CHAPTER - 5

Literature Review

An Innovative Approach in New Product Development Process for SMEs in Surat, India
CHAPTER 5  LITERATURE REVIEW

5.1 CHAPTER OVERVIEW

The core of the whole study is justified in this chapter – “Review of Literature”. The aim of this chapter is to highlight key studies and research relating to the issue that is the focus of this study. The key objectives of the literature review is to support a structure for the research by identifying the general conclusions reached in previous analysis that are relevant to the present study. In the past, both in large and SMEs, a large number of studies have investigated the theme of New Product Development Process using Stages Suggested by various researcher. The study have examine various key success factors in New Product Development Process in each stage. The primary objective of this chapter is to provide an overview of the findings of the some of these past works. In this chapter, review of prior research is done in three sections. While first section is to provide reviews the studies conducted in New Product and New Product Development Processes, the second section discusses the past work of Success in New Product Development Process and the third section of this chapter discusses about Key/Critical Success Factors of New Product Development. The chapter come to an end with a discussion on the implication of the past study for the key concept of issues proposed in this work.

5.2 AN INNOVATIVE APPROACH TO NEW PRODUCT DEVELOP: KEY OR CRITICAL SUCCESS FACTOR IN NEW PRODUCT DEVELOPMENT PROCESS

In this section, a list of key success factor (KFS) or critical success factors (CFS) as Innovative Approach for the new product development process, based on the analysis of existing literature, is identified.

- Gupta and Wilemon (1990) studied improving Research and Development Marketing Relations a Research and Development Perspectives and explore
Successful product innovation hinges on close R&D/marketing relationships, especially in technology based organizations. There is evidence that linkage problems are common and when they are not overcome failure is the usual result. R&D's perspective on what R&D, marketing and top management can do to improve their relationship with marketing is presented. The recommendations are based on suggestions from R&D directors involved in new product development efforts in 83 technology-based companies. Also presented is how the need for integration has changed over time and where it is going in the future.

- DeHayes and Haeberle (1990) A Study of Emerging Businesses in SMEs, found that the most frequent reason for success among businesses was their ability to identify and focus on one or a few market niches. Further, they identified that most business plateau at US$10 million and that business is difficult to expand without change in management style and building up human resources in terms of quantity and quality.

- Zirger and Maidique, (1990) studied a model of new product empirically examined over 330 new products in the electronics industry in order to better understand the factors that differentiated successful from unsuccessful product development efforts. The study empirically test a model of product development that incorporates findings from the earlier exploratory survey and case study phases of research. The model identifies the critical organizational subunits, development activities and communication channels that influence product outcome, as well as, external factors such as characteristics of the product and the competitive environment and found key factors affect product outcome: (1) the quality of the R&D organization, (2) the technical performance of the product, (3) the product's value to the customer, (4) the synergy of the new product with the firm's existing competences, and (5) management support during the product development and introduction processes. Also important but less significant were the (6) competence of the marketing and manufacturing organizations and market factors, such as the (7) competitiveness and the (8) size and rate of growth of the target market.

- Cooper and Kleinschmidt, (1993) studied successful and unsuccessful projects; overall success measure; correlation analyses and found quality of execution of the activities that comprise the innovation process esp. regarding the aspects; initial screening, preliminary market assessment, detailed market study, test market/trial
sell, pilot or trial production, pre-commercialization business analysis. Product
definition prior to development esp. regarding the aspects; target market defined,
product concept/features defined, benefits of products to customer clear,
positioning strategy defined.

- Cooper and Kleinschmidt, (1993) Reduction of 8 success variables into 2 success
dimensions; financial index (FT), cycle time (CT). Correlation analyses with 95
NPD project characteristics and found positive impact on financial index; sharp,
early product definition (e.g. target market, product concept etc.), quality of
executing pivotal activities (e.g. initial screening, preliminary market and technical
assessment, business and financial analysis), strong market orientation of NPD
process, overall quality of activities along the entire NPD process.

- Cooper, (1994) Reduction of variables into thirteen constructs; split of projects into
three groups (top/mid/bottom) according to the thirteen constructs; analyses of
variance between the three groups with respect to eight single success measures and
found positive impact on profitability; quality of marketing actions, quality of pre-
development activities, sharp and early product definition, market launch
effectiveness.

- Cooper and Kleinschmidt, (1994) Reduction of independent variables into ten
constructs; two success dimensions for measuring speed; staying on schedule, time
efficiency, various multivariate analyses (correlations, analysis of variance) and
found positive impact on speed; Up-front homework (initial screening, preliminary
technical and market assessment, full-fledged market research, market research to
understand customers' needs, competitive analysis, test of market acceptance,
detailed business and financial analysis). Strong market orientation (early customer
involvement, market research for product design, work closely with the customer,
well-planned customer tests and field trials). Product definition before 'go to
development' (define target market, product concept, benefits to customer,
positioning strategy, product specifications).

- Cooper and Kleinschmidt, (1995) Reduction of success variables into two success
dimensions; financial performance, time performance. Cluster analysis based on the
success dimensions; stars, technical success, fast hits, fast dogs, big losers, thirteen
constructs measuring the characteristics of the NPD projects; analyses of variance
between the five clusters and found significant characteristics of 'stars': quality of
execution of the homework activities esp. regarding the aspects; initial screening of product idea, preliminary market assessment, business and financial analysis prior to development. Quality of execution of the marketing task esp. regarding the aspects; preliminary market assessment, detailed market study or market research, customer test/field trial of the product, market launch. Early sharp project definition esp. regarding the aspects: (clearly defined prior to development); target market, project concept, benefits to customer, positioning, product features.

- Cooper and Kleinschmidt, (1995) Success measures: Success rate, Profitability rating, Technical success rating, Domestic market share, Impact on company, Time efficiency, On time project twelve constructs measuring the characteristics of the NPD projects; correlation analyses and found quality of execution esp. regarding the aspects; quality of execution of marketing activities, quality of execution of technical activities, quality of execution of market launch, pre-development homework, sharp and early product definition.

- Cooper and Kleinschmidt, (1995) two success dimensions out of ten single success variables; programme impact (sales), programme profitability. Cluster analysis based on the two success dimensions; solid performer, high-impact technical winners, low-impact performer, dogs, reduction of independent variables into nine constructs; analysis of variance (t-tests) and found significant characteristics of 'solid-performer'; high-quality product process (construct), esp. regarding the aspects: quality of process execution, completeness and thoroughness, emphasis on up-front work (pre-development), sharp, early product definition (prior to development work), tough go-kill decisions points where projects really get killed, flexibility of process, strong market orientation.

- Gary Ragatz et. al. (1997) studied Success Factors for Integrating Suppliers into New Product Development. Effective integration of suppliers into New Product Development can yield such benefits as reduced cost and improved quality of materials, reduced product development time and improved access to and application of technology. The study identifies supplier membership on the NPD team as the greatest differentiator most and least successful integration efforts. Further they identifies that to integrate supplier into new product development, a company must overcome barrier as resistance sharing proprietary information. Overcoming such barrier depends on relationship structuring that is shared
education and training and formal trust development processes, formalized risk/reward sharing agreement, joint agreement on performance measurement, top management commitment from both companies and confidence in suppliers’ capabilities, assets sharing that is customer requirements, technology information, cross functional communication that is physical assets such as linked information systems, technology and shared plant and equipment.

- Carol Yeb Yun Lin (1998) studied Success Factors of Small and Medium Sized Enterprise in Taiwan: Analysis of cases and found that people related issues are more emphasized than those of structure and technological and business founders’ management skills, customer focus, and resource creations are more important than their technical skills and more concern for soft attitudes, skills and operating methods than for hard equipment.

- Liangli Kong (1998) study identify key success factors that affect new product success and failure in New Zealand electronic industry and found that new product success and failure were significantly influenced by the synergy of the market needs and product specifications. Another finding is how success factor is differ from failure were good understanding of buyer behavior, good value for money, made to meet users’ needs, less after sales problems, the customer has great need for product type, the experience to the product development team, and multi-functional development group, showed slight or no differences between new product success and failure. And also found that manufacturing companies have different set of important factors in separating new product success and failure. The manufacturing companies emphasized on pricing flexibility and first on market to new success and failure, while distribution companies stressed on technology fitness between the company and the new product and technology superiority in new product.

- Dyer, Gupta and Wilemon (1999) studied 182 PDMA members and suggests dedicated team structures strongly relate to first to market and fast followers firms, first to market cite difficulty in defining product/market as chief cause of delays, difficulty in product/market definition, poor interdepartmental relations and preoccupation with other responsibilities contribute to delays.

- Jonathan D Owens, John Davies (2000) studied The Importance of a New Product Development (NPD) process: Getting Started In order to achieve a successful new product, and certainly the successful implementation of a new product into a
company, it is necessary to have a structured and documented approach to New Product Development (NPD), therefore providing a clear roadmap for the development of new products. This research review highlights the NPD process, from concept to consumer, and what the key success drivers are, such as; the quest for real product superiority and success, and the need for cross functional teams; in order for a company to succeed and use new products as a source for competitive advantage. They concluded with the basic, but vitally important issues that a company should adhere to when in their beginning of NPD. The mission for successful innovation is continuous. The implementation of a NPD process however, will not solve every problem in the development process, but it will go a long way to introducing a commonsense structure that will assist somewhat in establishing success. Companies that fail to adopt these basic concepts could soon find themselves in decline facing survival pressures rather than the demands of growth.

- March-Chorda (2001) identified the major determinants that confront the product development. The cost of product development projects that discourages commitment to new product development and the uncertainty of the market acceptance were found to be the major factors. Contrary to what the theoretical studies recommend, the most frequent sequence for the process of development and promotion of new products is rather simple and short, with an average time for new product development of around 6 months, although largely depending on the sector and found that the fulfillment of the key success factors as suggested by the literature is, in general, low.

- B.C. Ghosh*, Tan Wee Liang, Tan Teck Meng (2001), The research tries to determine the strategy dynamics and key success factors (KSFs) for excellence in performance of the so-called "tiger" SMEs in Singapore. In 1995 and 1996, 50 top privately owned and successful enterprises in Singapore were identified. They have shown that they can excel, even in the current highly competitive and high operation cost environment. Their performance can be attributed to their dynamism and a few KSFs that are apparently universal to these successful companies. The strategy dynamics and their specific components that is the six top SMEs are found to be: First a committed, supportive, and strong management team. Second a strong, visionary, and capable leadership. Third adopting the correct strategic approach.
Fourth ability to identify and focus on market. Fifth ability to develop and sustain capability. Sixth a good customer and client relationship. Approximately 60% of the companies surveyed were found to be of Defender type organizations. As a majority of the companies are from manufacturing and servicing sectors and from OEMs supporting the MNCs, it is not surprising that the Defender type strategy is predominant. However, such organizations may have to evolve in order to adopt a more superior strategy such as Prospector and Analyzer when environment changes. The importance placed by organizations adopting different strategy types on their strategic posture are different although KSFs and capabilities are generally universal. Comparing proactive with passive strategy types, the degree of emphasis given various success factors by proactive type companies was generally found to be higher. Specifically, proactive type companies placed higher importance on the following factors for excellent performance: Satisfying customer’s needs, Close working relationship between top management and employee, Regionalization, Leadership, Availability of financial and technology resources and support. Further, the research also found that the importance attached to the various strategy-related success factors changes with the development. As it becomes more established, the ranking of KSFs changes as the organization faces different challenges when competition becomes tougher. Enterprises need to pay attention to the following dynamics and strategic thrusts: Strong market orientation and relevant capability; (b) Effective management; Strong management commitment and support Strong organizational capability and management cohesiveness; Access to broad base support and resources.

- Thomas Åstebro (2003) studied Key Success Factor for Research and Development Project or New Product Development Commercialization and found that the four specific criteria that the data generates as most predictive: expected profitability, technological opportunity (relative product quality), development risk and appropriability conditions (legal protection) are no great surprises and they should not be given that past research has already identified these characteristics (among 68 others).

- Kuan Yew Wong (2005), critical success factors (CSFs) for implementing knowledge management (KM) in small and medium enterprises (SMEs) have not been systematically investigated. Existing studies have derived their CSFs from
large companies’ perspectives and have not considered the needs of smaller businesses. Found the overall results from the empirical assessment were positive, thus reflecting the appropriateness of the proposed CSFs.

- Bahman P. Ebrahimi, Robert P. McGowan, Tsungting Chung (2006), The findings of a study of new product development processes in a large US technology company is reported. Based on interviews and survey questionnaires from key informants, the results indicate that there are a number of keys to success in new product development using cross-functional teams. Product development teams that believe they have a monopoly on customer and technical knowledge are less likely to innovate. Soliciting and encouraging idea generation from multiple sources, both internal and external, leads to increased innovation. The results also lend support to the findings of prior research on the crucial role of champions and sponsors in the innovation process. Strong communication and goal directedness, however, did not play a key role in the innovation process.

- Anna Kyrki, Samuli Kortelainen (2006), Distribution of new product development encompasses both great opportunities and threats. In this paper authors identified both key success factors and common pitfalls for Western firms in the organization of distributed product development in Russia. Russia’s national innovation system holds a lot of potential for foreign firms, but there are also many challenges to be addressed. By following general guidelines for co-development, the chances for success are likely to increase also in the case of joint development with Russian firms.

- Maher al-Mahrouq (2010) studied Success Factors of Small and Medium-Sized Enterprises (SMEs) in Jordan. The importance of the small and medium-sized enterprises come from the vital role of the SMEs in the private sector and because SMEs considered as a labour intensive firms. There are internal factors that they could be the reason behind the success of these firms. The objective of the study is to identify the main factors that mostly used to reflect the success of Jordanian small and medium-sized enterprises. The data used in this study were provided by financial institutions that provide loans to the SMEs. The analysis is based on the results of the questionnaire survey that was distributed to the sample firms that includes 163 firms distributed over the main three sectors and the three main governorates. The descriptive statistical technique of factor analysis has been used
for analyzing data. The finding of research indicate a set of five factors separately identifiable factors that have positive and significant impact on the success of the sample firms. These factors, when ranked in their order of importance are as follows: Technical procedures and technology, Structure of the firm, financial structure, Marketing and productivity and Human resources structure.

- Harold Siow Song Teng, Gurpreet Singh BhatiaSajid Anwar (2011), studied A success versus failure prediction model for small businesses in Singapore. The objective of the study to examine the potential success and failure of small- and medium-sized enterprises (SMEs). An exploratory business success versus failure prediction model is introduced, modeled after the Lussier prediction model, using data from Singapore. Using logistic regression analysis, it is found that the Lussier model (p=0.057) and the exploratory model (p=0.047) are significant predictors of business success and failure. Findings of the research The Lussier model accurately predicted 85.6 percent of the surveyed firms and explained 25 percent of the variance of contributing factors to S/F, and the exploratory model explained 86.3 and 38 percent of the same, respectively. SMEs regard the top four most important factors contributing to their business S/F as: employment, training, and the retainment of high-quality staff members; prevalence of good products, services, and optimum timing in introducing these in the marketplace; excellent relationships with customers and availability of top managers with good leadership qualities.

- Sima Sedighadeli et.al (2013), New product development is considered as one of the survival strategies for organisations with high risk which is related to extreme failure rate that should not be neglected. Among internal and contextual factors which affect winning or losing in new product development (NPD), the role of top management team as key decision makers is critical. The objective of our research is to explore managerial factors influencing success in new product development. To find out these factors, relevant literature was reviewed and specific top managers were interviewed. Afterwards, a survey was administrated to elicit the opinions of managers involved in NPD in accordance to the degree of each factor's importance. This study examined six factors assumed to be critical in top management level to achieve success in NPD including commitment, regulatory focus, entrepreneurial orientation, social capital, international orientation and tendency of top managers to future study.
5.3 NEW PRODUCT AND NEW PRODUCT DEVELOPMENT PROCESSES

Numerous studies exist for NPD. Descriptive studies typically outline the steps involved in NPD, either as a sequential or concurrent process. The success factors are examined in various stages of the NPD process. Theories on NPD have pointed out that the focus and activities in various stages of NPD are different. But surprisingly, most of the empirical studies on the topic indirectly regard the success factors in every stage of NPD as identical and, as a result, researcher know little about what exactly is highlighted in each stage of the NPD process. In order to be competitive and survive confidently, many SMEs have focused on various factors to achieve successful NPD.

- Hauschildt (1991) studied towards measuring the success of innovations, thirty extensive empirical investigations have been compared in terms of how they measure the success or failure of innovations. It is noted that there is far from an agreement on the standards of measurement. There are important differences in the choice and the qualities of measurement, the stage of the process at which the success is measured, the standards of comparison, and the choice of persons who assess the success of the innovation. Thus, there are not only difficult problems of reliability, but also of validity. It is found that the investigations cannot be compared, though they are subsumed under the same headline. Starting from this analysis, a concept for the measurement of the success of innovations is developed with the object of measuring the success at all stages of the innovation process and suggested that success could be measured from both technical and economic perspectives and that multiple criteria were needed if a correct assessment was to be made.

- Urban and Hauser (1993) contend that any organisation can decide on its strategic direction for new product development. The two main strategies for product development are either reactive or proactive. A reactive product strategy is based on dealing with the initiating pressures as they occur, whereas a proactive strategy would explicitly allocate resources to pre-empt undesirable future events and achieve goals. To select the appropriate strategy, organisations must understand the situations that affect this decision. Urban and Hauser suggest that reactive strategies may be best in situations that: Require concentration on existing products or
markets, Can achieve little protection for innovation; Are in markets too small to recover development costs; Are in danger of being overwhelmed by competitive imitations - are in distribution chains dominated by another innovator. For other situations, the authors recommend proactive strategies that: Require rapid sales growth; Mean entering new markets; Provide high volumes or margins; Offer a capability of achieving patent or market protection; Supply resources and time necessary to develop new products; Block competitors from rapidly entering with a second, but better strategy; Provide reasonable power in the distribution channel.

- Bowen et al. (1994), highlights seven critical elements that any outstanding product development project should have in common: firstly recognize and nurture the firm’s core capabilities, secondly a guiding vision shared by all members in the cross-functional team, thirdly project leadership and organization, fourthly ability to instill the team with a sense of ownership and commitment, fifthly ability to rapidly learn and to reduce mistakes and misunderstandings, sixthly ability to push forward the company’s performances, and lastly ability to integrate within projects following a systems approach.

- Kotler et.al. (1994) argues that to ensure successful new product development, it is critical to have strong new product planning. He believes that top management is ultimately responsible for the new product success rate. Senior managers should establish specific criteria for new products and define strategic roles, so product managers, research and development staff, marketing and other employees are sure of what role the new product will play. Furthermore, to ensure a co-ordinate new product development process, senior management should set up effective organisational structures that can be tailored to handle all aspects of the new product.

- Cooper (1994) presents a detailed list of the main elements contributing to the final outcome of new product development. These elements are: Unique and superior features of a new product. Product superiority comprises unique product attributes and characteristics, good value for money, meeting customer needs, excellent product quality, superior price characteristics, and perceived product value. A strong market orientation - this means that product development processes should be market driven and customer focused. Requirements of a new product should be clearly defined and agreed by all parties involved in the project. Early product
definition normally describes the target market of the intended product users, description of the product concept and the product's benefits. A cross-functional team approach not only speeds products to market, but also enhances the success rate. Successful new projects have a balanced process that involves marketing, engineering, research and development, production, design and finance.

- Montoya and Calantone, (1994) in their study determinants of new product performance a review and meta-analysis and concluded that new product performance literature content, research methodology, data set characteristics and variable operations are highly diverse and research on new product performance is not highly consistent in terms of which factors are to be included in each study and which statistics are to be reported.

- Kaul and Rao (1995) studied an integrative review of product positioning and design models in the marketing literature. They discriminate the product positioning models, which involve decisions about intangible perceptual features, and product design models, which involve selecting optimum levels for a set of physical, assessable product features. Optimal product planning in the marketing literature is typically posed as selection of optimal price and product characteristic levels that achieve maximum profit or market share. For complex products, where engineering constraints may prevent some combinations of product characteristic levels from being technically attainable, it is difficult to define explicitly which combinations of characteristics are feasible. For such products, planning decisions made without engineering input may yield inferior or infeasible solutions.

- Henard and Szymanski (2001) discussed about significant and non-significant drivers of performance, dominant drivers of performance, breadth of performance drivers and prior emphasis in performance modeling and concluded that giving more emphasis on market place, strategy, and product characteristics than process characteristics is more appropriate for augmenting success levels.

- V. Krishnan Karl T. Ulrich (2001) reviewed of research in product development, which they defined as the transformation of a market opportunity into a product available for sale. Their reviewed was broad, encompassing work in the academic fields of marketing, operations management, and engineeringdesign. The value of this breadth was in conveying the shape of the entire research landscape. They focused on product development projects within a single firm. They also devoted
attention to the development of physical goods, although much of the work we describe applies to products of all kinds. They looked inside the “black box” of product development at the fundamental decisions that are made by intention or default. In doing so, they adopted the perspective of product development as a deliberate business process involving hundreds of decisions, many of which can be usefully supported by knowledge and tools. They contrast this approach to prior reviews of the literature, which tend to examine the importance of environmental and contextual variables, such as market growth rate, the competitive environment, or the level of top-management support.

- Xueli Huang, Geoffrey N. Soutar, and Alan Brown (2002), examined the new product development process (NPDP) in Australiansmall and medium-sized enterprises (SMEs) and found that Australian SMEs suggest that marketing-related activities were undertaken less frequently and were less well executed than technical activities in developing new products. Marketing-related activities were important in distinguishing between successful and unsuccessful new products. In addition, resource and skill availability and new product planning were positively associated with the quality with which NPD activities are executed. Further, the existence of a new product strategy seemed to have a significant positive impact on the quality of NPD activities.

- Poolton and Barclay, 1998; Ernst (2002), in their study New product development from past research to future applications found focusing on the identification of the success factors in new product performance. These two reviews summarized the success factors from the past literature and pointed out the limitations in applying these success factors to develop successful products in the market.

- Caffyn and Grantham (2003) studied nurturing continuous improvement within new product development. Their study reports on the findings from a research project that applied an action research approach to investigating these variables in real-time NPD environments. Data from this project, from an in-depth study of a medium-sized design and manufacturing company in the UK, indicate that success with NPD CI (Continuous Improvement) enablers may be dependent on less problem-oriented thinking involving high levels of understanding about the concepts underpinning CI, such as improvement and learning. Study also suggest that facility with a range of practical skills is necessary; deploying problem-solving
tools to procedure and process (rather than product), and a positive dominant management of the implementation program through CI facilitation. The study concludes by simplifying the findings to current theory about CI and, more specifically, organisational learning within NPD.

- Bayo-Morines and Merino-Diaz de Cerio (2004) studied employee involvement: its integration with advance manufacturing technologies. Employees as one of the main resources that contribute ideas to NPD. They described that employees are one of the main assets of a firm and one of the decisive factors in determining performance as one that allows little room for argument.

- Cravens and Piercy (2005) developed the new product development planning process. The process includes such stages as, need analysis, idea generation, screening and evaluation, business analysis, product and marketing strategy development, and finally testing and commercialization. The business analysis stage components are sales forecasts, cost estimation, profit projections, risks assessments and finally the possible cannibalization of sales. The business analysis components should be used to estimate the commercial performance of the new-product concept. Before going any further this assessment is crucial for moving on in the product development process. The business analysis stage have many important components, therefore we see it as a crucial part of the whole process. To stress the importance of the business analysis stage that “business analysis is the final assessment before deciding whether to develop the concept into a new product or not.”

- Nilsson-Witell (2005) highlights the continuous improvement as an important strategy in improving organisational performance. With the purpose of preserving competition capabilities, an organisation needs to focus on timely delivery of high-quality products. Given that the time of NPD is becoming an important competitive advantage, it is essential for the production companies to constantly introduce improvements, not only in the process of NPD but also in the production processes. An organization adopting a continuous improvement programme in product development will have several improvement programmes working in parallel. Some of them might be focused on improving the products, while others might be aimed at improving the performance of the product development process.
Rajesh Chandy, Brigitte Hopstaken, Om Narasimhan and Jaideep Prabhu (2005) studied the ability of firms to convert ideas into products, i.e., their conversion ability and found that converting promising ideas to launched drugs is no easy task: only about 20% of patented drug ideas make it to product launch, firms vary widely in their ability to convert promising drug ideas to launched drugs. Firms with the highest conversion ability are those that: 1) focus on a moderate number of ideas, in areas of importance, and in areas where they have expertise, and 2) deliberate for a moderate length of time on promising ideas.

Hanna Timonez, Eila Jarvenpaa (2005) studied the process of knowledge acquisition from external knowledge sources in the NPD of SMEs. Based on a comparative case study research design, three knowledge acquisition models are identified, and the used knowledge sources and the role of patent information in these models are discussed and found that there is a relationship between the NPD processes and the ways the knowledge is acquired from the external environment, but on the other hand, the knowledge acquisition models identified do not correspond to the previous studies about knowledge acquisition in terms of the environmental scanning framework. Thus further studies are needed to understand the relationship between the type of knowledge acquired and the scanning-interpretation modes used by organizations.

Robert G. Cooper and Michael S. Mills (2005) explored the drivers of new product performance, with a particular focus on P&G’s best practices. The Innovation Diamond is introduced as an integrative and guiding framework to help management focus on what’s important to success: innovation strategy, a solid idea-to-launch process, portfolio management and the right climate and leadership. The best practices identified are grounded on research results from a major benchmarking study undertaken by one of the article’s authors. And illustrations of these best practices in action are taken from P&G, which has implemented many of them under the guidance of the other author.

Hanna Timonen, Eila Järvenpää (2005) studied focuses on the process of knowledge acquisition from external knowledge sources in the NPD of SMEs. Based on a comparative case study research design, three knowledge acquisition models are identified, and the used knowledge sources and the role of patent information in these models are discussed and found that there is a relationship between the NPD
processes and the ways the knowledge is acquired from the external environment, but on the other hand, the knowledge acquisition models identified do not correspond to the previous studies about knowledge acquisition in terms of the environmental scanning framework.

- **Barbara Scozzi and Claudio Garavelli (2005)** study sets out to investigate business modeling techniques (BMTs) which can be used to support and improve innovation processes within small and medium-sized enterprises (SMEs) and found that the paper is the identification of the problems facing SMEs in innovation processes and the possible support offered by BMTs. Though methods and models alone do not assure the success in the innovation development process (IDP), they are enabling factors and can support the creation of strategies, reasoning, insights, and communication.

- **Pattikawa et al. (2006)** reviewed new product performance research at the project level by investigating the variables associated with new product project performance. This review was extended to formulate the central tendency and variance in the composition of the variables associated in the form of a correlation coefficient and stated that new product project performance is highly dependent on strong market orientation, proficiency in new product development, synergy of resources, and strong inter-functional coordination.

- **Kahn et al. (2006)** present their view of a best practices framework for NPD management based on the PDMA’s six NPD management dimensions: Strategy, portfolio management, process, market research, people, and performance evaluation. A new product strategy is needed to focus the product development effort and tie it to business unit or corporate strategy; and a new product strategy provides a way for management to influence this process.

- **Ali E. Akgün’a, Gary S. Lynnb, Cengiz YNlmaz (2006)** study reported to develop and empirically test a model of team learning process and its effects on team performance in new product development teams. Using the socio-cognitive theory of learning in groups and organizations, several hypotheses were tested to show that the prime components of social cognition (that is, information acquisition, information dissemination, information implementation, unlearning, thinking, intelligence, improvisation, sense-making, and memory) form an interactive process model of the team learning phenomenon. By studying 165 new product development
projects, it was shown: (i) that the eight primer socio-cognitive factors of information acquisition, information dissemination, information implementation, memory, thinking, improvisation, unlearning, and sense-making constitute interrelated sub-components of a higher-order team information-processing construct; (ii) that team intelligence is positively related to components of team information-processing; and (iii) that information-processing facilitates new product success primarily through the positive effects of superior information implementation. Theoretical and managerial implications of the study findings are discussed.

- Owens (2007) studied an Exploratory Investigation on why do some SME’s of United Kingdom still find the implementation of a New Product Development process problematical? The long-term survival of a business often hinges upon its ability to successfully introduce new products into the market place. These new products and their successful development can be the lifeblood of a company. Thus, NPD is a major consideration for most organisations. New products can provide the stimulus for the company to grow and produce profitable returns. New products can gain new markets and market shares and subsequently help to defend against competitive pressures. Some businesses not only want to accelerate their NPD efforts, they also like to be a ‘first to market’ business. However, this strategy has its own risks as well as competitive advantages. They explored numerous businesses NPD is one of the leading areas for focus, as companies seek to reduce time to market, access new technologies and develop more and better products. This study has identified a number of areas that could accelerate NPD process in SMEs and have significant impact on the NPD process performance in terms of its speed, cost, flexibility, quality, profitability, customer value, etc. Most of these can be grouped into four major categories: (1) senior management support; (2) early integration of functional expertise in NPD; (3) availability of NPD resources and their management; and (4) an organizational environment that supports team work. Subsequently, the consistent development and introduction of new products that customers’ value can be an important criteria for business growth and prosperity. This study found in the innovation management literature on the development of new products. This study examined why product development
delays occur, the nature of these delays, and what could be done in order to avoid them.

- Jifeng Mu, Gang Peng, and Yi Ten, (2007) examined the key success factors of NPD in Chinese SMEs. Different from the traditional approach regarding the success factors in each stage of NPD as homogeneous, the key success factors in each stage of the NPD process are examined from a managerial perspective and found that Chinese SMEs do not regard financial return as the primary criterion in the idea-generation stage. Although the key success factors are relatively quite different in various stages, technological, marketing, commercial, and managerial factors are important across all stages.

- Jerry Soldatos, Jurate Hardy (2007), examined the new product development process in the Australian grocery organisations and the influenced of strategic planning on new product development and found that top management’s skills and vision in addressing various issues in new product development are vital to business success and the importance of top managements support during new product development phases, creating an innovative culture within an organisation should be a management priority, so new product ideas can be generated from various levels in the organisation.

- Mathew Cheria1, Myrna Flores, G. Srinivasan (2008) relates literature and established theories of inter-organizational relationships with the experiences on Indian Manufacturing Enterprises’ alliances by the respective CEOs and Top level Managers and conclude with the proposes a model integrating eleven key Critical Success Factors (CSFs) that can enable the future formation of successful Cross Border Alliances (CBAs) of Indian Manufacturing Enterprises (IMEs).

- David Deakins, David North, Rob Baldock, Geoff Whittam (2008) reported an in-depth study into demand and supply side issues relating to access to bank finance by Scottish SMEs and whether there is still market failure associated with good, bankable business cases from SMEs that do not receive finance. They argued that their study utilizes innovative methodology and is relatively rare as a robust study in this area. They combine demand side in depth survey analysis of SMEs with supply side analysis by bank managers of real business propositions through verbal protocol analysis. Focusing on these categories of SMEs, they analyze survey evidence, in depth case studies and verbal protocol analysis with bank managers to
discussion research questions on whether informational effects can lead to market failure in the provision of debt finance, the circumstances in which sound propositions are turned down and whether such circumstances can be prevented. This forms the basis for development of conclusions on the continued existence of a debt gap for certain categories of SMEs and some policy implications.

- Arzu Tektas, Emine Nur Gunay, Abdulmecit Karatas, Asli D. Helvacioglu Kuyucu (2008) studied measures of the innovation awareness and utilization levels of a sample of SMEs located in an Organized Industrial Zone (OIZ) in Istanbul. It indicates that the SMEs with higher ICT adoption capabilities have higher innovation utilization rates. These SMEs also benefit from increasing exports and technologically new or significantly improved goods and services. Although the findings cannot be generalized, they can also shed light on the existing positive correlation between utilization levels of different innovation types.

- Glauco Henrique de Sousa Mendes et. al (2009), studied similarities and divergences in the new product development practices: comparing technology-based companies in the medical device and process control automation device industries with the objectives to identify and compare practices which influence the success of NPD projects in two industries: medical device industry (MDI) and process control automation device industry (PCAD). They tested a conceptual model of the relationships among the variables affecting new product performance to help identify the critical factors in these industries. The variables taken under study were: new product innovation degree, product advantage, marketing skills, sources of technology, company skills, project leader skills, cross-functional integration, NPD teams’ organization method and NPD process proficiency. The analysis is based on a survey of 104 new product projects in 62 companies. Divergences and similarities and between the industries studied can be identified in the results. The critical success factors in MD companies are related to the organizational characteristics of the company, such as proficiency in NPD and marketing. The critical success factors in PCAD companies were related to the characteristics of the products, the degree of innovation incorporated in the new product and the capability of the company to analyze the targeted market. The results will be helpful for guiding management actions, as one way to improve NPD performance in both industries.
5. LITERATURE REVIEW

- Gloria Barczak, Abbie Griffin, and Kenneth B. Kahn (2009), studied Perspective: Trends and drivers of success in NPD Practices: Results of the 2003 PDMA Best Practices Study. The objective of their research is to assist managers in determining how to improve their own product development methods and practices and found that in the eight years since the previous best practices study was conducted, firms have become slightly more conservative in the portfolio of projects, with lower percentages of the total number of projects in the new-to-the-world and new-to-the-firm categories. Although success rates and development efficiencies have remained stable, this more conservative approach to NPD seems to have negatively impacted the sales and profits impact of the new products that have been commercialized. As formal processes for NPD are now the norm, attention is moving to managing the multiple projects across the portfolio in a more composed manner. Finally, firms are implementing a wide variety of software support tools for various aspects of NPD. NPD areas still extremely in need of improved management include idea management, project leadership and training, cross-functional training and team communication support, and innovation support and leadership by management. In terms of aspects of NPD management that differentiate the “best from the rest,” their findings indicate that the best firms highlight and assimilate their innovation strategy across all the levels of the firm, enhanced support of team communications, conduct extensive research, and use many forms of new methods and techniques to backing NPD. All companies seem to remain struggle with the recording of ideas and making them readily available to society at large and in the organization, even the best.

- Chen et al. (2010) focused on reviewing 70 empirical articles related to NPD speed. Their review identified 17 most frequently examined antecedents of NPD speed and further stated that these antecedents are organized into four groups of characteristics namely; strategy, project, process, and team to explore the relationships between NPD speed and its 17 commonly studied antecedents.

- Wim G. Biemans (2010), studied big new product development research into new product development (NPD) has grown steadily over the last couple of decades. The current body of NPD research displays a distinct methodological bias and consists mostly of either large-scale quantitative questionnaires or small qualitative investigations that are often anecdotal. But a closer look at NPD practice reveals
that NPD research needs to re-invent itself by using more complex research designs and addressing new research questions that look at complex NPD issues in a broad organizational context and argues that the reality of NPD practice requires a methodological make-over of NPD research, with more emphasis on interpretive research methods and complex multi-informant/multi-organization research designs. Such improved NPD research leads to richer results that significantly advance our understanding of NPD and close the gap between NPD research and practice.

- Fu, Yan-Kai (2010), studied New Product Success among Small and Medium Enterprises (SMEs in Taiwan and investigates critical factors affecting the likelihood of new product success and effective new product development (NPD) performance for Taiwanese small and medium enterprises (SMEs). The sample included 357 SMEs from consumer manufacturing. Empirical results suggest that new product success dimension in measure customer acceptance measures, market acceptance measures, financial performance measure, and technical level measure and found that managerial implications, and suggestions for future research are all presented.

- Arina Soukhoroukova, Martin Spann and Bernd Skiera (2010) studied the propose the concept of idea markets as a new method to create and evaluate new product ideas and described the methodology of idea markets and discuss their scope for designs and present the results of a real-world intranet-based idea market in a large, high-tech B2B company and empirically assess the feasibility of idea markets for creating and evaluating new product ideas, analyze the quality of the idea market's ability to create and evaluate new product ideas, compare the evaluations of an idea market with those of experts, and outlined the participant's as well as the top-management's evaluations of the overall performance of the idea market. Findings indicated that idea markets are a promising new method to support the new product development process.

- Bingwen Yan and Oluwole Daniel Makinde (2010) studied impact of continues improvement on new product development within SMEs South Africa and they explore that companies generally embrace Continuous Improvement (CI) in their quality improvement process over the last decades. The adoption of CI on New Product Development (NPD) has not been practically communized. In the current
dynamic environment, many companies are focusing on innovation and NPD in order to be innovative and competitive. It has become an important issue on investigating the application of CI practice on NPD process. They reports on the findings from a research project that applied a survey approach to investigate the impact of CI on NPD process. Data were collected from 40 Small and Medium-sized Enterprises (SMEs) through questionnaire and interviews. The findings of the study indicate that CI plays a significant role in boosting NPD management within SMEs, although some areas still need to involve in depth learning to improve management competency and knowledge in order to implement CI effectively. Finally, a new NPD model that embedded CI into NPD management process in SMEs is proposed. This model will add value to the future research on CI and NPD management.

- Clare Flinders, Patrick Lynch, Mary T. Holden (2010), studied overcoming the barriers to managing innovation in the early stages of new product development in SMEs and described the critical events that enabled an SME to successfully overcome the barriers to managing new product concepts from inception and, in so doing, presents implementable guidelines that can be used by SMEs to manage the delivery of creative and attractive new product concepts in the early stages of NPD. Action research was used to conduct a three-phase methodology involving a single case study. First, a diagnosis phase investigated the nature of innovation within the company. In the second phase, a series of iterative interventions by the researchers provided participants with both the theory and practice skills to manage innovation. The third phase involved an evaluation of the extent to which change in managing innovation in the company had occurred. Found the highlight a vast and sustained improvement in Dudley Europe’s innovation management of their early NPD stages.

- Marjan Mohammadjafari and Shamsuddin Ahmed et.al. (2010) studied a conceptual model for development of New Product in SMEs by E-collaboration and Project Management, excessive time for new product development is one of the problems in most of the industries. Usually the time for production is longer than the first estimation. Then the companies lose their customers. Therefore, they can’t be competitive in the global market; also the cost for production will be increased. Specially small and medium size enterprises (SMEs) can’t successfully enter the
market, unless they do the customer needs. Study was found electronic collaboration between different sections in the company via project management is necessary for improving time and cost of new product. Other researchers already identified several factors are important for lead times in new product development projects like design, planning, product and procurement. We develop the model incorporation all these four factors, to estimate the time and cost.

- Nader Ale Ebrahim*, Shamsuddin Ahmed and Zahari Taha (2010) NPD and its relationship with virtuality and then identifies the critical factors of NPD in virtual teams. The statistical method was utilized to perform the required analysis of data from the survey. The results were achieved through factor analysis at the perspective of NPD in some Malaysian and Iranian manufacturing firms (N = 191). The 20 new product development factors were grouped into five higher level constructs. It gives valuable insight and guidelines, which will help managers of firms in developing countries to consider the main factors in NPD.

- Yahya, et.al. (2011), explored process innovation of small and medium enterprises (SMEs) in Malaysia. A survey of 50 Peninsular Malaysia-based manufacturing SMEs was conducted. The respondents were asked questions about their perception on the company’s innovative characteristic which in this study is focusing mainly on process innovation (e.g. new product development, systems and technology). A definition of innovation was established based on past studies and a systematic approach to measure company innovativeness was adopted. Company innovativeness was measured using ten indicators. The top 20 per cent firms were compared with bottom 80 per cent firms in terms of product innovation management, systems and technology. Means of responses were compared for two sets of companies. Findings showed that the characteristics of more innovative SMEs manufacturing firms are perceived to be different as compared to the less innovative SMEs manufacturing firms.

- Hardik Vachhrajani (2011), studied the outcomes of a grounded inquiry performed on 10 outperforming SMEs from the industrial city of Rajkot in western India. Various emergent patterns include propositions related to the strategies adopted by SME entrepreneurs to attain innovation advantage. Outcomes, along with other insights, also emphasize the important role played by managerial aspects like
organization structure, process implementation, and top management involvement, in the innovation process.

- Nadia Bhuiyan (2011), studied the framework of critical success factors, metrics, and tools and techniques for implementing metrics for each stage of the new product development (NPD) process and found that NPD success factors, suggests metrics that should be used to measure these factors, and proposes tools and techniques to make use of these metrics. This was done for each stage of the NPD process, and brought together in a framework that the authors propose should be followed for complex NPD projects.

- Martin Muršič (2011) study investigated the use of risk management methods in new product development with SMEs in the Eindhoven area. Functioning in highly competitive environments forces numerous companies to frequently launch new products. Companies excelling in NPD, improve performance not just in individual aspects of NPD, but concurrently improve several managerial aspects of NPD (Griffin, 1997). Among these managerial aspects, researchers have paid relatively little attention to the topic of risk management and even less to risk management in small and medium enterprises (SME). Since the research on risk management in SMEs is somewhat limited the contribution of this master thesis is to create an overview of the current literature and to modify current risk management tools to better fit SME needs and specifics.

- Jiyao Chen et al. (2012), studied New product development (NPD) speed, it has become increasingly important for managing innovation in fast-changing business environments due to continuous reduction in the product life cycle time and increase in competition from technological advancements and globalization. While the existing literature has not produced consistent results regarding the relationship between speed and success for NPD projects, many scholars and practitioners assert that increasing NPD speed is virtually always important to NPD success. The purpose of their study is to examine the implied theory that faster is better as it relates to new product success (NPS). From the perspectives of time pressure diseconomies and receptive capacity, the study assumed that speed has a linear relationship with success. The study further argue that time-presure diseconomies depend on levels of uncertainty involved in NPD projects. Using survey data of 471 NPD projects, to test the hypotheses hierarchical regression analysis and subgroup
5. LITERATURE REVIEW

polynomial regression used. The results of this study indicate that NPD speed has a linear curve relationship with NPS, and the nature of the speed–success relationship differs, depending on type and level of uncertainty. When technological newness is high and complex the relationship is linear curve, but when uncertainties are low, the relationship is linear. In contrast, the results of this study suggest a curvilinear relationship under conditions of low market newness but not when market newness is high. The study states that time-pressure diseconomies and absorptive capacity are important theoretical constructs in understanding speed in NPD. The various impact of market newness and market disorder on NPD speed supports the difference of newness and disorder as two different sources of uncertainty. The study also focused on the effects of NPD speed under the different conditions of uncertainty. NPD teams needed to pursue NPD speed as a critical strategy, but it is necessary to analyze the source and degree of uncertainty about projects before a time-based strategy is selected. In order to address the challenges of high uncertainty, a firm needs to probe, learn, and iterate fast. In particular, NPD teams need to distinguish between the different requirements for new products in emerging and new markets, and those in fast-changing markets. Moreover, NPD teams need to balance how fast they need to go with how fast they can go by considering team absorptive capacity and customer absorptive capacity.

- Hakikur Rahman and Isabel Ramos (2013) study focused on open innovation processes to reach out to the common stakeholders in the entrepreneurship system through small and medium enterprises. It has been observed that to provide innovative services or products to the outer periphery of the customer chain, SMEs play an important role. Hence, focusing innovation for SMEs would lead to a newer dimension of innovation research for better business and economic growth. The research emphasizes on various open innovation strategies for SMEs at the outset by focusing transformation of innovation processes from a closed boundary leading to a networked paradigm, try to provide some overview on a few innovation strategies, and develop a business model. Discussed about some challenges and barriers that SMEs are facing in implementing open innovation strategies.
5.4 SMALL AND MEDIUM SIZE ENTERPRISES

- D.J. Storey (1994) admitted that there were many acceptable definitions of a small firm at the time. The enterprises are usually measured by their size; in terms of their staff count, sales turnover and/or profitability. SMEs may be regarded at sectorial level, where in some sectors and industries the firms may be considered as small, while in others they are simply not recognised as SMEs. Several criteria may be used to define SMEs. For instance, the firms within the manufacturing industry have traditionally been distinguished by the number of employees, but retail firms may usually be categorised by their turnover. Yet, the most common and easiest criterion to define SMEs and to differentiate them from the larger firms is by using different thresholds. Storey (1994) defined SMEs as firms which employ up to 499 people. He held that firms with a staff-count of 500 become considered as large organisations. A number of studies have used the benchmark of 500 employees as a cut-off point to define their SMEs under investigation (Storey, 2010). Therefore, up to 500 employees became one of the key criteria in selecting the researched companies. However, there were exceptions to the rule. The danger of many SME definitions is the inherent assumption that there is a homogeneous small firm sector, and it is assumed that all firms within it will show similar characteristics.

- Hill et al. (2002) noted that ‘small-organisation’ smallness is a multi-dimensional concept which may not always be judged from the size perspective alone. Perhaps, there is no such thing as a ‘typical small organisation’. While size may be a determining factor, it may not be sufficient to explain the patterns of employment relations. Undoubtedly, there are other influences which may affect HR practices in SMEs. A variety of influences may be triggered by both internal and external behaviour (Mukherjee et al., 2012). A number of factors may comprise the specific ownership forms, sector characteristics, the particular markets and strategies which are used to attract them, technology, ethnicity or cultural influence and so on (Nieto and Santamaria, 2010).

- Kotelnikov, (2007) Acs et al. (1997) argued that small firms are indeed the engines of global economic growth, whereas small and medium enterprises (SMEs) play an important role in promoting economic development. Many economists believe that the wealth of nations and the growth of their economies strongly depend on the
performance of their SMEs (Schröder, 2006). In many developed and developing countries, small and medium sized enterprises (SMEs) are the unsung heroes that bring stability to the national economy and help buffer the shocks that come with the boom and bust of economic cycles. SMEs also serve as the key engine behind equalizing income disparity among workers (Choi, 2003). SMEs seem to be appropriate units when behaving like network nodes because of their lean structure, adaptability to market evolution, active involvement of versatile human resources, ability to establish a sub-contracting relation and good technological level of their products (Mezgar et al., 2000). In light of the above, SMEs have advantages in terms of flexibility, reaction time and innovation capacity that make them central actors in the new economy (Raymond and Croteau, 2006).

- Samuel Odongo Anyanga, Micah Odhiambo Nyamita (2016), studied the major growth strategies adopted by small and medium enterprises in Kenya: A Case of Kisumu County Small and Medium Enterprises (SMEs) formulate growth strategies in order to attain high market share, high productivity and gain more profit and attract more customers. They mentioned Kenya, small businesses fail because of adopting wrong strategies that do not enhance growth. Therefore, their study sought to investigate growth strategies adopted by SMEs in Kenya, they focusing on artisans operating within one of the biggest market in the country-Kibuye market. Their study employed descriptive survey research design and used questionnaires to collect both qualitative and quantitative data. This study asserted the theory of growth strategies by indicating through and found that enterprises move through different stages of growth and that each stage contains a relatively calm period of growth that ends with a management crisis. They also found that the SMEs in Kenya have realized relative growth with each stage of growth characterized with numerous management challenges and suggested the major growth strategy the enterprises adopted is product development strategy, but to a moderate extent through identification of new markets for their new existing products.

5.5 ESTABLISHING RESEARCH GAP

The evidence of the past research indicates that there is very less work done under new product development in SMEs and in emerging and developing countries like India. Major study found in literature was either done in large organization
or in developed countries like USA, Canada, Spain and Australia. Studies have been conducted to find the critical success factors of new product development (NPD) (Cooper, 1979; Calantone and Cooper, 1981; Calantone et al., 1996; Balachandra and Friar, 1997; Song and Parry, 1997; Henard and Szymanski, 2001; Ernst, 2002). However, most of these studies were conducted either within the developed economies, such as North America and Europe, or for large enterprises that own capacity and expertise advantages, while little attention has been directed towards developing countries and emerging new markets like China, India, and Southeast Asia. Even less is known about the NPD processes of the small and medium-sized enterprises (SMEs) in these countries and regions.

The past research have not tried to examine Key Success Factors in each stage of new product development and the importance of each Key Success Factor in each stage of New Product Development. The present study tries to incorporate these Key Success Factors and examine them in each stage of New Product Development Stage in Small and Medium Size Enterprises. The stages of new product development in SMEs are quite different than the large size enterprises. There are many stages of new product development are skipped in SMEs. The most of the study found in literature are study of critical success factors and not Key Success Factor. Adopt positive approach of study. It is decided to go for approach based on key success factors not critical success factors. As Key Success Factors could have stimulate defensive attitude with positive answer to all question, as respondents are reluctant to recognize their own limitations.

It is important to fragmentation that empirical studies have found many firms inclined to emphasis only on the measurement of innovation inputs and outputs in terms of spend, speed to market and numbers of new products, and ignore the processes in-between. There is a need to identify the Key Success Factors for the product development process in SMEs considering their role in the economy and the potential for employment. Most of the studies have discussed a generic framework for identifying KSFs in the product development process without any special reference to the size and nature of the industries. Research over the past two decades has provided valuable insights into the factors that influence new product performance, suggesting a number of variables that distinguish new product success from failure (see Craig and Hart 1992;
Hart and Baker (1994; Montoya-Weiss and Calantone, 1994). In a recent extensive study, Cooper and Kleinschmidt (1995) found that a firm’s new product performance depends mainly on its processes, resources, and strategies, which are the “cornerstones of successful product development” (Cooper, 1996, p. 655).

An examination of classical studies in the field of NPD reveals that these papers either exclude, or at least do not deliberately focus on, the situation of SMEs. The older empirical studies (e.g., Booz-Allen and Hamilton, 1968, 1982) do not explicitly focus on the situation of SMEs. For example, the firms in many studies are quite large, often with sales of at least $1 billion. The same can be said for literature reviews conducted during the 1990s (Craig and Hart, 1992; Rubinstein, 1994; Brown and Eisenhardt, 1995; Griffin, 1997) as well as more recent ones (Jong and Vermeulen, 2003; Perks and Wong, 2003). Recently conducted empirical studies (e.g., Griffin, 1997; Cooper et al., 2004) also neglect the SME angle. Despite the importance of NPD for SMEs, it has been noted that this area is largely neglected. Although engaged in extensive literature searches, researchers failed to locate any review paper or papers providing a comprehensive overview of the field particularly in Textile and Diamond SMEs in India. The following table shows the total number of research papers, books, web sites, and theses reviewed as literature in the chapter of Literature Review and other chapters like introduction, theoretical background, introduction to industries, research methodology, and Data Analysis and Findings and Conclusions.

Table 5.5-1 Counts of Literature Review

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<tr>
<td>New Product and New Product Development</td>
<td>45</td>
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5.6 CHAPTER SUMMARY

This chapter has attempted to outline those elements in the extensive academic literature on New Product Development in Small and Medium Size Enterprises (SMEs) that are most relevant to the study. The study conducted in this field were reviewed in detail, and the wide range of methods and methodologies employed has been highlighted. The chapter discusses in four parts previous study conducted in New Product and New Product Development Process, Success of New Product Development, Key/Critical Success Factors of New Product Development and Small and Medium Size Enterprises. The chapter ends with the research gaps.