibits all the variables in research structure, which investigates the correlation stuck

between types of innovation and the firm MP. Four research hypotheses of this inquest were generated to test the corporation among innovation types - product, process, marketing and organization and firm MP.

Research framework of types of innovation (independent variables) and MP (dependent variables)

- I. Product innovation and the SME MP
H₁: Product innovation has positive influence on the SME MP
- II. Process innovation and SME MP
H₂: Process innovation has positive influence on SME MP
- III. MI and SME MP
H₃: MI has a positive influence on the SME MP
- IV. Organization innovation and SME MP
H₄: Organization innovation has a positive influence on the SME MP
- V. Innovation types and the SME MP
H₅: Innovation types has a positive influence on the SME MP

3.1. Product Innovation and SME MP

Product innovation can be distinguished through the commencement of a new product/service or breed consequential advancement in the existing products/services (Polder et al., 2010). Product innovation can likewise be revived or improve product in association to its features, intended use, software, user-friendly or constituents and substance. Product innovation is associate with dissimilar perspectives. On the grounds, where the customers are new to the product. Secondly, where the product is new to the firm, and lastly, the product modification through product distinctiveness in an existing product of the business (Atuahene-Gima, 1996). Service organization competencies are triggered by innovation (Polder et al., 2010). In contemporary business, service firms have to advance new products/services according to its customer's needs (Olson et al., 1995).

Moreover, attracting new customers is an essential summative in product innovation. The needs of customers' tend to be of great importance to every firm introducing new products or modification of an existing product (Adner and Levinthal, 2001). Shorter life span of products necessitate the innovativeness of business in relation to products (Duranton and Puga, 2001). Product innovation also makes organizations to be highly competitive in the market. Low competition faced at the introduction stage of product innovation ensures high profit for the firms (Roberts, 1999). Ettlíe and Reza (1992) stated that firms introduce product innovation to outweigh competitors in the markets. Product innovation ensures customer satisfaction. Moreover, in agreement with (Hertog, 2000), service innovation is divided into four approaches expressly; service concept, client interface, service delivery system and technological which also delivers useful blueprint for different varieties of innovation of service. Product innovation generates a competitive vantage to firms (Camisón and Villar-López, 2014). With an improved quality of service it tends to advance the performance of organizations leads to the creation of a business advantage (Garvin, 1987; Forker et al., 1996). Markets' threats from competitors is avoided through product innovation offerings (Hult et al., 2004).

Consequently, product innovation is the assurance of functional performance of businesses (Olson et al., 1995). The accomplishment of firms currently actualized on product innovation tends to rationalize the share of the market and organizational performance. Ettlíe and Reza (1992) mentioned the positive correlation between new product development and the firm performance. Bayus et al. (2003) conjectured that organizational performance has a robust effect on product innovation. Product innovation is assumed as responsiveness to MP. In addition, Alegre and Chiva (2008) designated that the perspectives of product innovation i.e., (efficacy and efficiency) were unambiguous and expressive associated to the performance of firms. Finally and importantly, (Varis and Littunen 2010) also said there exists a strong correlation between a newly introduced product and the firm performance. The expounders are of the assertion that product quality results in more customer satisfaction which in turn leads to organizational performance. The above literature review leads to following hypotheses;

Hypothesis 1: Product Innovation is positively associated with the SMEs MP

3.2. Process Innovation and SME MP

Foremost, successful execution of the production or delivery approach that is new or effectively enhanced can be ascribed to process innovation (Oecd, 2005). Process innovation includes bringing meaningful improvement in the equipment, technology and software of the production or delivery method. The peculiar technique should be reflected as an improvement to the firm and one that has never been executed. New processes, nonetheless, can be created by the firm itself or with the help of another firm (Polder et al., 2010). Developing innovative products and changes have made to procedures to introduce the new products are correlated to the firm innovation process (Adner and Levinthal, 2001). Likewise, cost of the product is mirrored by the process innovation (Olson et al., 1995). Consequently, cost curtailment is virtually of compelling significance to business when it comes to process innovation.

Further, effectual inter-relation between the service provider and customer can be ascribed to service process innovation (Bienstock et al., 2003). This proved that service product or process integrates on the association amongst it under service innovations. Core service characteristics and attributes designing should not be visualized as the only value added to users but also through delivery of service processes beside new service evolution (Papastathopoulou et al., 2001; Randhawa and Scerri, 2015). When service is being delivered, this makes employees gain opportunities to learn, innovate and co-create value with customers as argued by Agarwal and Selen (2011) and Voss and Zomerdijk (2007). Service design and delivery has been recognized as the best option through customer interface and technology (Sampson and Spring, 2012; Den Hertog et al., 2010). Synergistically, successful service innovation embraced all these critical variables.

In general, the intrinsic worth of process innovation gives productivity gains, improvements in product quality, and cost and time savings (Martínez-Ros and Labeaga, 2009; Un and

Asakawa, 2015). In agreement, scholars have established the interconnection of process innovation as critically weaved to financial benchmarks such as sales improvement (He and Wong, 2004) and profitability (Piening and Salge, 2015). For instance, cost restrictions of operations of production and supply chain technologies from process innovation enable businesses to accumulate utmost profit margin and consumers benefiting from its price reduction, which ultimately is preeminent in raising market sales and shares respectively (Dehning et al. 2007). Firms adopt new processes to compete with other firms hence customer satisfaction. Manufacturing abilities (e.g., productivity and speed of delivery) lead to an enhancement in a firm's market performance of customers satisfaction and its customer relations improvement (Li et al., 2005). Varis and Littunen (2010) exploration on SME in Finland avouch the literature of the unarguable correlation between process innovation and the firm MP.

The following hypothesis is shown below:

Hypothesis 2: Process innovation is positively associated with the SME MP

3.3. Marketing Innovation and SME MP

Currently, value chain perspectives can comprehensively change through new ideas. Innovation iceberg is just the tip of products and services innovations as mentioned by Schaltegger and Wagner (2011). Utkun and Atilgan (2010) define MI as the usage of a unique marketing blueprint embrace a refined distinction in exceedingly product's evaluation, pricing, promotion, placement or packaging. Chen (2006) also added that MI is the changing ways of collecting customer's information. In consonance to Hassan et al. (2013), MI is the mechanism of new marketing approach that embrace enhanced changes in the design, placement, packaging, product promotion and pricing strategy. To expounders, the existential of MI is to enhance sales, return on investment through profit, return on capital employed, return on asset, and return on equity, market share and new markets openings.

Competitive firms always reckoned in deepening their MI programs in order to be serviceable in their firms (Polder et al., 2010). MI seeks to advance new techniques for marketing. In that cause, advancing new blueprint and mechanism for marketing has an influential capacity in the conquest of the organizations. MI ought to lessen the uncertainties, which are comprehensible to technology and market (O'Connor and Rice, 2013) occasioned by a firm to practice new partnership with prospective customers and to discern their actions and learning requirements through a lead consumer analysis (Moreau et al., 2001; Song and Thieme, 2009).

Performance of businesses in relations to MI s is found to be real. Bhaskaran (2006) research conducted on small and medium-sized enterprises that nexus on MI are profitable and capable to generate impressive competitive edge and as in contradictory to robust big businesses. Robinson (1990) studies conducted initiated that there is gratuitous correlation between innovative performances and MP knit by the product innovation and market share. Further, Szymanski et al. (1993) opined that market share remarkably leads to an improved business performance. Proportionately, studies have found that product delivery speed

measuring production performance is robustly interlinked with market share measuring market performance of the firm. Anderson et al. (1994) investigate the connection between product quality being provided and customer satisfaction. Further, the correlation between organizations innovation programs and their marketing abilities is manifested to be productive in improving customer interfaced performance (Ngo and O'Cass, 2012). Halpern (2010) consummated performance in the airport industry had a positive effect on MI. The following hypothesis is proposed;

Hypothesis 3: MI is positively associated with the SME MP

3.4. Organization Innovation and SME MP

Polder et al. (2010) defined Organizational innovation as initiating new style of doing business, workplace organizing methods, decision making sequence and new artery of handling foreign relations. Further, administering new forms of strategizing business practices, external relations and work place is alluded to organization innovation (Oecd, 2005). Organizational innovation is new ways of organizing routine activities. Consequently, current businesses inevitably have to perpetually improve their style of organizing, which invariably enhances organizational performance to curtail the transaction and administrative cost respectively. Efficiency in firms are also achieved through organizational innovation Polder et al. (2010) postulated that organization itself or with the furtherance of third partaker can initiate new ways and methods in its new organizational approach. Whereat, organization innovation amending the ways of organizing matters to compete intensely with competitors and customer satisfaction Ettlle and Reza (1992).

Extant literatures on the inter-relation between performance and organizational innovation have attested to the kindred amongst them. In consonance to Jiménez-Jiménez and Sanz-Valle (2011) inquest, there is an appreciative association between organizational learning, innovation and firm performance. Gopalakrishnan (2000) study also identified two perspectives of innovations i.e. speed & magnitude with the organizational performance. The exploration ascertains that, the innovations of speed of adoption and firm performance are highly correlated. Damanpour et al. (2009) supported the statement of an existential dependence between innovativeness and firm performance which is positively inter-related. Bowen et al. (2010) mentioned the positive accord between innovativeness and future performance. Cingöz and Akdoğan (2011) also suggested the positive agreement of an expected positive performance effect with innovative behavior which is regarded as a weighty advantage that guides an organization in the attainment of dynamic business environment. It is surmised that there is a direct fitness of formalization and centralization with administrative innovation which in turn affirms positively with organizational efficiency. The following hypothesis is formulated:

Hypothesis 4: Organization innovation is positively with the SME MP

3.5. Innovation Types and the SME MP

In 1959, Penrose forward the theory of resource based-view (Garnsey, 1998), which alluded that organizational performance is dependent on the resources and capabilities which is the ultimate

cause of acceptable competitive edge in the market (Wernerfelt, 1984; Mahoney, 2001). Garnsey (1998) posited that for firms to grow, there is the necessity to siege, organize and release resources. Organizational goals rest on the distinctive avenues that are always accustomed to determine organizational performance. These evaluative mechanisms are financial and non-financial tools (Darroch, 2005; Bagorogoza and de Waal, 2010; Bakar and Ahmad, 2010). In addition, the significance of innovation to organizations are virtually due to competitive edge and profits maximization as announced by Roberts and Amit (2003). Most businesses tend to apply financial indicators as an evaluative mechanism to performance (Grant et al., 1988; Rosli and Sidek, 2013), while non-financial mechanisms are widely used in order to adjust to the variations in the internal and external environments (Kargar and Parnell, 1996). As disclosed by many studies and scholars, innovation and firm performance have a positive affinity for examples (Zahra and Das, 1993; Capon et al., 1990; Calantone et al., 1995; Han et al., 1998).

Anning-Dorson (2016) explained that innovation is empirically linked with competitiveness and is an indispensable strategic instrument for service organizations accepting to secure competitiveness and be important. Flexibility, conformation and responsiveness lead to performance of firms improvement through innovation as expounded by Anning-Dorson et al. (2015). The key argument made for innovation leading to firm performance is that, these firms are efficient in constantly getting ahead of competition. Two cardinal items to ascertain the firm performance and organizational development are financial and non-financial performance (Anning-Dorson, 2016; Jaworski and Kohli, 1993). Wherefore, MP is duplicated in the construct of profit, sales, customer satisfaction, and customer retention and market share being sufficient to firm's measurement of performance. The following hypothesis is proposed:

H₃: Innovation types is positively associated with the SME MP

4. METHODOLOGY

The study objectives intend to establish the nexus between innovation types and the MP of SME and to examine how the various dimensions of each innovation types predicate on the MP of SME. The inquest essentials are collected affix on business owners/managers where each respondent was asked to give data on his/her business and knowledgeable materials on innovation types and its correspondent with the MP of discrete firms. The study was done in Greater Accra (Accra) and Ashanti (Kumasi) regions of Ghana, which are, the capital and second largest city in Ghana respectively, with the prominent concentration of SME. A convenient sample was used to select 500 business owners/managers from SMEs. This approach is in consonance with a previous study by Makanyeza and Dzvuke (2015) in which only a person was selected to fill the questionnaires for the business. This, as a result of the resemblance of SME activities of an economy, a sample size of 500 is thought of being large and representative, since most businesses in this sector are deficient of official data about their activities.

The structured questionnaires were tested and final adjustment was made to replicate the instruments trustworthiness before they were dispensed to the respondents. The questionnaires were compeer by a group of eight researchers from the area of centre of entrepreneurship and business owners/managers of SME. Accordingly, five investigative assistants were engaged and cortege to assist in the administering of the study questionnaires to respondents. In all, 87.4% of the total questionnaires administered were returned representing 437 respondents. All the suitable types of innovation and the MP were conjugated in sequence to reduce the issue of common method variance (CMV). Further the participants were promised of data secrecy and information provided. Acquaah and Agyapong (2015) and (Acquaah et al. (2011) studies are coherent with reducing CMV problems.

4.1. Measurement of Constructs

Innovation types as an independent variable in this investigation was classified into product innovation, process innovation, MI and organizational innovation. This part includes 20 items divided into 4 subcategories (Innovation types) to scale varied issues connected with the aspects of innovation. Each of the independent variables will be measured by a Likert-type scale of seven (7) levels (ranging from "1 strongly disagree" to "7 strongly agree").

4.1.1. Product innovation (SI)

Embraced four elements, expressly introduction of new products, developing new product features, reposition of existing products and new products to penetrate markets as was used by I.D. Prajogo, (2017) (Vinarski-Peretz, Binyamin, & Carmeli, 2011). A 7-point interval scale ranging from strongly agree =1 to strongly disagree=7 was used and the respondents were asked to distinguish their businesses' innovation types and the MP comparative to competitors. Item (reposition of existing products) were omitted of having an outer loading value >0.40 (Hair et al., 2013). Table 2 and 4 shows the Cronbach's Alpha for pilot and actual studies respectively were found to be more than the minimum value of 0.70 and therefore justifies the construct inclusion in the analysis.

4.1.2. Process innovation (PI)

Comprised four items namely increase speed of implementation, information accessibility, methods allowing work instruction and cut variable cost. All these items were adapted/ modified from (Bilderbeek, Hertog, Marklund, & Miles, 1998). A 7-point interval scale ranging from strongly agree =1 to strongly disagree=7 was used and the respondents were asked to show their businesses' innovation types and the MP relation to competitors. Table 2 and 4 shows the Cronbach's Alpha for pilot and actual studies respectively were found to be more than the minimum value of 0.70 and therefore justifies the construct inclusion in the analysis.

4.1.3. Marketing innovation (MI)

Cleaved seven items, i.e. innovating marketing programs to stay ahead of the market, find new ways to build and improve relationships with customers, sales techniques are always revised, and the new methods are tried to find, implement innovative marketing programs, look for ways to develop new business models, product design is constantly renewed according to customer's needs and competitive products and look for ways

to improve promotion methods and tools. All these items were adapted/ modified from (Deshpandé, Farley, & Webster Jr, 1993), (Sok, O’Cass, & Sok, 2013) .A 7-point interval scale ranging from strongly agree =1 to strongly disagree=7 was used and the respondents were asked to identify their businesses’ innovation types in the relation to the firm MP approximate to competitors. Item (the new methods are tried to find) were omitted of having an outer loading value >0.40 (Hair et al., 2013) Table 2 and 4 shows the Cronbach’s Alpha for pilot and actual studies respectively were found to be more than the minimum value of 0.70 and therefore justifies the construct inclusion in the analysis.

4.1.4. Organization Innovation (OI)

Measures four items, i.e. co-operation between units and departments, encouragement to disagree, encouragement to be multi-skilled, work well-being of employees and appreciation of employees All these items were adapted /modified from cf., (Lampikoski & Emden, 1999); (Harborne & Johne, 2003); (Wan et al., 2005); (Dobni, 2008); (van Hemert, Nijkamp, & Masurel, 2013). A 7-point interval scale ranging from strongly agree =1 to strongly disagree=7 was used and the respondents were asked to identify their businesses’ innovation types in relation to the firm MP relative to competitors. Item (encouragement to disagree) were omitted of having an outer loading value >0.40 (Hair et al., 2013). Table 2 and 4 shows the Cronbach’s Alpha for pilot and actual studies respectively were found to be more than the minimum value of 0.70 and therefore justifies the construct inclusion in the analysis.

4.1.5. Marketing Performance

As a dependent variable measured by three (3) items namely Profitability, Customer Satisfaction, and Sales. All these items were adopted and modified from (Vorhies & Morgan, 2005), the literature review and other studies in such areas. These items are selected according to the appropriateness of each item and to maximize the construct’s reliability and validity. In this research, the subjective perceptions of owners or managers of SME were used to evaluate the MP. A 7-point interval scale ranging from strongly agree =1 to strongly disagree=7 was used and the respondents were asked to identify their businesses’ innovation types in interrelation to firm MP alike to competitors. Table 2 and 4 shows the Cronbach’s Alpha for pilot and actual studies respectively were found to be more than the minimum value of 0.70 and therefore justifies the construct inclusion in the analysis.

4.2. Control Variables

In accordance to studies conducted, the study controlled four characteristics of the firm – firm size (number of employees); firm age (number of years established); firm sector (measured as hospitality, beauty, transportation and banking service) and finally forms of business (classified as family owned, sole trader, private, partnership and public limited companies).

4.3. Descriptive Statistics

Table 1 shows the characteristics of the respondents and the SME participated in this study. The data collected for this study come from 437 business owners/managers from Accra and Kumasi respectively. 39.4% of the respondents are located in

Table 1: Characteristics of respondents

Variables	Frequency	Valid percent
Gender		
Male	236	54.0
Female	201	46.0
Age		
Under 21 years	54	12.4
21–34 years	202	46.2
35–44 years	105	24.0
45–54 years	63	14.4
55–65 years	13	3.0
Education		
No formal education	54	12.4
Primary school	39	8.9
High/secondary	62	14.2
Training/professional cert	147	33.6
HND/bachelor	127	29.1
Graduate and post graduate	8	1.8
Establishment		
<2 years	12	2.7
3–5 years	102	23.3
6–8 years	69	15.8
9–11 years	152	34.8
12 years and above	102	23.3
Location		
Accra	172	39.4
Kumasi	265	60.6
Forms of business		
Private Limited Company	111	25.4
Partnership Limited Company	75	17.2
Public Limited Company	43	9.8
Sole Proprietorship	168	38.4
Family Owned Business	40	9.2
Employees		
<5 (μ)	59	13.5
6–29 (small)	293	67.0
30–99 (medium)	70	16.0
100 and more (large)	15	3.4
Role in the firm		
General manager/owner	232	53.1
Marketing/sales manager	158	36.2
Supervisor	47	10.8
Current business		
Existing	194	44.4
Existing concept in Ghana	147	33.6
Never existed	96	22.0
Sector		
Hospitality	144	33.0
Beauty	136	31.1
Transportation	87	19.9
Banking service	70	16.0

Source: Based on the sample survey

Accra, whiles 60.6% were in Kumasi, this might be due to high population of SME in Kumasi. The background education of these respondents demonstrates 33.6% of them having professional/training certificates, followed by HND/bachelors with 29.1%, whiles 14.2%, 12.4%, 8.9% and 1.8% were high/secondary, no formal education, primary school and graduate and post graduate certificates respectively. The 53.1% of the respondents were managers/owners, 36.2% of them were marketing/sales managers and supervisors were 10.8%. Classification of employees really reflect on the SME definition which identified 13.5% as Micro, 67% as small, 16% as medium and 3.4% as large businesses. The sample is rich in four sectors including mainly from hospitality

(33%), beauty (31.1%), Transportation (19.9%), and banking (16%). The business model of SME, 44.4% are existing, 33.6% existing concept in Ghana and 22% were never existed. The ages of the respondents vary between under 21 years (12.4%), 22–34 years (46.2%), 35–44 (24.0%), 45–54 years (14.4%) and 55–65 years (3.0%). In terms of age, the survey depicts most of the respondents as predominantly as young adults. Gender, 54% of the sample is male and the remaining part (46%) is female. Types of business operated by the SME, sole proprietorship were 38.4%, 25.4% are private limited liability, 17.2% partnership limited liability, 9.8% were public limited liability and family owned business hold 9.2%.

5. RESULTS AND DISCUSSION

5.1. PLS-SEM Assessment

Foremost, the challenges in survey exploration is the designation of an apt statistical model for analysis. PLS based SEM is centered on the principal component concept (which is good for theory building) and uses the PLS estimator (Hair et al., 2011; Lowry and Gaskin, 2014; Vinzi, et al., 2010). PLS, variance-based SEM is widely acceded in business management and operations management (Carter et al., 2008; Peng and Lai, 2012; Shah and Goldstein, 2006); information systems management (Urbach and Ahlemann, 2010); marketing management (Hair et al., 2012) and organizational behavior and human resource management (Anderson and Gerbing, 1988).

PLS-SEM is selected in the inquiry due to the following accession: (1) It is fit for theory building studies (Vinzi et al., 2010). (2) It is regarded as appropriate for investigating complex cause-effect-relationship models (Henseler et al., 2016; Lowry and Gaskin, 2014). (3) It is a non-parametric method which limits handful restrictions on data distribution and sample size (Vinzi et al., 2010). Smart PLS 3 software was accustomed to quiz the hypothesis of the research (Henseler et al., 2016). Figure 2 provides more details of our approach.

5.2. Measurement Model Assessment

In PLS-SEM, appraisalment of the measurement model (also referred to as the outer model) includes composite reliability (CR) to evaluate internal consistency, individual indicator reliability and average variance extracted (AVE) to adjudge convergent validity (Hair et al., 2013).

5.2.1. Multicollinearity amongst exogenous variables

Pallant (2007) imputed that tolerance values of below 10 and variable inflation factor (VIF) values of above 10 precede multicollinearity among independent variables, thereby constructing the development of good PLS-SEM models. The tolerance values ranging from (0.413) to (0.793) and VIF

values also ranging from (1.252) to (2.423), captured from this analysis, attained the infrequency of multicollinearity between the exogenous variables. Table 3 recount the Tolerance values as well as VIF values for the aforementioned variables.

5.2.3. Internal Consistency Reliability

This is a configuration of reliability that is used to herald the consistency of results over items of the same variables (Hair et al., 2013). It decides whether the items measuring a variable are comparable in their results (Hair et al., 2006). Internal consistency reliability is sieged by using CR. Table 4 shows the CR values of all the latent variables used in this study. These values were contrived to be >0.70 (Hair et al., 2006) which demonstrate internal consistency.

5.2.3. Convergent reliability

This pertains to limit in which an estimate harmonize positively with option instruments of the same variable (Hair et al., 2013). AVE was conjecture to scrutinize convergent validity. Table 2 and 4 shows the AVE values for pilot study and actual study respectively. These values were advance were more than the specified value of 0.50 (Hair et al., 2006) and therefore attest to convergent validity.

5.2.4. Discriminant reliability

This is the range to which a variable is indeed distinct from other variables, in tenure of how much it complements with other variables, and how much the index interpret only a single variable (Hair et al., 2013). The distinction and cross-loading score of (Fornell and Larcker, 1981) were used to certify discriminant validity. Table 4 adduced that the square root of AVE for all latent variables was prominent than the inter-construct appendage (Fornell and Larcker, 1981) and hence they validate discriminant validity. Complementary, all index individual loadings were constituted to be higher than their distinctive cross-loadings (Hair et al., 2013). This waived further attestation for discriminant validity (Table 6).

5.3.5. Indicator reliability

This particularize how much of the difference in an item is translated by a variable (Hair et al., 2013). The outer loadings are apt to appraise the indicator reliability as shown in Table 5. A higher outer loading on a variable herald the interrelated benchmark has much in common, that is measured by the variable (Hair et al., 2013). Hair et al. (2013) intimated that items having a loading >0.70 should be withheld, items having an outer loading value >0.40 should be neglected and that its weight on the AVE and CR of the variable should be scrutinized.

5.4. Structural Model Assessment

Structural model is elicited to experiment the association between endogenous and exogenous variables. In PLS-SEM, path

Table 2: Computed reliability coefficients for pilot study

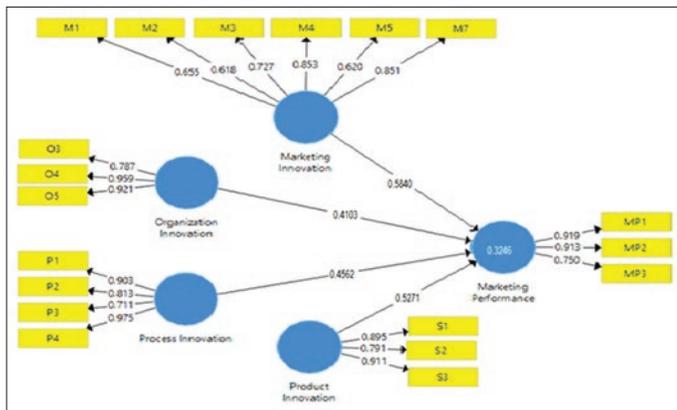
Exogenous variable	Number of items	Sample size	CR	Cronbach's alpha
Marketing Performance	3	30	0.869	0.759
Product innovation	5	30	0.898	0.826
Process innovation	4	30	0.821	0.795
Marketing Innovation	7	30	0.856	0.810
Organizational innovation	5	30	0.8701	0.747

MI: Marketing innovation

coefficients to ascertain the weight and relevance of structural model relationships coerced through structural model assessment, Q2 to estimate the model’s predictive relevance and f2 to pronounce on the influential weight of the exogenous variable on an endogenous variable (Hair et al., 2013).

5.5. Path – Coefficient

Figure 2: Partial least squares structural equation modelling output for the direct relationship between SI, PI, MO, OI and MP



6. DISCUSSION

SI, PI, MO, and OI was positively associated with MP, which supports H₁, H₂, H₃ and H₄ respectively (Figure 2). For which reason, it is very eminent for managers and business owners to embrace MP as an essential clue in ascertaining firm performance

Table 3: Multicollinearity amongst exogenous variables

Exogenous variable	Colinearity	
	Tolerance	VIF
Product innovation	0.793	1.252
Process innovation	0.456	2.195
Marketing Innovation	0.413	2.423
Organization innovation	0.413	2.423

Source: Field work, 2018, MI: Marketing innovation

Table 4: Measurement model results

Constructs	Items	Loadings	AVE	CR	Cronbach’s alpha
Marketing Innovation (MI)	M1	0.655	0.53	0.869	0.869
	M2	0.618			
	M3	0.727			
	M4	0.853			
	M5	0.620			
	M7	0.851			
	Organizational Innovation (OI)	O3			
O4		0.959			
O5		0.921			
Process Innovation (PI)	P1	0.903	0.733	0.916	0.900
	P2	0.813			
	P3	0.711			
	P4	0.975			
Product Innovation (SI)	S1	0.895	0.752	0.901	0.847
	S2	0.791			
	S3	0.911			
Marketing Performance (MP)	MP1	0.919	0.747	0.898	0.826
	MP2	0.913			
	MP3	0.750			

AVE: Average variance extracted, CR: Composite reliability. MI: Marketing innovation, PI: Process innovation, MP: Marketing performance

and its inclination, whereas MP has a direct and admiring influence on SI, PI, MO and OI respectively. Because SI, PI, MO and OI, and MP have closed relationship in enhancing organizational performance through innovation activities. The outcomes of these direct relationships are consistent with those of Augusto et al. (2014), (Camisón and Villar-López, 2014; Gunday et al., 2011; Mohamad and Sidek, 2013) which established a complimentary affinity between innovation types and MP. The path coefficient value of the MI - MP inter-relation is slightly higher than that of the other variables which denotes SMEs berth more worth on MI in relation to attainment of an enhanced MP.

6.1. Hypothesis Testing

The PLS-SEM model was engaged to examine the correlation between the various constructs advanced by the investigation. In this cause, SEM analysis was executed by PLS version and analyses specific to goodness-of-fit indices. The outcome aided with Goodness fit indices. For the whole model, statistical results show that Chi-square/df = 1.578, SRMR = 0.071 and NFI = 0.926. Hair et al. (2016) acknowledged that SRMR and NFI are imperative to model fit analysis. Congruence to the study, we hypothesized four paths using the SEM to investigate the correlation of innovation types on the firm MP, results foretell that all the paths were significant (P < 0.05). A SEM model affirms that the innovation types are directly having a gratuitous effect on the MP efforts. The plenary paths were significant at P < 0.000. The statistical findings revealed the following hypothesis.

H₁: Product innovation positively influence the MP.

The analysis of the data collected proved that product innovation (SI) had a significant positive effect on MP (β = 0.5271, t = 9.0531 P < 0.05; Table 7). The beta coefficient was in the right tide, as hypothesized. Consequently, the hypothesis that “Product innovation positively influences MP” was supported. Hitherto, this infers that advancement in product innovation would give a boost to MP of SME. In harmony, SME that are capable to

Table 5: Cross loadings between the measures

Items	MI	MP	Organization innovation	PI	Product innovation
M1	0.655	0.016	-0.052	0.106	0.055
M2	0.618	-0.002	-0.036	0.032	-0.030
M3	0.727	0.013	-0.044	0.042	0.051
M4	0.853	0.080	-0.021	0.114	0.047
M5	0.620	0.007	-0.086	0.033	0.021
M7	0.851	0.081	-0.054	0.099	0.120
MP1	0.120	0.919	-0.011	-0.022	-0.066
MP2	0.058	0.913	-0.054	-0.003	-0.089
MP3	0.032	0.750	-0.039	-0.053	-0.107
O3	-0.029	-0.005	0.787	-0.100	-0.001
O4	-0.052	-0.044	0.959	-0.081	0.003
O5	-0.043	-0.031	0.921	-0.051	0.015
P1	0.106	-0.021	-0.086	0.903	0.492
P2	0.110	-0.005	-0.052	0.813	0.313
P3	0.091	0.002	-0.050	0.711	0.478
P4	0.119	-0.033	-0.063	0.975	0.430
S1	0.038	-0.107	0.007	0.322	0.895
S2	0.080	-0.044	0.012	0.489	0.791
S3	0.142	-0.086	0.004	0.482	0.911

MI: Marketing innovation, PI: Process innovation, MP: Marketing performance

Table 6: Fornell Larcker criterion for checking discriminant validity

Variables	MI	MP	OI	PI	SI
MI	0.728				
MP	0.584	0.865			
OI	0.510	0.639	0.892		
PI	0.421	0.529	0.675	0.856	
SI	0.495	0.506	0.538	0.566	0.867

Diagonal elements in bold: Square root of AVE, off-diagonal elements: Correlation between constructs

attain high levels of product innovation activities would correlate performance indicators of marketing. The results is congruence with some of the discovery in earlier studies, which recited expressive favorable connection between product innovation and firm performance. For example, Augusto et al. (2014) found a positive relationship between product innovation and MP in their study of innovation and business performance in SME. Other studies also supported a positive relationship between product innovation and organizational performance (Hall and Wagner, 2012; D'Angelo, 2012; Atalay et al., 2013).

H₂: Process innovation positively influence the MP.

The analysis of the data collected showed that process innovation had significant positive effect on MP ($\beta = 0.4562$, $t = 5.2509$, $P < 0.05$; Table 7). The hypothesis; “process innovation positively influences MP” was supported and this was indicative in the beta coefficient which depicts the right direction of the path. This precept foretell that an efficiency in process innovation would result in an enhanced performance of SME. Justification, SME that have high efficiency of process innovation activities would perfect well on MP indicators. The result is consonance with some of the judgment of (Murat and Baki, 2011), who opined that process innovations have a potent and positive affiliation with organizational performance as well as (Mohamad and Sidek 2013), who also effectuated on the hypothesis that process innovation entranced firm performance sentimentously.

H₃: MI positively influence the MP.

The analysis of the data collected showed that MI had significant positive influence on MP ($\beta = 0.5840$, $t = 24.9573$, $P < 0.05$; Table 7). The hypothesis that “MI positively influences MP” was supported as the beta coefficient was in the right path. In furtherance, it alludes that an enrichment in process innovation would result in an advancement in the performance of SMEs. Whereat, SME that have high levels of process innovation activities would perform well on MP indicators. The aftereffect is in agreement with some of the deductions in earlier studies, which reported significant positive relationship between process innovation and MP. For example, (Varis and Littunen, 2010) using an estimated model, avow a highly significant association between a market related innovative activity and firm performance. Gunday et al. (2011) posited in their inquest of innovation, that organizational learning and performance bear out a positive relationship between process innovation and organizational performance.

H₄: Organization innovation positively influence the MP.

Experiment of the data collected modelled that organizational innovation (OI) had significant positive influence on MP ($\beta = 0.413$, $t = 5.8329$, $P < 0.05$; Table 7) as hypothesized; accordingly, that “organizational innovation positively influences MP” was supported, hence the beta coefficient given in the right path. This presupposed that an advancement in the activities of organization innovation would correlate its affinity of SME MP. The climax is in agreement with some scholars inquest which transcribed to the significant positive relationship between organization innovation and firm performance (Dadfar et al., 2013; Noruzy et al., 2013; Camisón and Villar-López, 2014).

6.1.1. Predictive relevance

Blindfolding was used to cross-validate the model's predictive relevance for each of the individual endogenous variables, the Stone-Geisser Q² value (Geisser, 1974; Stone, 1974). By performing the blindfolding technique (Hair et al., 2013) with an exclusion distance of 7 yielded cross-validated redundancy Q² values of all the endogenous variables. In this inquisition, Table 7 settled that the Q² coefficients for the predictive relevance associated with each latent variable block in the model, through the dependent latent variables, are all <0.35 which presage a medium predictive relevance of the model.

6.1.2. Effects size (f²) of exogenous variables

The effect size for each path model is envisioned by calculating Cohen's f². The f² is figured by noting where $R^2_{included}$ and $R^2_{excluded}$ are the R² values of endogenous latent variables when a selected exogenous variable is included or excluded from the model (Hair et al., 2014). F² size effect narrates the effect of a peculiar predictor latent variable on a specific endogenous variable as shown in Table 7. In this study, F² size effect radiate from small to large for all the exogenous variables in elucidating the SI, PI, MI, OI and MP. Table 7 spot-on the effect sizes of the various structural paths in the model, where SI/MP is medium, PI/MP is small, MI/MP is large and OI/MP is also medium.

Table 7: Structural model results for hypotheses 1, 2, 3 and 4

Hypothesis	Beta	Standard error	t-values	P values	Q ²	Remarks	f ²	Remarks
H1: SI -> MP	0.5271	0.0582	9.0531	0.0028	0.3246	Medium	0.234	Medium
H2: PI -> MP	0.4562	0.0869	5.2509	0.0135	0.3246	Medium	0.137	Small
H3: MI-> MP	0.5840	0.0234	24.9573	0.0001	0.3246	Medium	0.452	Large
H4: OI -> MP	0.4103	0.0703	5.8329	0.0100	0.3246	Medium	0.246	Medium

Q² Decision rules small: 0.0<Q² effect size<0.15, medium: 0.15<Q² effect size<0.35, large: Q² effect size>0.35, f² decision rules small: 0.0<f² effect size<0.15; medium: 0.15<f² effect size<0.35; large: f² effect size>0.35

7. RESEARCH AND DISCUSSION

The Table 3 demonstrates the statistical appendage between the innovation types (independent variables) which is modestly low, connoting the lack of multicollinearity exceptions and hence making way for regression analysis. The multicollinearity cluster were also assessed with the Tolerance and VIF. The tolerance values of the independent variables ranged between 0.413 and 0.793, which are not <0.10. For which reason, the VIF values of the independent variables confined between 1.252 and 2.423, which are well below the cut-off 10. These indicate that the multicollinearity deductions are not breached and the regression outcome are not misinterpreted by this faction (Pallant, 2007).

Peripheral important climax of this inquest is that innovation types have a positive and significant impact on MP of the SME. The aftereffect acknowledge that product, process, marketing and organizational innovations have a positive influence on SME MP. Consequently, hypotheses H₁, H₂, H₃ and H₄ are supported, but the fate of marketing and product innovations were noticed to be highly significant. Hence, they appearing to be observed as critical consideration for SME MP. This presage that improving innovation types will enhance SME MP and further place it into a strong bond between process and organization innovation as was identified in the examination. This suggests that an improvement in these activities will optimize MP. This espouses that SME managers or owners need to invest more in innovation activities which will boost the MP of SME.

Overall findings of the quest can be abridged as follows; to achieve MP of SME first need to advance innovation types that can motivate innovation behavior, internal coordination with employee to strengthen the innovation edge thinking that pulls off ideas, concepts into successful product/service, process, business model or system. The point of interest for SMEs is to develop innovation activities, motivate and empower individuals within an organization to encourage innovative mindset. Delivering the better innovation outcomes and MP through organizational leverage of technology and marketing knowledge. Finally and importantly, the illustrations from quest indicate that if SME have robust innovation types investment will advance MP.

8. CONCLUSION AND RECOMMENDATIONS

This exposition has established the nexus between innovation types on firm MP. For this purpose, a sample size of 437 was collected from SME in the Hospitality, Beauty, Transportation, and Banking service. The reflection of product innovation, process innovation,

MI and organizational innovation on MP was assessed, and the major issues that emerged from the findings show that: Product innovation positively influenced MP levels of the SME ($\beta = 0.4562$, $t = 9.0531$, $P < 0.05$), process innovation positively influenced MP levels of the SME ($\beta = 0.4562$, $t = 5.2509$, $P < 0.05$), MI positively influenced MP levels of the SME ($\beta = 0.4562$, $t = 24.9573$, $P < 0.05$) and organizational innovation positively influenced MP levels of the SMEs ($\beta = 0.4562$, $t = 5.8329$, $P < 0.05$). MI (=24.9573) had the highest innovation types, having the most impact on the firm MP, followed by product innovation (=9.0531), organization and process innovations having (=5.8329) and (= 5.2509) respectively. The composite effect of product innovation, process innovation, MI and organizational innovation on MP was also assessed, and the findings indicate that product innovation, process innovation, MI and organizational innovation collectively predicted the level of performance of the SME significantly ($R^2 = 0.3246$; $P < 0.05$), where innovation accounted for 32.5% of the difference in MP.

It is experienced from the study that all the types of innovation had positive effect on MP, remonstrate for product innovation, the effects were descriptive of all the types of innovation. MI had the most impact on MP with product innovation acting as the least contributor to MP. The weight of MI on MP is largely improved by the exact of organizational innovation. Also, the level of innovation implemented by the firm significantly impact its performance. The sequent further show that innovation accounts for more than thirty percent of the difference in MP. In summary, all the four types of innovation positively influence MP. SME managers and/or owners should ensure that there is adequate investment in product, process, marketing as well as organizational innovation activities, thereby avoiding the risk of not being suitable to achieve their marketing objectives. Based on the inquest and conclusions presented, it is recommended that owners/managers of SME should develop newness for current products, leading to improved ease for customer's importance to strengthen customer satisfaction. This can be achieved by determining as well as avoiding non-value adding conditioning in delivery related procedures of their products and also renewing the blueprint of current and or new products through changes in areas such as appearance, packaging, shape and volume without changing their basic technical and functional features.

Also, owners/managers of SME should not only pay attention to activities geared towards renewing the routines, procedures and processes employed to execute firm activities in an innovative manner, but also invest in MI activities, as it has the largest influence on MP. Furthermore, with regard to policy direction, results from the study imply that policy makers need to provide some form of training that would highlight the merits of

innovation in SME and how such innovation translates into improved performance especially in marketing. The Government should also provide an empowering environment that would support the execution of this business strategy. The confinement of the population to SME operating in Accra, the capital city of Ghana and Kumasi, the second largest city respectively renders the findings, conclusions and recommendations applicable mainly to this group of SME. The second limitation of this analysis is qualitative information of the MP. We tend to use qualitative information to measure the firm MP due to the firm restriction for giving original data. Thus we have got to limit with subjective information. But subjective information is wide utilized in the organizational research (Azaranga et al., 1998; Dess and Robinson, 1984). Future considerations should be supported to investigate the relationships in association with the four different types of innovation and MP in the SME manufacturing sector. This will advance in-depth exposition with regard to how each type of innovation relates to one another in relation to an improved MP.

REFERENCES

- Abor, J., Biekpe, N. (2006), Small business financing initiatives in Ghana. *Problems and Perspectives in Management*, 4(3), 69-77.
- Abor, J., Quartey, P. (2010), Issues in SME development in Ghana and South Africa. *International Research Journal of Finance and Economics*, 39(6), 215-228.
- Acquaah, M., Agyapong, A. (2015), The relationship between competitive strategy and firm performance in micro and small businesses in Ghana: The moderating role of managerial and marketing capabilities. *Africa Journal of Management*, 1(2), 172-193.
- Acquaah, M., Amoako-Gyampah, K., Jayaram, J. (2011), Resilience in family and nonfamily firms: An examination of the relationships between manufacturing strategy, competitive strategy and firm performance. *International Journal of Production Research*, 49(18), 5527-5544.
- Adner, R., Levinthal, D. (2001), Demand heterogeneity and technology evolution: Implications for product and process innovation. *Management Science*, 47(5), 611-628.
- Agarwal, R., Selen, W. (2011), Multi-dimensional nature of service innovation: Operationalisation of the elevated service offerings construct in collaborative service organisations. *International Journal of Operations and Production Management*, 31(11), 1164-1192.
- Agyapong, D. (2010), Micro, small and medium enterprises' activities, income level and poverty reduction in Ghana – A synthesis of related literature. *International Journal of Business and Management*, 5(12), 196.
- Aksoy, H. (2017), How do innovation culture, marketing innovation and product innovation affect the market performance of small and medium-sized enterprises (SMEs)? *Technology in Society*, 51, 133-141.
- Alegre, J., Chiva, R. (2008), Assessing the impact of organizational learning capability on product innovation performance: An empirical test. *Technovation*, 28(6), 315-326.
- Ambler, T. (2003), *Marketing and the Bottom Line: The Marketing Metrics to Pump Up Cash Flow*. Harlow: Pearson Education.
- Ambler, T., Roberts, J.H. (2008), Assessing marketing performance: Don't settle for a silver metric. *Journal of Marketing Management*, 24(7-8), 733-750.
- Anderson, E.W., Fornell, C., Lehmann, D.R. (1994), Customer satisfaction, market share, and profitability: Findings from Sweden. *The Journal of Marketing*, 58, 53-66.
- Anderson, J.C., Gerbing, D.W. (1988), Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411.
- Anning-Dorson, T. (2016), Interactivity innovations, competitive intensity, customer demand and performance. *International Journal of Quality and Service Sciences*, 8(4), 536-554.
- Anning-Dorson, T., Hinson, R., Amidu, M. (2015), Environmental Moderators and Performance Effect of Interactivity Innovation, Study of the Services Sector of an Emerging Economy. *Proceedings of 2015 Annual Conference of the Emerging Markets Conference Board*.
- Aryeetey, E., Baah-Nuakoh, A., Duggleby, T., Hettige, H., Steel, W.F. (1994), *Supply and Demand for Finance of Small Enterprises in Ghana*. Ghana: The World Bank.
- Atalay, M., Anafarta, N., Sarvan, F. (2013), The relationship between innovation and firm performance, An empirical evidence from Turkish automotive supplier industry. *Procedia-Social and Behavioral Sciences*, 75, 226-235.
- Atuahene-Gima, K. (1996), Market orientation and innovation. *Journal of Business Research*, 35(2), 93-103.
- Augusto, M.G., Lisboa, J.V., Yasin, M.M. (2014), Organisational performance and innovation in the context of a total quality management philosophy, An empirical investigation. *Total Quality Management and Business Excellence*, 25(9-10), 1141-1155.
- Azaranga, M.R., Gonzalez, G., Reavill, L. (1998), An empirical investigation of the relationship between quality improvement techniques and performance - A Mexican case. *Journal of Quality Management*, 3(2), 265-292.
- Bagorogoza, J., de Waal, A. (2010), The role of knowledge management in creating and sustaining high performance organisations: The case of financial institutions in Uganda. *World Journal of Entrepreneurship, Management and Sustainable Development*, 6(4), 307-324.
- Bakar, L.J.A., Ahmad, H. (2010), Assessing the relationship between firm resources and product innovation performance: A resource-based view. *Business Process Management Journal* 16(3), 420-435.
- Barney, J. (1991), Firm resources and sustained competitive advantage. *Journal of management* 17(1), 99-120.
- Barwise, P., Farley, J.U. (2004), Marketing metrics: Status of six metrics in five countries. *European Management Journal*, 22(3), 257-262.
- Bayus, B.L., Erickson, G., Jacobson, R. (2003), The financial rewards of new product introductions in the personal computer industry. *Management Science*, 49(2), 197-210.
- Bessant, J., Tidd, J. (2009), *Inovação e Empreendedorismo: Administração*. Porto Alegre: Bookman Editora.
- Bhaskaran, S. (2006), Incremental innovation and business performance: Small and medium-size food enterprises in a concentrated industry environment. *Journal of Small Business Management*, 44(1), 64-80.
- Bienstock, C.C., DeMoranville, C.W., Smith, R.K. (2003), Organizational citizenship behavior and service quality. *Journal of Services Marketing*, 17(4), 357-378.
- Bilderbeek, R., Hertog, P.D., Marklund, G., Miles, I. (1998), Services in innovation: Knowledge intensive business services. (KIBS) as coproducers of innovation. *SI4S Synthesis Paper*. Work Package, 5(6), 60.
- Bowen, F.E., Rostami, M., Steel, P. (2010), Timing is everything: A meta-analysis of the relationships between organizational performance and innovation. *Journal of Business Research*, 63(11), 1179-1185.
- Calantone, R.J., Vickery, S.K., Dröge, C. (1995), Business performance and strategic new product development activities: An empirical investigation. *Journal of Product Innovation Management*, 12(3), 214-223.
- Camisón, C., Villar-López, A. (2014), Organizational innovation

- as an enabler of technological innovation capabilities and firm performance. *Journal of Business Research*, 67(1), 2891-2902.
- Capon, N., Farley, J.U., Hoenig, S. (1990), Determinants of financial performance: A meta-analysis. *Management Science*, 36(10), 1143-1159.
- Carter, C.R., Sanders, N.R., Dong, Y. (2008), Paradigms, revolutions, and tipping points: The need for using multiple methodologies within the field of supply chain management. *Journal of Operations Management*, 26(6), 693-696.
- Chakravarthy, B.S. (1986), Measuring strategic performance. *Strategic Management Journal*, 7(5), 437-458.
- Chen, Y. (2006), Marketing innovation. *Journal of Economics and Management Strategy*, 15(1), 101-123.
- Cingöz, A., Akdoğan, A.A. (2011), An empirical examination of performance and image outcome expectation as determinants of innovative behavior in the workplace. *Procedia-Social and Behavioral Sciences*, 24, 847-853.
- Clark, B.H., Ambler, T. (2001), Marketing performance measurement: Evolution of research and practice. *International Journal of Business Performance Management*, 3(2-4), 231-244.
- Craig, S.G., Kohlhase, J.E., Perdue, A. (2014), Entrepreneurship and economic development: The relative attraction of employment centres by firm size. *International Journal of Global Environmental Issues*, 13(2-4), 281-293.
- Crossan, M.M., Apaydin, M. (2010), A multi-dimensional framework of organizational innovation: A systematic review of the literature. *Journal of Management Studies*, 47(6), 1154-1191.
- D'Angelo, A. (2012), Innovation and export performance: A study of Italian high-tech SMEs. *Journal of Management and Governance*, 16(3), 393-423.
- Dadfar, H., Dahlgard, J.J., Brege, S., Alamirhoor, A. (2013), Linkage between organisational innovation capability, product platform development and performance: The case of pharmaceutical small and medium enterprises in Iran. *Total Quality Management and Business Excellence*, 24(7-8), 819-834.
- Dalitso, K., Peter, Q. (2000), The Policy Environment for Promoting Small and Medium-Sized Enterprises in Ghana and Malawi. Australia: University of Manchester.
- Damanpour, F. (1991), Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of Management Journal*, 34(3), 555-590.
- Damanpour, F., Walker, R.M., Avellaneda, C.N. (2009), Combinative effects of innovation types and organizational performance: A longitudinal study of service organizations. *Journal of Management Studies*, 46(4), 650-675.
- Darroch, J. (2005), Knowledge management, innovation and firm performance. *Journal of Knowledge Management*, 9(3), 101-115.
- Dehning, B., Richardson, V.J., Zmud R.W. (2007), The financial performance effects of IT-based supply chain management systems in manufacturing firms. *Journal of Operations Management*, 25(4), 806-824.
- Den Hertog, P., Van der Aa, W., De Jong, N.W. (2010), Capabilities for managing service innovation: Towards a conceptual framework. *Journal of Service Management*, 21(4), 490-514.
- Deshpandé, R., Farley, J.U., Webster, F.E.Jr. (1993), Corporate culture, customer orientation, and innovativeness in Japanese firms: A quadrad analysis. *The Journal of Marketing*, 23-37.
- Dess, G.G., Robinson, R.B.Jr. (1984), Measuring organizational performance in the absence of objective measures: The case of the privately-held firm and conglomerate business unit. *Strategic Management Journal*, 5(3), 265-273.
- Dobni, C.B. (2008), Measuring innovation culture in organizations: The development of a generalized innovation culture construct using exploratory factor analysis. *European Journal of Innovation Management*, 11(4), 539-559.
- Drucker, P.F. (1985), The discipline of innovation. *Harvard Business Review*, 63(3), 67-72.
- Duranton, G., Puga, D. (2001), Nursery cities: Urban diversity, process innovation, and the life cycle of products. *American Economic Review*, 91(5), 1454-1477.
- Ettlie, J.E., Reza, E.F. (1992), Organizational integration and process innovation. *Academy of Management Journal*, 35(4), 795-827.
- Farris, P.W. (2006), *Marketing Metrics*. Singapore: Pearson Education India.
- Foraker, L.B., Vickery, S.K., Droge, C.L. (1996), The contribution of quality to business performance. *International Journal of Operations and Production Management*, 16(8), 44-62.
- Fornell, C., Larcker, D.F. (1981), Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18, 39-50.
- Garnsey, E. (1998), A theory of the early growth of the firm. *Industrial and Corporate Change*, 7(3), 523-556.
- Garvin, D. (1987), Competing on the eight dimensions of quality. *Harvard Business Review*, 65, 101-109.
- Geisser, S. (1974), A predictive approach to the random effect model. *Biometrika*, 61(1), 101-107.
- Gopalakrishnan, S. (2000), Unraveling the links between dimensions of innovation and organizational performance. *The Journal of High Technology Management Research*, 11(1), 137-153.
- Grant, R.M., Jammine, A.P., Thomas, H. (1988), Diversity, diversification, and profitability among British manufacturing companies, 1972-1984. *Academy of Management Journal*, 31(4), 771-801.
- Gunday, G., Ulusoy, G., Kilic, K., Alpan, L. (2011), Effects of innovation types on firm performance. *International Journal of Production Economics*, 133(2), 662-676.
- Hair, F.Jr., Sarstedt, J.M., Hopkins, L., Kuppelwieser, V.G. (2014), Partial least squares structural equation modeling. (PLS-SEM) An emerging tool in business research. *European Business Review*, 26(2), 106-121.
- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., Tatham, R.L. (2006), *Multivariate Data Analysis*. Vol. 6. Upper Saddle River, NJ: Pearson Prentice Hall.
- Hair, J.F., Hult, G.T.M., Ringle, C., Sarstedt, M. (2016), *A Primer on Partial Least Squares Structural Equation Modeling. (PLS-SEM)*. Thousand Oaks: Sage Publications.
- Hair, J.F., Ringle, C.M., Sarstedt, M. (2011), PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139-152.
- Hair, J.F., Ringle, C.M., Sarstedt, M. (2013), Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long Range Planning*, 46(1-2), 1-12.
- Hair, J.F., Sarstedt, M., Ringle, C.M., Mena, J.A. (2012), An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science*, 40(3), 414-433.
- Hall, J., Wagner, M. (2012), Integrating sustainability into firms' processes: Performance effects and the moderating role of business models and innovation. *Business Strategy and the Environment*, 21(3), 183-196.
- Halpern, N. (2010), Marketing innovation: Sources, capabilities and consequences at airports in Europe's peripheral areas. *Journal of Air Transport Management*, 16(2), 52-58.
- Han, J.K., Kim, N., Srivastava, R.K. (1998), Market orientation and organizational performance: Is innovation a missing link? *The Journal of Marketing*, 62, 30-45.
- Harborne, P., Johne, A. (2003), Creating a project climate for successful product innovation. *European Journal of Innovation Management*, 6(2), 118-132.
- Hassan, M.U., Shaukat, S., Nawaz, M.S., Naz, S. (2013), Effects of innovation types on firm performance: An empirical study on

- Pakistan's manufacturing sector. *Pakistan Journal of Commerce and Social Sciences*, 7(2), 243.
- He, Z.L., Wong, P.K. (2004), Exploration vs. exploitation: An empirical test of the ambidexterity hypothesis. *Organization Science*, 15(4), 481-494.
- Henseler, J., Ringle, C.M., Sarstedt, M. (2016), Testing measurement invariance of composites using partial least squares. *International Marketing Review*, 33(3), 405-431.
- Hertog, P.D. (2000), Knowledge-intensive business services as co-producers of innovation. *International Journal of Innovation Management*, 4(04), 491-528.
- Hitt, M.A., Bierman, L., Shimizu, K., Kochhar, R. (2001), Direct and moderating effects of human capital on strategy and performance in professional service firms: A resource-based perspective. *Academy of Management Journal*, 44(1), 13-28.
- Homburg, C., Pflesser, C. (2000), A multiple-layer model of market-oriented organizational culture: Measurement issues and performance outcomes. *Journal of Marketing Research*, 37(4), 449-462.
- Hult, G.T.M., Hurley, R.F., Knight, G.A. (2004), Innovativeness: Its antecedents and impact on business performance. *Industrial Marketing Management*, 33(5), 429-438.
- Ismail, T. (2012), The development of entrepreneurial social competence and business network to improve competitive advantage and business performance of small medium sized enterprises: A case study of batik industry in Indonesia. *Procedia-Social and Behavioral Sciences*, 65, 46-51.
- Jaworski, B.J., Kohli, A.K. (1993), Market orientation: Antecedents and consequences. *The Journal of Marketing*, 57, 53-70.
- Jiménez-Jiménez, D., Sanz-Valle, R. (2011), Innovation, organizational learning, and performance. *Journal of Business Research*, 64(4), 408-417.
- Kargar, J., Parnell, J.A. (1996), Strategic planning emphasis and planning satisfaction in small firms: An empirical investigation. *Journal of Business Strategies*, 13(1), 42-64.
- Katsikeas, C.S., Morgan, N.A., Leonidou, L.C., Hult, G.T. (2016), Assessing performance outcomes in marketing. *Journal of Marketing*, 80(2), 1-20.
- Keskin, H. (2006), Market orientation, learning orientation, and innovation capabilities in SMEs: An extended model. *European Journal of Innovation Management*, 9(4), 396-417.
- Kobe, K. (2007), *The Small Business Share of GDP, 1998-2004*. Washington, D.C.: SBA Office of Advocacy.
- Kotler, P., Armstrong, G. (2003), *Fundamentos de Marketing*. Mexico: Pearson Educación.
- Kuratko, D.F. (2005), The emergence of entrepreneurship education: Development, trends, and challenges. *Entrepreneurship Theory and Practice*, 29(5), 577-597.
- Lampikoski, K., Emden, J. (1999), *Managing Innovatively: Exploit Creative Resources*. Porvoo: WSOY.
- Li, S., Rao, S.S., Ragu-Nathan, T., Ragu-Nathan, B. (2005), Development and validation of a measurement instrument for studying supply chain management practices. *Journal of Operations Management*, 23(6), 618-641.
- Lin, M.J.J., Huang, C.H. (2012), The impact of customer participation on NPD performance: The mediating role of inter-organisation relationship. *Journal of Business and Industrial Marketing*, 28(1), 3-15.
- Lowry, P.B., Gaskin, J. (2014), Partial least squares. (PLS) structural equation modeling. (SEM) for building and testing behavioral causal theory: When to choose it and how to use it. *IEEE Transactions on Professional Communication*, 57(2), 123-146.
- Mahoney, J.T. (2001), A resource-based theory of sustainable rents. *Journal of Management*, 27(6), 651-660.
- Makanyeza, C., Dzvukeye, G. (2015), The influence of innovation on the performance of small and medium enterprises in Zimbabwe. *Journal of African Business*, 16(1-2), 198-214.
- Martínez-Ros, E., Labeaga, J.M. (2009), Product and process innovation: Persistence and complementarities. *European Management Review*, 6(1), 64-75.
- Merchant, K.A. (1998), *Modern Management Control Systems: Text and Cases*. London: Prentice Hall.
- Mohamad, M.R., Sidek, S. (2013), Innovation and firm performance: Evidence from Malaysian small and medium enterprises. *International Business Information Management Association*, 2013, 794-809.
- Moreau, C.P., Markman, A.B., Lehmann, D.R. (2001), What is it? Categorization flexibility and consumers' responses to really new products. *Journal of Consumer Research*, 27(4), 489-498.
- Morgan, N.A., Clark, B.H., Gooner, R. (2002), Marketing productivity, marketing audits, and systems for marketing performance assessment: Integrating multiple perspectives. *Journal of Business Research*, 55(5), 363-375.
- Morgan, R.E., Strong, C.A. (2003), Business performance and dimensions of strategic orientation. *Journal of Business Research*, 56(3), 163-176.
- Murat, A.I., Baki, B. (2011), Antecedents and performance impacts of product versus process innovation: Empirical evidence from SMEs located in Turkish science and technology parks. *European Journal of Innovation Management*, 14(2), 172-206.
- Ngo, L.V., O'Cass, A. (2012), In search of innovation and customer-related performance superiority: The role of market orientation, marketing capability, and innovation capability interactions. *Journal of Product Innovation Management*, 29(5), 861-877.
- Noruzi, A., Dalfard, V.M., Azhdari, B., Nazari-Shirkouhi, S., Rezazadeh, A. (2013), Relations between transformational leadership, organizational learning, knowledge management, organizational innovation, and organizational performance: An empirical investigation of manufacturing firms. *The International Journal of Advanced Manufacturing Technology*, 64(5-8), 1073-1085.
- Nyoni, T., Bonga, W.G. (2018), *Anatomy of the Small and Medium Enterprises. (SMEs) Critical Success Factors. (CSFs) in Zimbabwe: Introducing the 3E Model*.
- O'Connor, G.C., Rice, M.P. (2013), New market creation for breakthrough innovations: Enabling and constraining mechanisms. *Journal of Product Innovation Management*, 30(2), 209-227.
- Oecd, E. (2005), *Oslo Manual. Guidelines for Collecting and Interpreting Innovation Data*.
- Olson, E.M., Walker, O.C. Jr., Ruekert, R.W. (1995), Organizing for effective new product development: The moderating role of product innovativeness. *The Journal of Marketing*, 59, 48-62.
- Owen, D. (2006), Emerging issues in sustainability reporting. *Business Strategy and the Environment*, 15(4), 217-218.
- Pallant, J. (2007), *SPSS Survival Manual*. 3rd ed. New York: McGrath Hill.
- Papastathopoulou, P., Avlonitis, G., Indounas, K. (2001), The initial stages of new service development: A case study from the Greek banking sector. *Journal of Financial Services Marketing*, 6(2), 147-161.
- Peng, D.X., Lai, F. (2012), Using partial least squares in operations management research: A practical guideline and summary of past research. *Journal of Operations Management*, 30(6), 467-480.
- Piening, E.P., Salge, T.O. (2015), Understanding the antecedents, contingencies, and performance implications of process innovation: A dynamic capabilities perspective. *Journal of Product Innovation Management*, 32(1), 80-97.
- Polder, M., Leeuwen, G.V., Mohnen, P., Raymond, W. (2010), *Product, Process and Organizational Innovation: Drivers, Complementarity and Productivity Effects*. Europe: Scientific Publications.
- Randhawa, K., Scerri, M. (2015), *Service Innovation: A Review of the*

- Literature. *The Handbook of Service Innovation*. London: Springer. p. 27-51.
- Roberts, P.W. (1999), Product innovation, product–market competition and persistent profitability in the US pharmaceutical industry. *Strategic Management Journal*, 20(7), 655-670.
- Roberts, P.W., Amit, R. (2003), The dynamics of innovative activity and competitive advantage: The case of Australian retail banking, 1981 to 1995. *Organization Science*, 14(2), 107-122.
- Robinson, W.T. (1990), Product innovation and start-up business market share performance. *Management Science*, 36(10), 1279-1289.
- Rosli, M.M., Sidek, S. (2013), The impact of innovation on the performance of small and medium manufacturing enterprises: Evidence from Malaysia. *Journal of Innovation Management in Small and Medium Enterprises*, 2013, 1.
- Sampson, S.E., Spring, M. (2012), Customer roles in service supply chains and opportunities for innovation. *Journal of Supply Chain Management*, 48(4), 30-50.
- Schaltegger, S., Wagner, M. (2011), Sustainable entrepreneurship and sustainability innovation: Categories and interactions. *Business Strategy and the Environment*, 20(4), 222-237.
- Shah, R., Goldstein, S.M. (2006), Use of structural equation modeling in operations management research: Looking back and forward. *Journal of Operations Management*, 24(2), 148-169.
- Sok, P., O’Cass, A., Sok, K.M. (2013), Achieving superior SME performance: Overarching role of marketing, innovation, and learning capabilities. *Australasian Marketing Journal*, 21(3), 161-167.
- Song, M., Thieme, J. (2009), The role of suppliers in market intelligence gathering for radical and incremental innovation. *Journal of Product Innovation Management*, 26(1), 43-57.
- Stewart, D.W. (2009), Marketing accountability: Linking marketing actions to financial results. *Journal of Business Research*, 62(6), 636-643.
- Stone, M. (1974), Cross-validated choice and assessment of statistical predictions. *Journal of the Royal Statistical Society. Series B*, 36, 111-147.
- Szymanski, D.M., Bharadwaj, S.G., Varadarajan, P.R. (1993), An analysis of the market share-profitability relationship. *The Journal of Marketing*, 57, 1-18.
- Teal, D.M. (2002), *Intrusion Detection System and Method Having Dynamically Loaded Signatures*, Google Patents.
- Tidd, J., Bessant, J., Pavitt, K. (2005), *Managing Innovation Integrating Technological, Market and Organizational Change*. New Jersey: John Wiley and Sons Ltd.
- Un, C.A., Asakawa, K. (2015), Types of R and D collaborations and process innovation: The benefit of collaborating upstream in the knowledge chain. *Journal of Product Innovation Management*, 32(1), 138-153.
- Urbach, N., Ahlemann, F. (2010), Structural equation modeling in information systems research using partial least squares. *Journal of Information Technology Theory and Application*, 11(2), 5-40.
- Utkun, E., Atilgan, T. (2010), *Marketing Innovation in the Apparel Industry: Turkey*.
- van Hemert, P., Nijkamp, P., Masurel, E. (2013), From innovation to commercialization through networks and agglomerations: Analysis of sources of innovation, innovation capabilities and performance of Dutch SMEs. *The Annals of Regional Science*, 50(2), 425-452.
- Varis, M., Littunen, H. (2010), Types of innovation, sources of information and performance in entrepreneurial SMEs. *European Journal of Innovation Management*, 13(2), 128-154.
- Vinarski-Peretz, H., Binyamin, G., Carmeli, A. (2011), Subjective relational experiences and employee innovative behaviors in the workplace. *Journal of Vocational Behavior*, 78(2), 290-304.
- Vinzi, V.E., Chin, W.W., Henseler, J., Wang, H. (2010), *Perspectives on Partial Least Squares*. *Handbook of Partial Least Squares*. London: Springer. p. 1-20.
- Vorhies, D.W., Morgan, N.A. (2005), Benchmarking marketing capabilities for sustainable competitive advantage. *Journal of Marketing*, 69(1), 80-94.
- Vorhies, D.W., Morgan, N.A. (2003), A configuration theory assessment of marketing organization fit with business strategy and its relationship with marketing performance. *Journal of Marketing*, 67(1), 100-115.
- Voss, C., Zomerdijs, L. (2007), *Innovation in Experiential Services: An Empirical View*. London: AIM Research.
- Wan, D., Ong, C.H., Lee, F. (2005), Determinants of firm innovation in Singapore. *Technovation*, 25(3), 261-268.
- Wernerfelt, B. (1984), A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171-180.
- Wirtz, B.W., Schilke, O., Ullrich, S. (2010), Strategic development of business models: Implications of the Web 2.0 for creating value on the internet. *Long Range Planning*, 43(2-3), 272-290.
- Wolff, J.A., Pett, T.L. (2006), Small-firm performance: Modeling the role of product and process improvements. *Journal of Small Business Management*, 44(2), 268-284.
- Zahra, S.A., Das, S.R. (1993), Innovation strategy and financial performance in manufacturing companies: An empirical study. *Production and Operations Management*, 2(1), 15-37.