
MANAGEMENT INNOVATION AND COMPETITIVENESS OF SELECTED PHARMACEUTICAL FIRMS IN ANAMBRA STATE, NIGERIA

¹ Hilda E. Osioma; ² Hope N. Nzewi; ³ Ijeamaka C. Mgbemena & ⁴ Leo T. Onwuzuligbo

^{1 - 4} Department of Business Administration, Nnamdi Azikiwe University, Awka, Nigeria

ABSTRACT

In the midst of the seemingly intense competition, dynamic environment, increasing consumers and societal demands for new and potent medications, product and process innovation alone appear inadequate for firms in the Pharmaceutical sub-sector to gain competitive advantage and sustain organizational competitiveness. This study determined the type of relationship that exists between management innovation practice and competitiveness of selected pharmaceutical firms in Anambra State. The study employed the correlation survey design and data were generated through structured questionnaire. Product moment correlation coefficient technique was used to analyze the data. Finding revealed a significant positive relationship between management innovative practice and competitiveness in the firms studied. It was concluded that organisational renewal in the form of structural improvement contributes to the establishment of conducive environment for other types of innovations to flourish. It was recommended that managers should demonstrate timely responsiveness, flexible product innovation and management capability to effectively coordinate and redeploy internal and external competences through management innovation.

Key words: Management Innovation, Competitiveness, Structural Innovation, Incremental Innovation

INTRODUCTION

In today's highly dynamic business environment caused by globalisation, rapidly changing technology, ever-increasing market and customers' needs, expectations and sophisticated requirements, organisations have started to acknowledge the importance of innovation as the key for achieving organisational competitiveness and long-term sustainability (Cavusgil, Calantone & Zhao 2003; Moore 2005; Paap & Katz 2007). Innovation could be recognized as a critical success factor in an increasingly complex business environment. The act of innovating can provide a firm with the capability to enter new markets, increase the existing market share, or create an entirely new market opportunity thereby providing the organisation with a competitive advantage (Lim, 2010).

Organisations may differentiate themselves from other players in the market particularly the leading companies which tend to use innovative strategies to create an edge over their competitors through the development of new products, services, processes or business models. An innovation strategy then becomes a plan of how to use the development of new products, services, processes or business models to achieve competitive edge (Abbing, 2010). Innovation helps firms to develop performance, sustain performance, and create growth, in a dynamic and changing business environment.

Gaining and maintaining a competitive edge would entail a search not only for new products and new technologies, but also changes in the nature of management within the organization, that is, management innovation. Management innovation is defined as the generation and implementation of a new management practice, process, technique or structure that significantly alters the way the work of management is performed (Birkinshaw, Hamel, & Mol, 2008). Management innovation explains how managers anticipate, interpret, and respond to the demands of rapidly changing business environments by altering the practices, processes, and structure of the organisation. In discussing the importance of

management innovation for sustainable competitiveness, Teece (2007) pointed out that an organization must not only spend heavily on Research & Development and protect its intellectual property, it must also generate and implement the complementary managerial innovations needed to effectively coordinate and redeploy internal and external competences. Management innovation is more distinct and difficult to replicate than technological innovations, hence more likely to lead to sustainable competitive advantage (Birkinshaw & Mol, 2006; Hamel, 2007; Teece, 2007). Therefore, the cutting edge lies in management innovation, which equips the organisation with the necessary tools to respond timely using flexible product and technological innovations (Morris, et al. 2005).

Today, management innovation is very relevant in the pharmaceutical sector as a result of the high degree of internal and external complexity in their business environment which put special demands on management to actively judge opportunities and threats when making strategic decisions. In addition to the rising changes in general business environment, the pharmaceutical industry faces a number of other challenges such as shorter product lifecycles, increased knowledge intensity, new technological opportunities, convergence of industries and higher consumer knowledge and demands. Technological innovations alone may be inadequate to cope with the degree of uncertainty that is present in the industry. In this situation, there is need for management innovation to create a conducive atmosphere for technological innovations (Book & Kuusk-Jonsson, 2010).

1.2 STATEMENT OF THE PROBLEM

As competition intensifies, product and process innovation alone may no longer be adequate, necessitating the introduction of management innovation as a means of gaining and maintaining a competitive edge. In the pharmaceutical sector, innovation is regarded as the most important source of sustainable competitive advantage. Through product innovation, pharmaceutical firms develop novel medications for emerging illnesses. Today, the process of creating new drugs has become increasingly costly, complex and risky, since consumer and societal demands are increasing, enabling technologies are becoming more complex, and failure rate is high (Kola 2008, Paul, Mytelka, Dunwiddie, Persinger, Munos, Lindborg, & Schacht, 2010). Staropoli in Gunday, Ulusoy, Kilic, & Alkpan (2011) emphasized the importance of organisational rearrangements and coordination mechanisms, which is, management innovation, to enhance technological innovations in the pharmaceutical industries. For pharmaceutical firms to manage these challenges, they need a suitable environment for product innovation and the resulting attendant technological innovation to thrive. Organisational renewal in the form of structural improvements leading to intra-organisational coordination contributes to the formation of an enabling environment for other types of innovations to flourish (Gunday et. al., 2011). In spite of the importance of management innovations in facilitating and integrating technical innovations, they remain poorly understood and the extent to which they enhance competitiveness unclear (Birkinshaw & Mol, 2006). While product innovation is imperative, efforts directed at technological innovations without management innovation may be futile.

Objective of the Study

The objective of this study is to determine the type of relationship existing between Management Innovation practice and competitiveness in selected pharmaceutical firms in Anambra State.

Research Hypothesis

H₁: There is no significant positive relationship existing between Management innovation practice and competitiveness in selected pharmaceutical firms in Anambra State.

REVIEW OF RELATED LITERATURE

Conceptual Review

Atkinson (2013), views innovation as the implementation of a new or significantly improved product, process, marketing method, or a new organizational method in business practices, workplace organization, or external relationships. Plessis (2007) describes innovation as the creation of new knowledge and ideas to facilitate new business outcomes, aimed at improving internal business processes and structures and to create market-driven products and services.

Bessant, Lamming, Noke, and Phillips (2005) emphasize that innovation represents the core renewed process in any organization and that unless it changes what it offers the world and the way in which it creates and delivers those offerings, it risks its survival and growth prospects. Innovation is an important component of a firm's strategy mainly because it constitutes one of the principal means through which it can seek new business opportunities (Marques & Ferreira, 2009). Vigoda-Gadot (2005) proposes innovativeness to include creativity, risk-taking, and openness to change, future orientation, and pro-activeness. The newness of the product of a firm emphasizes a greater cost effectiveness of the product and/or new features and differentiates the product.

Some scholars differentiate technological innovations comprising product and process innovations from non-technological innovations comprising market, administrative innovation or management innovation. Product innovation is the development and commercialization of new product to create value and meet the needs of the external user or the needs of the market (Damanpour & Gopalakrishnan, 2001). It is the introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses (Atalay, Anarfarta & Sarvan, 2013). Process innovation is the creation and implementation of new processes or improvement to existing ones (Leonard & Waldman, 2007). It involves the implementation of a new significantly improved method, which includes changes in techniques, equipment and/or software (Bi, Sun, Zheng & Li, 2006). Marketing innovation is the implementation of a new marketing method involving significant changes in product design, pricing, promotion, and placements (Popadiuk & Choo, 2006). It is aimed at better addressing customer needs and opening up new markets (Atalay et al, 2013). Administrative innovation is the performance derived from the changes in organizational structure and administrative process, and it encompasses basic work activities within the organization which is directly related to management (Chew, 2000). Administrative innovation is also referred to as management innovation (Damanpour, Walker & Avallaneda, 2009). It refers to strategy, structure, systems, and culture innovation (Popdiuk & Choo, 2006).

Innovation may be disruptive or incremental (Assink, 2006). Disruptive innovations according to Sandberg and Hansen (2004) are innovations that involve significant new technologies, require considerable change in consumption patterns, and are perceived as offering substantially enhanced benefits. They are also regarded as radical, discontinuous, generational or breakthrough (Dahlin & Behrens, 2005). According to Ojasalo (2008), this is a new product or system with original state-of-the-art proprietary technology that will significantly expand the capabilities of obsolete existing ones. They are prone to severe risks such as the failure to gain acceptance among customers (Heiskanen, Hyvonen, Niva, Pantzer, Timonen, & Varjonen, 2007). Despite the risk and uncertainty, when successful, innovation can have a sizeable impact on firms' financial results and economic performance (Marques & Ferreira, 2009).

Assink (2006) assert that incremental innovation remains within the boundaries of the existing market and technology or processes of an organization and carries lower financial and market acceptance risks. It involves an application of current technologies (Ojasalo, 2008). Management innovation supports

technological innovation as it tends to trigger the adoption of technological innovation (Ayerbe, 2006; MoladBirkinshaw, 2009; Molleman & Broekhuis, 2001).

Management Innovation

Management innovation is defined as the generation and implementation of a management practice, process, structure or technique that is new to the state of the art and is intended to further organizational goals (Birkinshaw, Hamel & Mol, 2008). It is the introduction of management practices new to the firm and intended to enhance firm performance. Management innovation is a consequence of a firm's internal context and of the external search for new knowledge (Mol & Birkinshaw, 2009). It is the use of new managerial and working concepts and practices (Armbruster, Bikfalvi, Kinkel, & Lay, 2008). It is characterized by a marked departure from traditional management principles, processes and practices or a departure from customary organizational forms (Hamel, 2006). Management innovation concerns changes in how managers set directions, make decisions, coordinate activities, and motivate people (Hamel, 2006). These changes determine new management practices, processes or structures. Management processes are the routines that govern the work of managers, drawing from abstract ideas and turning them into actionable tools, which include strategic planning, project management, and performance assessment (Birkinshaw et al, 2008; Hamel, 2006, 2007).

According to a model proposed in Birkinshaw and Mol (2006), the invention of a new management practice, process or structure is preceded by a combination of internal dissatisfaction with the status quo and inspiration from outside the company. The innovation invented then goes through a process of internal and external validation and, finally, the innovation may be diffused in the organization. This model suggests that the identification of a novel problem and an organizational system supportive of new thinking drives management innovations. Birkinshaw et al (2008) propose two change agents involved in management innovation – the internal agents being employees of the firm who experiment and validate new practices and processes. The external change agents are those who from outside the organization exert influence in the adoption of the innovation. These may include academics, consultants, and management gurus (Schmidt, 2010).

Organisational Competitiveness

Organizational competitiveness has become the centre in strategic management literature as an explanation for organizations' success (He, 2012). In today's turbulent business environment, flexibility, agility, speed, and adaptability are becoming more important sources of competitiveness (Barney, 2001; Sushil, 2000). Competitiveness has been described by many researchers as a multidimensional and relative concept.

Noe, Hollenbeck, Gerhart and Wright (2010) define competitiveness as a company's ability to maintain and gain market share in its industry. Competitive advantage refers to something that an organization does extremely well, a core competency that clearly sets it apart from competitors and gives it advantage over them in the market (Schermerhorn, 2010). Competitiveness means an involvement in business rivalry. Firm level competitiveness which is the concern of this study can be defined as the ability of an organization to design, produce and/or market products superior to those offered by competitors, considering the price and non-price qualities (D'Cruz in Ambastha & Momaya, 2011). Sources of competitiveness are those assets, processes and performance within an organization that provide competitive advantage. These sources can be tangibles or intangibles (Ambastha & Momaya, 2011). Key constructs of competitiveness are value creation, customer satisfaction, new product

development, quality, flexibility and adaptability, operational assets, creativity, variety, profitability, and relationship management (Ambastha & Momaya, 2011). Hamel and Prahalad (1990) emphasize the role of factors internal to the firms such as firm strategy, structures, competencies, capabilities to innovate, and other tangible and other intangible resources for competitive success.

Innovation and Organizational Competitiveness

Innovation and organizational competitiveness have been examined in terms of new products, processes, investment in research and development, new marketing methods and in terms of market share, profitability and operational assets. Several studies report that innovation is a key factor for firm success and survival (Jmenez & Sanz-ralle, 2011; Bel, 2005; Cho & Pucik, 2005; Gopalaksihnan & Damanpour, 1997) and sustainable competitive advantage (Standing & Kinit in Atalay, 2013; Walker, 2004; Bartel & Genid, 2009; Johannessen, 2008; Mumford & Licuanan, 2004; Artz, Norman, Hatfield & Cardinal, 2010; Lin & Chen, 2007).

With regard to competitiveness indicators, there is considerable variation as to what constitutes it. Some studies focus on firm assets and processes (Ambastha & Momaya, 2011; Hamel & Prahalad, 1990) while others consider profitability, customer satisfaction, and product development. Studies that propose indirect relationship between innovativeness and organizational competitiveness propose that direct effects of innovation on the performance of the firm are relatively small and that the benefits from innovations are indirect (Geroski in Gunday et al, 2011).

Theoretical Framework

This study is anchored on the theory of Porter's diamond, also known as the competitive advantage of nations (Porter, 1990). Porter's diamond states that some firms are more successful in certain industries than others (Smith, 2010). According to Porter, the possibility of gaining competitive advantage is through innovations and to constantly seek ways to sustain those innovations in line with changes in the environment. Porter (1990) argues that the success of innovations, which is considered as fundamental for competitive advantage, lies in four conditions- Factor condition which involves all sets of resources needed to produce goods and services in the industry; Firm strategy, structure, and rivalry which refers to the competitive arena for a specific industry; Demand Conditions which refers to the extent or degree to which firms react to buyers' needs by creating new products or by improving existing products; Related and supporting industries which refers to industries that either produce similar goods or supply the industry with the inputs needed to produce a particular good.

This theory was adopted for this work as it addresses the necessity of innovation in organisations and its importance in facilitating the achievement of competitive advantage by enabling the organizations to channel their resources, capabilities, and competencies into innovation

Empirical Review

A number of studies have been carried out by various researchers on innovation and organizational competitiveness. Some of them are reviewed below:

Atalay, Anafarta, and Saravan (2013) examined the relationship between innovation and firm performance in the automotive supplier industry in Turkey. Descriptive survey design method was adopted. The study found that technological innovations have significant positive impact on firm performance.

Cho and Pucik (2005) explored the relationship between innovativeness, quality, growth, profitability and market value at the firm level in the U.S. finance industry using the structural equation modeling method. Their study indicated that innovativeness mediates the relationship between quality and growth, while quality mediates the relationship between innovativeness and profitability.

Arungai (2014) assessed the influence of service process innovation on competitive advantage in the banking sector in Kenya. The study adopted a triangulation design involving a cross sectional approach. It was found that service process innovations are very important in influencing competitive advantage in the banking sector.

Gunday, Ulusog, Kilic, and Alkpan (2011) explored the effects of product, process, organization and marketing innovations on different aspects of firm performance, including achievements in production, marketing and finance, through descriptive survey design covering Turkish manufacturing firms in different industries. The study revealed that product, organization and marketing innovations have positive effects on firm performance in manufacturing industries.

Artz, Norman, Hatfield and Cardinal (2010), investigated the impact of patents acquired and product innovations on firm performance in different industries in the U.S. and Canada. They found that product innovation has a significant impact on firm performance.

Therrien, Dolorcux, and Chamberlain (2011) appraised the impact of innovation on firms' performance in selected service industries. The results indicate that more sales are associated with innovations, early entry to market and introduction of new products with high level of novelty.

Marques and Ferreira (2009) employed survey method in examining the relationship between firms' innovative capacity and their performances in Portugal. It was found that superior innovative capacity significantly affects the firm's competitive advantage and improves its performance.

Damanpour, Walkerr, and Avellaneda (2009) studied the consequences of adopting innovation types in service organizations. A panel analysis of 428 public service organizations in the UK for four years was carried out. Findings revealed that adopting a specific type of innovation every year is detrimental, consistency in adopting the same composition of innovation types over the years has no effect.

METHODS

Research Design

This study employed the correlation survey design in order to show the type of relationship between the dependent and independent variables.

Population of the Study

The population of the study comprised the management staff of three randomly selected pharmaceutical firms - Gauze, Rico and Juhel pharmaceuticals, Anambra State, with management staff strengths of 16, 15, and 10 respectively, giving a total population size of 41. There was no sampling technique since the entire population size was utilized.

Method of Data Collection

Data for the research were collected from primary source. Copies of structured questionnaire were administered, and the participants were placed on responses for each statement on a five- point Likert scale. The response scoring weights were Strongly agree- 5 points, Agree- 4 points, Undecided- 3 points, Disagree – 2 points, and Strongly disagree – 1 point.

Reliability of the Instrument

The reliability test for the questionnaire was done with the aid of SPSS. Reliability relates to the precision, consistency and accuracy of the instrument.

The table below shows the computed Cronbach Alpha value:

Questionnaire Reliability Statistics	
Cronbach's Alpha	N of Items
.730	10

Source: SPSS Ver. 22

The Cronbach Alpha value was .730 which means that 73.0% of the variance in the scores was reliable.

DATA PRESENTATION AND ANALYSIS

Data Presentation

Table 1: Questionnaire administered and returned

Number of Questionnaire Administered	Number of Questionnaire Returned
42	39

Table 2: QUESTIONNAIRE ITEMS AND DESCRIPTIVE STATISTICS

	N	Minimum	Maximum	Mean	Std. Deviation
My organisation has adopted advanced production techniques in its product manufacturing towards increasing profitability.	39	2.00	5.00	4.2564	.78532
Altering the method of allocating responsibilities has increased my organisation's performance.	39	2.00	5.00	3.9231	.89984
My organisation has adopted a new communication structure towards facilitating value creation.	39	1.00	5.00	3.8718	.92280
Management's commitment to improvement has increased the variety of my organisations product offerings.	39	1.00	5.00	3.8974	1.07103
Application of improved business processes has to a large extent enhanced the flexibility of my organisation to adapt to changes.	39	2.00	5.00	3.9231	.70280

Alteration in the method of coordinating work activities has improved the quality of my organisation's output.	39	1.00	5.00	3.6923	1.17325
The establishment of a customer response system has facilitated an increase in our customers' satisfaction.	39	3.00	5.00	4.1795	.64367
Adoption of the use of teams has promoted the development of new products in my organization.	39	1.00	5.00	3.6667	1.13168
Applying integrated information system in my organisation (i.e. installing computers for easy access to information) has reduced its operational cost.	39	1.00	5.00	3.7949	1.12810
Designing processes for managing, sharing and using developed knowledge in my organisation has contributed to its creativity.	39	2.00	5.00	3.6410	1.03840
Valid N (listwise)	39				

Source: SPSS Ver. 22

Test of Hypothesis

Decision Rule: Reject the null and accept the alternate if p value < .05; if otherwise, accept the null.

Correlations			
		Management Innovation	Organisational Competitiveness
Management Innovation	Pearson Correlation	1	.647**
	Sig. (2-tailed)		.000
	N	39	39
Organisational Competitiveness	Pearson Correlation	.647**	1
	Sig. (2-tailed)	.000	
	N	39	39

** . Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS Ver. 22

The table above shows a positive relationship between Management Innovation and Organisational Competitiveness. The Pearson product moment Correlation value was .647. *Since p-value is less than .05, we reject the null and accept the alternate hypothesis.* Thus Management Innovation has a significant positive relationship with Organisational Competitiveness

Findings/Management Implications

The result of the test of hypothesis revealed that the null hypothesis was not accepted and therefore, management innovation has a significant positive relationship with organizational competitiveness. This finding has some management implications. This suggests that as management innovation increases, organizational competitiveness also increases. This is in line with the results of studies by Atalay et. al. (2013), Gundayet. al. (2011), Marques and Ferreira (2009), Arungai(2014), and Damanpouret. al. (2009) which indicated that innovative performance has a significant positive effect on organizational competitiveness. It has also shown that Management innovation is useful in the creation of flexibility in firms administration towards ensuring organisations' adaptability to the changing environment.

Conclusion

The study concludes that Management innovation is vital for achieving and sustaining competitive advantage. Innovation influences organisations' competitiveness positively. Management innovation is expedient for organizations because it facilitates product and process innovations. Organisational renewal in the form of structural improvements contributes to the formation of an enabling environment for other types of innovations to flourish

Recommendations

Sequel to the findings and conclusion, the following recommendations are made:

1. Managers should recognise the basic need for innovation and provide adequate resources in order to obtain and sustain competitive advantage.
2. Managers should demonstrate timely responsiveness, flexible product innovation and management capability so as to effectively coordinate and redeploy internal and external competences through management innovation.
3. Managers should create ambidextrous organizational forms which provide the context for both exploitative and exploratory activities to coexist and allow for stability and incremental change simultaneously with experimentation and discontinuous change.

REFERENCES

Abbing, E. (2010). *Brand-driven Innovation*. AVA Publishing, SA.

Ambastha A. & Momaya K. (2011). Competitiveness of firms: Review of theory, frameworks, and models. *SINGAPORE MANAGEMENT REVIEW*26(1): 45-52.

Armbruster H., Bikfalvi A., Kinkel S. & Lay, G., (2008). Organizational innovation: The challenge of measuring non technological innovation in large scale surveys. *TECHNOVATION* 28(10), 644-657.

Artz, K., Norman, P., Hatfield, D. & Cardinal L. (2010). A longitudinal study of the impact of R&D patents and product innovation on firm performance. *JOURNAL OF PRODUCT INNOVATION MANAGEMENT*. 27(5), 725-740.

Arungai K. (2014). Influence of service process innovation on competitive advantage in the banking sector in Kenya. *INTERNATIONAL JOURNAL OF SOCIAL SCIENCES AND ENTREPRENEURSHIP*. 1(13), 199-224.

Assink M. (2006). Inhibitors of disruptive innovation capacity: A conceptual model. European *JOURNAL OF INNOVATION MANAGEMENT*9(2), 215-233.

Ataley M., Anafarta N. & Sarvon F. (2013). The relationship between innovation and firm performance: An empirical evidence from Turkish automotive supplier industry. *SOCIAL AND BEHAVIOURAL SCIENCES* 75, 226-235.

Ayerbe C. (2006). Innovation technologiqueetorganisationelle au sein des PME innovantes. *Internationale PME*, 19, 9-34.

Barney J. (2001). The resource based view of the firm. *JOURNAL OF MANAGEMENT*27. 625-641.

Bartel, C. & Gerud R. (2009). The role of narratives in sustaining organizational innovation. *ORGANIZATIONAL SCIENCE* 20(1), 107-117

Bell, G. (2005). Clusters, networks and firm innovativeness.*STRATEGIC MANAGEMENT JOURNAL*26, 287 – 295.

Bessant, J., Lamming, R., Noke, H. & Phillips, W. (2005). Managing innovation beyond the steady state. *TECHNOVATION* 25(12), 1366-1376.

Birkinshaw, J. & Mol, M. (2006). How management innovation happens. *MIT SLOAN MANAGEMENT REVIEW* 47(81).

Birkinshaw, J., Hamel, G. & Mol, M. (2008). Management Innovation, *ACADEMY OF MANAGEMENT REVIEW*, 33(4), 825- 845.

Book, P., & Kuusk-Jonsson, E. (2010). *Constructing openness on open innovation platforms in the Life Science industry*. Master thesis. School of Business, Economics and Law. University of Gothenburg.

Cavusgil, S., Calantone, R. & Zhao, Y. (2003). Tacit knowledge transfer and firm innovation capability, *JOURNAL OF BUSINESS & INDUSTRIAL MARKETING* 18(1), 6–21.

Chew, C. (2000) Organizational culture characteristics and innovation: A perspective from electrical and electronics industry Penang, Malaysia.

Cho, H. & Pucik, V. (2005). Relationship between innovativeness, quality, growth, profitability and market value. *STRATEGIC MANAGEMENT JOURNAL*, 26(6), 555-570.

Dahlin, K. & Behrens D. (2005). When is an invention really radical? Defining and measuring technological radicalness. *RESEARCH POLICY*34(5), 717-737.

Damanpour, F. (1991). Organizational innovation: A Meta-Analysis of effects of determinants and moderators. *ACADEMY OF MANAGEMENT JOURNAL*34, 555-590.

Damanpour, F. & Gopalakrishnan S. (2001). The dynamics of the product and process innovations in organizations. *JOURNAL OF MANAGEMENT STUDIES*38(1)

Damanpour, F., Walker R. & Avellaneda C. (2009). Combinative effects of innovation types and organizational performance. A longitudinal study of service organizations. *JOURNAL OF MANAGEMENT STUDIES* 46(4), 650-675.

Gopalakrishna, S. & Damanpour, F. (1997). A review of innovation research in economics, sociology and technology management. *OMEGA INTERNATIONAL JOURNAL OF MANAGEMENT SCIENCE* 25(1), 15-29.

Gunday G., Ulusoy G., Kilic K. & Alpkan L. (2011). Effects of innovation types on firm performance. *INTERNATIONAL JOURNAL OF PRODUCTION ECONOMICS*133(2), 662-676.

Gunday, G., Ulusoy, G., Kilic, K., & Alpkan, L. (2011), Effect of innovation types on firm performance, *INTERNATIONAL JOURNAL OF PRODUCTION ECONOMICS*, 133(2), .662-676.

Hagedoorn & Cloudt (2003). Measuring innovative performance: Is there an advantage in using multiple indicators? *RESEARCH POLICY*32 (2003) 1356 – 1379.

Hamel, G. (2006). The why, what and how of management innovation. *HARVARD BUSINESS REVIEW*, 84 72-84.

Hamel, G. & Prahalad C. (1990). Strategic intent. *HBR*, 3, 63-76.

Harder, M. (2011). Internal antecedents of management innovation. PhD series 7. Copenhagen business school.

Heiskanen, E., Hyvonen, K., Niva, M., Pantzar, M., Timonen, P. & Varjonen J. (2007). User involvement in radical innovation: Are Consumers Conservative? *EUROPEAN JOURNAL OF INNOVATION MANAGEMENT*, 10(4), 489-509.

Jimenez & Sanz-valle (2011). Innovation, organizational learning and performance. *JOURNAL OF BUSINESS RESEARCH*, 64(4), 408 – 417.

Johannessen, J. (2008). Organizational innovation as part of knowledge management. *INTERNATIONAL JOURNAL OF INFORMATION MANAGEMENT*28(5), 403-412.

Kola, I. (2008). The state of innovation in drug development, *CLINICAL PHARMACOLOGY AND THERAPEUTICS*, 83, 227- 230,

Leonard, J. & Waldman C. (2007). An empirical model of the sources of innovation in the U.S manufacturing sector. *BUSINESS ECONOMICS*42 (4) 33-45.

Lim, J., Schultmann, F., & Ofori, G. (2010). Tailoring competitive advantages derived from innovation to the needs of construction firms. *JOURNAL OF CONSTRUCTION ENGINEERING AND MANAGEMENT*, 568-581.

Lin, C. & Chen M. (2007). Does innovation lead to performance? An empirical study of SMEs in Taiwan management research news 30(2), 115-132.

Marques, C. & Ferrcira, J. (2009). SME innovation capacity, competitive advantage and performance in a traditional industrial region of Portugal. *JOURNAL OF TECHNOLOGY MANAGEMENT AND INNOVATION* 4 (4).

Mol, M. & Birkinshaw, J. (2009). The sources of management innovation: When firms introduce new management practices. *JOURNAL OF BUSINESS RESEARCH*, 62(12), 1269-1280.

Molleman, E. & Broekhuis, M. (2001). Sociotechnical systems: towards and organizational learning approach. *JOURNAL OF ENGINEERING AND TECHNOLOGY MANAGEMENT*18: 271-294.

Moore, G. (2005). *Dealing with Darwin: How great companies innovate at every phase of their evolution*, Penguin Books, London.

Morris, M., Schindehutte, M. & Allen, J. (2005). The entrepreneur's business model: toward a unified perspective. *JOURNAL OF BUSINESS RESEARCH*, 58(6), 726–735.

Mumford, D. & Licuanan B., (2004). Leading for innovation: Conclusions, issues and directors. *THE LEADERSHIP QUARTERLY*, 15(1), 163-171.

Ning, H. (2012). How to maintain sustainable competitive advantage – study on the evolution of organizational strategic management. *SCI EDU INTERNATIONAL JOURNAL OF BUSINESS ADMINISTRATION* 3(5).

Noe, R., Hollenbeck, J., Gerhart, B. & Wright, P. (2010). *Fundamentals of human resources management*, 3rded, New York: McGraw-Hill.

Ojasalo, J., (2008). Management of innovation networks. A study of different approaches. *JEUROPEAN JOURNAL OF INNOVATION MANAGEMENT*11(1), 51-86

Paap, J. & Katz, R. (2007) Anticipating disruptive innovation, *RESEARCH TECHNOLOGY MANAGEMENT*, 47(5), 13–22.

Paul, S., Mytelka, S., Dunwiddie, C., Persinger, C., Munos, B., Lindborg, S., & Schacht, A. (2010). How to improve R&D productivity: the pharmaceutical industry's grand challenge, *NATURE REVIEWS DRUG DISCOV*, 9, 203-214

Plessis M. (2007). The role of knowledge management in innovation. *JOURNAL OF KNOWLEDGEMANAGEMENT*11(4), 20-209.

Popadiuk S. & Choo C. (2006). Innovation and knowledge creation: How are these concepts related? *INTERNATIONAL JOURNAL OF INFORMATION MANAGEMENT*26(4).

- Porter, M. (1990). The Competitive Advantage of Nations. *HARVARD BUSINESS REVIEW*, 68(2) 73-93.
- Porter, M. (1991). Towards a dynamic theory of strategy. *STRATEGIC MANAGEMENT JOURNAL*, 12(S2), 95-117.
- Porter, M. (1998). Clusters and the new economics of competition. *HARVARD BUSINESS REVIEW*, 76(6), 77-90.
- Sandberg, B. & Hansen, S. (2004). Creating an international market for disruptive innovations. *EUROPEAN JOURNAL OF INNOVATION MANAGEMENT*, 7(1) 2332.
- Schermerhorn, J. (2010). Introduction to management, 10thed. New Jersey: John Wiley and sons, Inc.
- Schmidt, H. (2010). Management innovation: Studies on the role of internal change agents. Thesis, Erasmus University, Rotterdam. ERIM PhD series, 212.
- Smit, A. (2010). The Competitive Advantage of Nations: is Porter's Diamond Framework a new theory that explains the international competitiveness of countries? *SOUTHERN AFRICAN BUSINESS REVIEW*, 14(1), 105-130.
- Sushil, (2000). Flexibility in management. Vikas publishing house, New Delhi.
- Teece, D. (2007). Explicating dynamic capabilities: The nature and micro foundations of sustainable enterprise performance. *STRATEGIC MANAGEMENT JOURNAL* 28, 1319-1350.
- Vaccaro, I., Janesen J., Van den Bosch, F., & Volberda, H. (2010). Leadership and Management innovation: The moderating role of organizational size. *JOURNAL OF MANAGEMENT STUDIES*.
- Vigoda – Gadot, E., Shoham, Ruvio, & Schwabsky (2005). Innovation in the public sector. The university of Heifa and Nifu Step: Oslo.
- Walker, R. (2004). Innovation and organizational performance: Evidence and a research agenda. Advanced institute of management research working paper 002 – June.