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Bringing Innovation in New Product Development (NPD) by leveraging External Sources: Opportunity or Hype?

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Abstract: This paper examines the role of external sources may be called knowledge sources such as customers, suppliers and competitors in new product development (NPD). Adopting a qualitative perspective, this study is built an in-depth study of leading multinational companies (MNCs) around the world from the fast moving consumer goods (FMCG) industry. This paper explores that among these sources, which source is more influential that significantly contributes to the product innovation. The findings have highlighted that customers appeared to be huge sources of knowledge providers in innovation for NPD while suppliers provide technical competencies in the development of new products, yet competitors do not contribute to innovation in product development at all. This study offers a practical guideline for the managers in MNCs.

Keywords New: *Product Development, Innovation, Customers, suppliers, Competitors, MNCs..*

Introduction

In today's dynamic market environment, organizations are investing to employ advanced technologies in order to acquire knowledge in the process of new product development (NPD). Studies from diverse disciplines such as innovation and strategic management and technology have investigated the role of external knowledge sources in NPD can offer the firms to achieve competitive advantages and to operate successfully in dynamic market environment. (Hagedoorn and Duysters, 2002; Rothaermel and Hess, 2007; Almirall and Casadesus-Masanell, 2010). Researcher such as Chesbrough has explored that organizations need to collaborate with internal and external sources of knowledge providers in an open paradigm of innovation to gain access to more and more novel concepts for NPD, market updates and to advance their technologies (Chesbrough (2003, p. xxiv.). Following this belief, collaboration with external sources can result in generating new ideas and knowledge for product innovation (Lambe and Spekman, 1997; Ahuja, 2000). Collaboration with external knowledge sources also offers the firms to gain access to skills and assets need to transfer their innovation into a commercial success (Teece, 1986; Hagedoorn, 1993).

Although it is generally argued that collaboration initiatives for NPD results in number of benefits for the firms, yet there are few studies that have explored that collaboration with external knowledge sources in NPD can bring innovation for NPD (Jones, Lanctot and Teegen, 2001; Calantone, Cavusgil and Zhao, 2002; Laursen and Salter, 2006; Lichtenthaler, 2011). Few studies concluded as why some organizations collaborate with external entities to acquire external knowledge in their NPD processes and while some

other organizations believe in their inbound innovation structure. Following this perspective, there is a research gap to explore further that collaboration with external entities actually bring innovation and why organizations need to focus on collaboration with external entities to acquire complementary knowledge' (Knudsen (2007, p. 135).

The main objective of this research study is to fill the above mentioned research gap. This study employs a qualitative approach to explore as why organizations should collaborate with external knowledge sources in NPD and among chosen external knowledge entities which appears to be the most influential external knowledge entity in NPD to contribute to innovation significantly (Barney, 1991).

The article is outlined as follows: the next section offers a theoretical foundation of the study. The third part explains the methodology applied to carry this study. The fourth section presents the findings followed by discussion and implications. The article closes with limitations and future research.

Theoretical Foundation

A growing number of research studies suggest that organizations are increasingly enhancing their external connections in order to make themselves a part of a network that is filled with significant knowledge sources and information (Teece, 1992). These networks are substantial in a context that they offer a variety of knowledge specifically in those of the areas where an organization's own resources appeared to be insufficient (Leonard-Barton, 1992), and are supposed to be organisable in an efficient manner with enhanced speed and less cost, risks associated to the NPD (Vanhaverbeke, Duystersand Noorderhaven, 2002). These external knowledge sources support the organizations to accelerate their NPD processes and survive successfully in volatile market environment with a dynamic pace (Faems, Van Looy and Debackere, 2005; Knudsen, 2007; Laursen and Salter, 2006).

Reviews of the existing literature suggest a number of potential external knowledge sources for organizations that need to utilize them – customers, suppliers, competitors, and social network sites -as potential external knowledge sources for NPD processes.

Customers are regarded as the most substantial sources of knowledge for the organizations whenever organizations decide about NPD. Collaboration with customers for NPD processes has been discussed in literature and it has been explored by number of research studies that involving customers in the NPD processes effects positively on NPD processes. The fundamental reason of this positive impact is that because customers provide the key input to the organizations in the form of new ideas and also offer creative solutions to the NPD (Urban and Von Hippel, 1988). Organizations that grasp a better understanding about the needs of their customers develop the capacity to quickly sense the emerging market trends (Li and Calantone, 1998). Customer's contribution during funnel process of NPD can lessen the problems such as poor design (Knudsen, 2007) and poorly predicted market introductions (Tether, 2002; Belderbos et al., 2004). Consequently, customer's involvement in the process of NPD also results in product innovations (Souder, Buisson and Garrett, 1997; Brockhoff, 2003) and increases the chances of that NPD would embrace a tremendous success.

Suppliers- Studies suggest that collaboration with suppliers in NPD process results in a significant developments in regard to product operations and product performance (Lawson, Peterson, Cousins, and Handfield, 2009; Peterson, Handfield and Ragatz, 2005; Wynstra, Von Corswant, and Wetzel's, 2010). Involving suppliers in NPD includes from

a simple consultation about NPD technical aspects to fully determined design responsibility related to different components, assembly processes and systems. The prevailing view about supplier's involvement in NPD suggest that suppliers' involvement impacts very good results on NPD performances such as reduction in cost associated to the material and project, less time in product development, an increased material quality, enhanced product functional quality and manufacturability with reduced production cost and also grants an easy access to supplier's technology (Handfield, Ragatz, Petersen, and Monczka, 1999; Lau, Tang, and Yam, 2010; Ragatz et al., 1997). Because suppliers possess specialized knowledge and competencies, they can be a source of valuable input into NPD in the form of contribution of their innovative ideas, critical technologies, and in addition they can also make a stronger bond of their relationships with their clients (Håkansson and Eriksson, 1993).

Competitors are also a huge knowledge resource in NPD processes. Involving competitors in NPD processes can facilitate the organizations to acquire additional complimentary knowledge resources and embed with their own to obtain synergic results, to speed up the abilities of product development with less time and costs which is advantageous for both the organizations in the longer run (Belderbos ,Carree and Lokshin, 2004; Tsai, 2009). Competitor's collaboration offer numerous advantages: organization can gain a benchmark in their own technological fields, to increase the organization's access to the process of differentiation where organizations can visibly make themselves and their products differentiated in more innovative way (Linn, 1994).Researcher such as Tether (2002) states that competitor's collaboration enables competitors to look for those areas that need a more balanced strengths to develop together a unique range of new products rather than to imitate the other firms' strengths. Moreover, competitors' involvement in NPD is beneficial for both the organizations in a context that both the involved parties can employ a range of standards in markets, they can compete against the third-party competitors successfully, they can gain a competitive edge and can influence in the regulatory atmosphere standard (Perks and Easton, 2000).

Building on the above discussion, this study focuses on collaboration with external sources such as customers, suppliers and competitors in NPD with the objective to explore the most significant knowledge sources that contribute more effectively to bring innovation in NPD processes.

Methodology

Research Approach

In order to answer the proposed research question, we have focused on obtaining the meaningful insights as how linkages with some external sources can bring innovation for NPD. We have employed a qualitative approach to conduct the present study, to collect the data and analysis.

Data Collection

The data for this study were gathered over a period of around eight months (September 2015- April 2016). To obtain in-depth insights on how external linkages can bring innovation in NPD, we have selected five big multinational corporations (MNCs) in the fast consuming goods (FMCG) industry. These firms were chosen as they were observed to be frequently engaged in NPD processes and according to the nature of the study. We have chosen the managers as unit of analysis who were tasked with carrying the NPD

projects, product research, planning and development and marketing. In total twenty seven semi-structured interviews were conducted with the managers of five leading MNCs.

Data Analysis

The recorded data were analyzed with the help of thematic analysis. The data were analyzed in three phases: descriptive coding (first-phase classification), in this stage we found related items and assigned the codes based on described phenomena. Second, interpretive coding (second-phase themes), at this stage descriptive codes were grouped with shared characteristics and meanings and assigned interpretive codes. Finally, we identified overarching themes (aggregate dimension). See Figure 1

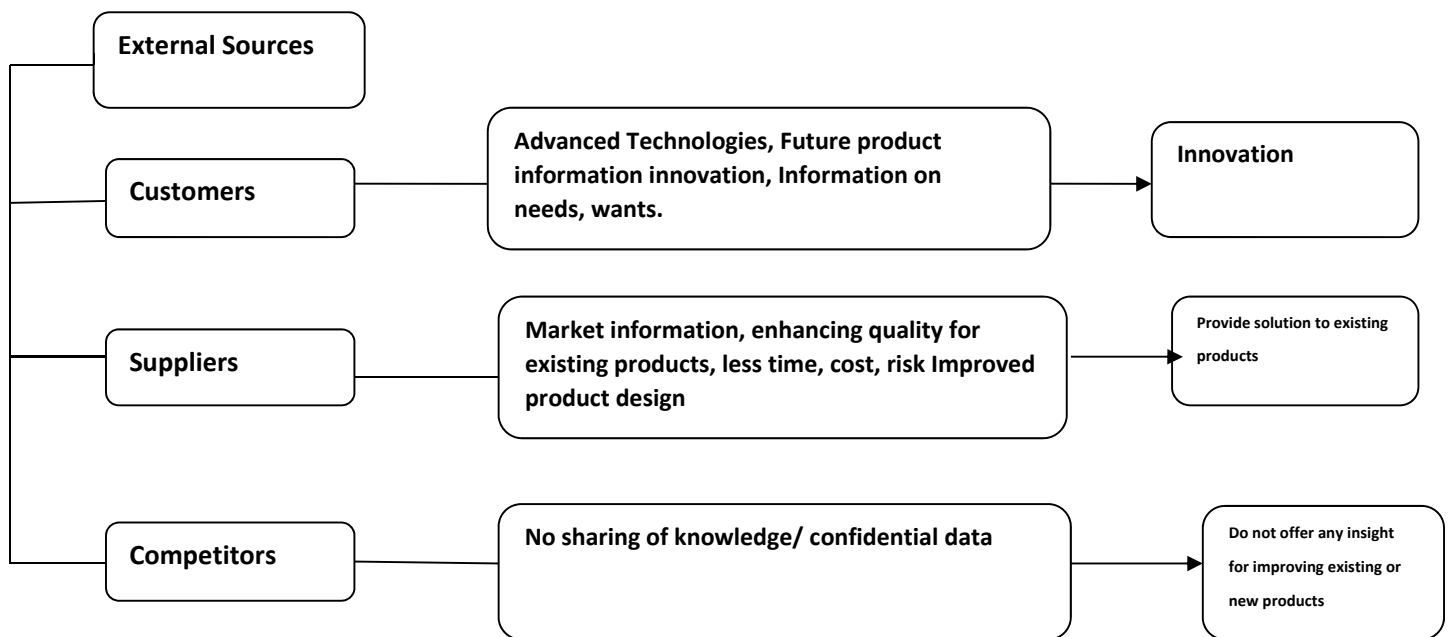


Figure 1: Conceptual Model

Results and Discussion

In this study, we have attempted to examine that linking with external sources can impact on the product innovation. We have empirically tested our findings by utilizing and analyzing twenty seven semi-structured interviews from FMCG industry. Our findings indicate that organizations collaborate with customers, suppliers and competitors to bring the innovation in their NPD process and that can also be regarded as external sources of knowledge for bringing innovation (Atuahene-Gima and KO, 2001).

Communicating with customers can support the firms about the emerging technologies may require for innovations in future products (Cleven and Brettel, 2011). Suppliers are also observed to be a source of external information for innovation. Collaboration with suppliers may assist the firms in enhancing the quality and supply time with reduced cost and improved product design for NPD (Ragatz, Handfield and Petersen, 2002; Song and Thieme, 2009) yet our results suggest that collaboration with suppliers can facilitate the firms in increasing and improving the quality of their existing products and processes, but suppliers are not found to produce substantial insights need for product innovation (Cleven

and Brettel, 2011). However, competitors were appeared not to be a contributor in product innovation, thus, emphasizes the need for further exploration on the phenomena (Cleven and Brettel, 2011).

Our findings indicate that firms consider customers the most significant external knowledge source and collaborate with them for NPD (Bercovitz and Feldman, 2007; Tetherand Tajar, 2008; Song and Thieme, 2009). Results indicate that collaboration with customers substantially offer insights for NPD processes, thus, confirming that customers are the most important source of knowledge for NPD projects in the organizations. Researchers such as Von Hippel (1986) Souder, Buisson and Garrett, 1997; Gruner and Homburg, 2000) have also explored the similar results in their studies. According to Beckhoff (2003), customer's involvement in NPD processes helps the organizations to deeply grasp their needs and preferences and manufacture the products that best fit with their needs and requirements, thus, this collaboration reduces the insufficiencies associated to the products and make the NPD processes more efficient. Customers are appeared to be the strongest influential factor in bringing innovation for NPD process, thus, customer's collaboration can help determine the firms in manufacturing the new products with more innovation, less time, cost and risk (Knudsen, 2007).

Supplier's collaboration also observed to have positive impact on NPD processes. Suppliers are investigated as the second influential source to contribute to NPD process in a context that they are primary source of improving the quality of their own products and also as they possess a huge volume of technological knowledge in their own specialist realms, so collaboration with them offer an opportunity to the organizations to increase the quality of their products by utilizing supplier's best available technologies and ascertain that the concepts for new products will produce an innovative new product (Primo and Amundson, 2002). In addition, collaboration with suppliers is favourable in developing long-term mutual relationships which are often connected with geographic proximity, (Wasti and Liker, 1997). Thus, collaboration with suppliers can be an external knowledge source that can assist organizations to enhance their NPD processes, yet there is a need for the firms to create the strategies for the protection of their confidential knowledge while collaborating with suppliers in NPD processes and to avoid dependency on suppliers (Doz, 1996).

While collaboration with customers, suppliers for bringing innovation impacts positively on NPD processes, our findings indicate that collaboration with competitors does not appear to be a source of innovation for NPD processes. In fact, this may produce a risk while involving competitors in collaboration for NPD innovation and such collaboration can be exceptional that might develop for some cases (e.g., Miotti and Sach-wald, 2003).

References

- Ahuja, G. (2000) The Duality of Collaboration: Inducements and Opportunities in the Formation of Interfirm Linkages. *Strategic Management Journal*, 21, 317–43.
- Almirall, E. and Casadesus-Masanell, R. (2010). Open versus Closed Innovation: A Model of Discovery and Divergence. *Academy of Management Review*, 35, 27–47.
- Atuahene-Gima, K. 2001. An exploratory analysis of the impact of market orientation on new product performance: A contingency approach. *Journal of Product Innovation Management* 12 (4): 275–93.
- Belderbos, R., Carree, M. and Lokshin, B. (2004) Cooperative R&D and Firm Performance. *Research Policy*, 33, 1477–92

- Bercovitz, J.E.L. and Feldman, M.P. (2007) Fishing Upstream: Firm Innovation Strategy and University Research Alliances. *Research Policy*, 36, 930–48.
- Brockhoff, K. (2003) Customers' Perspectives of Involvement in New Product Development. *International Journal of Technology Management*, 26, 464–81.
- Calantone, R.J., Cavusgil, S.T. and Zhao, Y. (2002) Learning Orientation, Firm Innovation Capability, and Firm Performance. *Industrial Marketing Management*, 31, 515–24
- Chesbrough, H.W. (2003) The Era of Open Innovation. *MIT Sloan Management Review*, 44, 35–41.
- Cleven J.Nina & Brettel Malte ,(2011) "Innovation Culture, Collaboration with External Partners and NPD Performance" Blackwell publishing ltd Volume No 20 No 4, 2011
- Doz, Y.L. (1996) The Evolution of Cooperation in Strategic Alliances: Initial Conditions or Learning Processes? *Strategic Management Journal*, 17, 55–83.
- Faems, D., Van Looy, B. and Debackere, K. (2005) Inter organizational Collaboration and Innovation: Toward a Portfolio Approach. *Journal of Product Innovation Management*, 22, 238–50.
- Gruner, K.E. and Homburg, C. (2000) Does Customer Interaction Enhance New Product Success? *Journal of Business Research*, 49, 1–14.
- Handfield, R. B., G. L. Ragatz, K. J. Petersen, and R. M. Monczka. 1999. Involving suppliers in new product development. *California Management Review* 42 (1): 59–82.
- Hagedoorn, J. (1993) Understanding the Rationale of Strategic Technology Partnering: Interorganizational Modes of Cooperation and Sectoral Differences. *Strategic Management Journal*, 14, 371–385.
- Hagedoorn, J. and Duysters, G. (2002) External Sources of Innovative Capabilities: The Preferences for Strategic Alliances or Mergers and Acquisitions. *Journal of Management Studies*, 39, 167–88.
- Håkansson, H. and Eriksson, A.-K. (1993) Getting Innovations Out of Supplier Networks. *Journal of Business-to-Business Marketing*, 1, 3–16.
- Jones, G.K., Lanctot, A. and Teegen, H.J. (2001) Determinants and Performance Impacts of External Technology Acquisition. *Journal of Business Venturing*, 16, 255–83.
- Knudsen, M.P. (2007) The Relative Importance of Interfirm Relationships and Knowledge Transfer for New Product Development Success. *Journal of Product Innovation Management*, 24, 117–38.
- Lambe, C.J. and Spekman, R.E. (1997) Alliances, External Technology Acquisition, and Discontinuous Technological Change. *Journal of Product Innovation Management*, 14, 102–16.
- Laursen, K. and Salter, A. (2006) Open for Innovation: The Role of Openness in Explaining Innovation Performance among UK Manufacturing Firms. *Strategic Management Journal*, 27, 131–50.
- Lau, A. K. W., E. Tang, and R. C. M. Yam. 2010. Effects of supplier and customer integration on product innovation and performance: Empirical evidence in Hong Kong manufacturers. *Journal of Product Innovation Management* 27 (5): 761–77.
- Lawson, B., K. J. Peterson, P. D. Cousins, and R. B. Handfield. (2009). Knowledge sharing in interorganizational product development teams; The effect of formal and informal socialization mechanisms. *Journal of Product Innovation Management* 26 (2); 156–72.
- Lichtenthaler, U. (2011) Open Innovation: Past Research, Current Debates, and Future Directions. *Academy of Management Perspectives*, 25, 75–93.

- Li, T. and Clantone, R.J. (1998) The Impact of Market Knowledge Competence on New Product Advantage: Conceptualization and Empirical Examination. *Journal of Marketing*, 62, 13–29.
- Linn, T.A. (1994) Learning from the Competition. *Journal of Accountancy*, 177, 43–46.
- Leonard-Barton, D. (1992) Core Capabilities and Core Rigidities: A Paradox in Managing New Product Development. *Strategic Management Journal*, 13, 111–25.
- Miotti, L. and Sachwald, F. (2003) Co-operative R&D: Why and with Whom? An Integrated Framework of Analysis. *Research Policy*, 32, 1481–99.
- Perks, H. and Easton, G. (2000) Strategic Alliances: Partner as Customer. *Industrial Marketing Management*, 29, 327–38.
- Petersen, K. J., R. B. Handfield, and G. L. Ragatz. 2005. Supplier integration into new product development: Coordinating product, process and supply chain design. *Journal of Operations Management* 23 (4): 371– 88
- Primo, M.A.M. and Amundson, S.D. (2002) An Exploratory Study of the Effects of Supplier Relationships on New Product Development Outcomes. *Journal of Operations Management*, 20, 33–52.
- Ragatz, G.L., Handfield, R.B. and Scannell, T.V. (1997) Success Factors for Integrating Suppliers into New Product Development. *Journal of Product Innovation Management*, 14, 190–202.
- Ragatz, G.L., Handfield, R.B. and Petersen, K.J. (2002) Benefits Associated with Supplier Integration into New Product Development under Conditions of Technology Uncertainty. *Journal of Business Research*, 55, 389–400.
- Rothaermel, F.T. and Hess, A.M. (2007) Building Dynamic Capabilities: Innovation Driven by Individual-, Firm-, and Network-Level Effects. *Organization Science*, 18, 898–921.
- Song, M. and Thieme, J. (2009) The Role of Suppliers in Market Intelligence Gathering for Radical and Incremental Innovation. *Journal of Product Innovation Management*, 26, 43–57.
- Souder, W.E., Buisson, D. and Garrett, T. (1997) Success through Customer-Driven New Product Development: A Comparison of US and New Zealand Small Entrepreneurial High Technology Firms. *Journal of Product Innovation Management*, 14, 459–72.
- Tsai, K.H. (2009) Collaborative Networks and Product Innovation Performance: Toward a Contingency Perspective. *Research Policy*, 38, 765–78.
- Teece, D.J. (1986) Profiting from Technological Innovation: Implications for Integration, Collaboration, Licensing, and Public Policy. In *Essays in Technology Management and Policy: Selected Papers of David J. Teece*. World Scientific, Hackensack, NJ.
- Teece, D.J. (1992) Competition, Cooperation, and Innovation – Organizational Arrangements for Regimes of Rapid Technological Progress. *Journal of Economic Behavior & Organization*, 18, 1–25.
- Tether, B.S. (2002) Who Co-operates for Innovation, and Why: An Empirical Analysis. *Research Policy*, 31, 947–67.
- Tether, B.S. and Tajar, A. (2008) Beyond Industry–University Links: Sourcing Knowledge for Innovation from Consultants, Private Research Organisations and the Public Science-Base. *Research Policy*, 37, 1079–95.

- Urban, G.L. and Von Hippel, E. (1988) Lead User Analyses for the Development of New Industrial Products. *Management Science*, 34, 569–82.
- Vanhaverbeke, Duysters, G. and Noorderhaven, N. (2002) External Technology Sourcing through Alliances or Acquisitions: An Analysis of the Application-Specific Integrated Circuits Industry. *Organization Science*, 13, 714–33
- Von Hippel, E. (1986) Lead Users – A Source of Novel Product Concepts. *Management Science*, 32, 791–805
- Wasti, S.N. and Liker, J.K. (1997) Risky Business or Competitive Power? Supplier Involvement in Japanese Product Design. *Journal of Product Innovation Management*, 14, 337–55.
- Wynstra, F., F, Von Corswant, and M.Wetzels, 2010. In chains? An Empirical study of antecedents of suppliers product development activity in the automotive industry. *Journal of Product Innovation Management* 27 (5); 625-39.