Innovation in New Service Development: The Role of Customer

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Abstract—Given today’s industry dynamics, new service development is becoming increasingly important to the competitiveness, growth, and survival of organizations. Unfortunately, new service development has proven to be a complex and difficult task. Numerous reasons are stated in the literature such as the difficulty of understanding and anticipating latent customer needs and insufficient market research techniques. By engaging a limited number of specially selected customers and working closely with them during parts or the entire development process, it is suggested that the stated problems can be minimized. The overall objective of this paper is to contribute to an increased knowledge of customer involvement, i.e., the role of customers as contributors and co-creators in new service development. The paper draws on theory from market and learning orientation in conjunction with a service centered model, and provides an extensive review of literature. The dissertation is based on four empirical studies from various service industries e.g., Staffing Services, Airline Services, and Mobile Telecommunication Services. In this paper it is argued that customer involvement aims at developing customer knowledge with an emphasis on sticky information such as customer latent needs. It is further argued that sticky information and insights cannot be detached from the social context in which they are generated. Therefore, the transfer of sticky information and knowledge requires deeper interactions and processes of communication. By allowing customers to innovate on their own or by spending time with them and actually taking part in activities with them, deep insights and new ideas have an opportunity to emerge.

Keywords—Customer involvement, new product development, new service development, Service innovation.

I. INTRODUCTION

New product and service development offers great potential. Research has shown a strong relationship between new products and performance. New products that have been on the market for five years or less account for on average 40 percent of company sales. Also, new products have a similar impact on profit. A recent article on the best NPD practices reports that the average percentages for three-year old products are about 28 percent of sales. Among the top 20 percent of companies, new products account for 38 percent of sales and 42, 4 percent of profits (Ibid.). The results for new services seem to be somewhat lower. [13] found, based on a large sample of new manufactured goods and services that new services account for 24, 1 percent of sales and 21, 7 percent of profits in comparison to new manufactured goods that account for 34 percent of sales and 32, 4 percent of profits. Unfortunately, new product and service development is a complex and difficult task.

Fig. 1 A simple customer involvement model

The failure rate for new products and services is high found that the overall success rate of new product introductions is less than 60 percent, and declines as the cost and risk of developing new products increases; some 46 percent of all resources given to product development and commercialization is spent on products that are cancelled or fail to yield adequate financial return.

Fig. 2 Model Showing steps and levels of customers participation in Co-Creation
Stevens and [12] argue that the failure rate of new products is somewhere between 40 and 75 percent. According to [3], 35 to 44 percent of all products launched are removed from the market after a short period. Many service development projects turn out to be less than successful and new services fail to meet expectations in terms of financial performance or the creation of customer value [19].

Customer satisfaction and service quality are considered as a fundamental marketing framework to determine new product development as well as customer loyalty. The term Co-Creation was introduced by C.K. Prahalad and Venkat Ramaswamy in Harvard Business Review Article, Co-Opting Customer Competence. [17] Stated that customers are always Co-Creators. Co-Creation process involves interaction, involvement and engagement of customers. It is a strategic tool that emphasizes the generation of mutual and ongoing realization of mutual firm-customer value. When customers is engaged / involved willingly and unwillingly with the business process in any form by shared or personal resources, to provide meaningful output in the growth of the company. It involves higher intensity of customer engagement. Co-Creation provides better, realistic and newer ways of doing Business. Co-Creation will serve as a hub for the entire co-creation process from visioning, identifying, researching, implementing, donating and volunteering. It involves a major rethink on how business Creates Value.

II. PROBLEMS AND CHALLENGES

A number of reasons for failure are stated in theory. [6] Lists a number of reasons for new product failures including inadequate market analysis, product problems or defects, lack of effective marketing effort, higher costs than anticipated, competitive strength or reaction, poor timing of introduction, and, technical or production problems. [8] Found that successful service firms fit their offerings 12 with current businesses more than unsuccessful firms. Successful firms also tend to allow champions to stay and manage NSD to a greater extent. Some of the problems stated in theory represent common challenges; some are specific for NPD and NSD. This paper addresses those problems that concern anticipating customer needs, customer research tools and techniques, and some of the specific problems of NSD. The exchange of information is the lifeblood of any innovation activity. Successful new product and service development demands profound information and knowledge of customers and their needs. A pioneer within the user innovation field maintains that to solve a problem, necessary information and problem solving capabilities must be brought together, virtually or physically, at a single locus.
was that most of the products developed tended to be marginal contributors to the firm’s portfolio, rarely involving new or “breakthrough” ideas, also assessed the range of market research methods that might enhance the output of NPD processes, classifying them by type of product sought (radically new vs. marginally new) and nature of the research method (traditional vs. nontraditional). They point out that traditional marketing research methods obtain information from respondents at the center of the market—respondents whose thinking is limited by their current experience and environment. It is also noted that the traditional methods have generally failed to produce radical new product breakthroughs, which has increased interest in non-traditional methods (Ibid.). Traditionally, there has also been a view that customer information is best fed into the development process through prototypes, are measured rather than used as direct design consumer, whose preferences, e.g., in terms of reactions to given a passive role as an information provider, but mainly a communication and integration of organizational functions development process. These examples of research into the products typically involves numerous tasks and developments processes more efficient. The development of complex information (rather than tasks) to make the development research methods that might enhance the output of NPD contributors to the firm’s portfolio, rarely involv ing new or (radically new vs. marginally new) and nature of the research method (traditional vs. nontraditional). They point out that traditional marketing research methods obtain information from respondents at the center of the market—respondents whose thinking is limited by their current experience and environment. It is also noted that the traditional methods have generally failed to produce radical new product breakthroughs, which has increased interest in non-traditional methods (Ibid.). Traditionally, there has also been a view that customer information is best fed into the development process through the marketing department, rather than through direct contact between NPD personnel and customers. This has translated, to a large extent, into a matter of communication and integration between marketing and R&D departments. In a review of the literature of the Marketing and R&D interface, [14] identified a number of barriers to communication and cooperation including personality, cultural thought worlds, language, organizational responsibilities, and physical barriers. To break these barriers, multifunctional teams have been implemented and found to be crucial to NPD success. [5] found that 60 percent of U.S. firms use a cross-functional stage gate process. It is important to note that the implementation of cross-functional teams should perhaps not be implemented as a universal solution in all development projects. In less innovative projects, e.g., service line extensions, service improvements, and style changes. Functional teams may be sufficient enough. This line of argument is also supported by [15] she found that over 84 percent of the more innovative projects use multi-functional teams in contrast to only 40-50 percent of the less innovative projects. Investigating the development activities of complex new products, Eppinger and colleagues emphasize the importance of focusing on flows of information (rather than tasks) to make the development processes more efficient. The development of complex products typically involves numerous tasks and developments teams and therefore demands feedback and iteration in the development process. These examples of research into the communication and integration of organizational functions adopt an internal perspective and imply that customers are given a passive role as an information provider, but mainly a consumer, whose preferences, e.g., in terms of reactions to prototypes, are measured rather than used as direct design alternatives. Specific problems of NSD as the field of service research emerged, the view of the customer changed somewhat. In early service research, most scholars argued that services are activities, deeds or processes, and interactions [7] where the customer no longer plays a passive role, but instead plays a multifaceted active role of contemporary consumer and co-producer that influences the outcome of the service. While reading this paper, it is important to distinguish between coproduction, customer involvement, and customization. While customer involvement focuses on the role of the customer as co-creator and co-developer in the pre-launch process of innovation, customer coproduction emphasizes the role of the customer as co-producer in the realization and delivery of the service. Customization on the other hand is the efforts taken to adopt the service to individual customer needs during the service delivery process.

Still, customer co-production and customization provide important arguments for involving customers in the development process. It can easily be argued in theory that if the customer influences the outcome and quality of service delivery, the customer should be a natural participant in the development process as it is in the development process where the

Prerequisites for the service are created [8]. If the service will allow for a high level of customization in the service delivery process, this needs to be taken into account in the innovation process. This view, however, has not been particularly evident in NSD literature. In fact, the customer is to a large extent invisible in current research. NSD has mainly been characterized as ad hoc and based on a trial-and-error type of approach [17]), resulting in “irreproducible methods, unpredictable success levels, and unsatisfactory development results”. Consequently, while NPD has numerous reliable tools, methods, and stage-gate processes, NSD is a relatively arbitrary and unstructured process. Furthermore, because many services are realized in a customer-company interaction which often occurs at the same time as the customer experiences the service, it is problematic to obtain relevant feedback from service customers in advance and test and isolate a new service in a traditional laboratory. And as many services are also tailored to individual buyers at the point of purchase (customization), it is difficult to test services through large samples. As a result, experiments with new services are most useful when they are conducted with real customers, engaged in real transactions (Ibid.).

III. SUMMARY

In summary, the previously stated problems of new product and service development are as follows:

- it is difficult and expensive to acquire sticky need information,
- many market research techniques are reported insufficient,
- multi-functional teams are advocated to interpret customer information and transform it into new customer offerings,
- NSD is still very much a random and unstructured process, and
- many services are produced and consumed at the same time which makes them difficult to concretize and test throughout the development process. By engaging a limited number of specially selected customers and working closely with them during
parts or the entire development process, it is suggested that the stated problems can be minimized [14] In this paper such activities are discussed under the concept of customer involvement.

Customer Involvement in New Product and Service Development In the late 70s, research into the customer’s role in new product and service development had its first major breakthrough. Customer Active Paradigm looking at the published articles on the subject, however, customer involvement has received increased attention since the beginning of the decade and is more relevant now than ever before. A clear indication of this popularity is the fact that building customer insight was the topic tied for first place in MSI research priorities. According to our survey, innovation continues to be viewed as the prime engine of growth, but customers play a much larger role in shaping innovation strategy and execution. At the market level, there are substantial opportunities for innovation in emerging markets and in new segments of established markets. At the development level, customer insights are needed to drive innovation and product and service design (this topic tied for first place in member votes). The increased interest in customer involvement from managers is explained by Gerald Zaltman. He states the following in the preface of his book “How customers think: Essential insights into the mind of the market”: While consumers have changed beyond recognition, marketing has not. These changes in consumer behavior include increased skepticism about business (especially marketing), more assertiveness, greater sophistication, less loyalty to companies and individual brands, and major concerns about privacy and security. The world has changed, but our methods for understanding consumers have not. We keep relying on familiar but ineffective research techniques and consequently misread consumers’ actions and thoughts[10]. In this paper, customer involvement in new product and service development is defined as those processes, deeds and interactions where a development team collaborates with current (or potential) customers at the program, project and/or stage level of the development process, to uncover sticky information such as latent needs, develop customer knowledge, and develop new solutions accordingly.

The basic idea of customer involvement is that sticky information and insights cannot be detached from the social context in which they are generated. Therefore, the transfer of sticky information and knowledge requires deeper interactions and processes of communication [5] By allowing customers to innovate on their own or by spending time with them and actually taking part in activities with them, deep insights and new product and service ideas have an opportunity to emerge.

In a customer involvement project, users are in contact with, and may act within, the environments and/or situations in which a future innovation is meant to be used. Ideas generated by a user in the user’s own environment therefore seem more likely to contain those unique features that companies seek but which are difficult to detect. Needs and requirements are likely to be, more or less consciously and deliberately from the user’s point of view, automatically built into the ideas generated. The rationale for customer involvement in NSD is improved performance [18] The underlying premise is that customer input (e.g., information, knowledge, ideas, prototypes, and/or solutions) in the various phases of the development process should influence the design of a new product or service to better fit customer needs. Customer involvement aims for a better output as firms ensure that the resulting new services and products offer added customer value and satisfy customer needs. As a compact way of achieving success, the product or service should be able to generate a higher profit margin through a larger sales volume or by providing customers with a better value proposition. Furthermore, companies engage in customer involvement as a way of achieving a more favorable cost/time product development curve and to reduce the uncertainty that usually surrounds the development process e.g., environmental, phase-related, and user requirement uncertainty [2]. In summary, the involvement of customer in development processes aims to improve both the process and the output.

IV. MANAGERIAL IMPLICATIONS

This research has important implications for management. By engaging a limited number of specially selected customers and working closely with them in the innovation process, some of the stated problems of new service (and product) development can be minimized. A customer involvement effort should start with a definition of the project’s prerequisites in terms of, e.g., corporate, marketing and innovation strategies, and cultural and organizational factors such as skills and competences needed and the organization of the project. Innovation should not be left solely to engineers. A customer involvement approach not only integrates market research and R&D but also behavioral science as a customer involvement project should be carried out in a customer context. Different knowledge and skills are needed to identify latent needs and to learn from customer behavior, experiences, and preferences. In truly innovative projects, the R&D function should appoint a multi-team including customers, marketers, engineers, behaviorists etc. Next, managers should carefully decide what the objectives are and work accordingly. Customer involvement potentially offers a number of important benefits besides a marketing opportunity, e.g., uncovering customer latent and expressed needs, superior and differentiated products and services, generation and test of new ideas, reduced cycle time, and enhanced customer. To develop the competitiveness, focus should be placed on capturing latent needs. Customer solutions, however, should not be dismissed as too original or unrealistic. Behind the solution, there might be an interesting yet unfulfilled need. The objectives provide the guidelines in terms of what types of customers to engage, where to involve them, and to what extent customers should be involved. Our research provides support for customer
involvement in the entire process. As such, managers are advised to adopt a proactive approach and involve customers early in the innovation process. To some context, customers are willing to share their knowledge, ideas, and possibly even innovations for free. In other situations, managers should carefully create incentives for customers to participate. Perhaps equally important is the creation of incentives that address team members. Team members that are engaged and believe in the idea, is a prerequisite for success. The techniques are the means by which customer information and knowledge are created. To achieve the previously stated objectives, the ways of working should be designed to facilitate customer knowledge development [20]. As sticky information cannot be detached from the social context in which they are generated, it is important to design a study that at least in part are conducted with real customers in real situations. The use of a variety of different market research techniques is recommended as these complement each other by means of, e.g., output and where in the development process they are useful. To aid in the selection of appropriate techniques, managers are advised to develop or use one of the existing classification schemes to help characterize and identify appropriate techniques for different purposes and different phases of the development process. Customer involvement, however, puts demands on organizations. Outsourcing parts of the innovation process to the customer requires a shift in mindset. Customers should be seen and treated as an equal partner by employees - a co-creator who shares the same interest. As such, innovation activities aided by customer involvement are intrinsically linked to organizational development and innovation. For organizations that want to increase the impact from customer involvement, suggested focus areas are competence in customer group management, relationship capabilities [1]collaborative skills [21]Finally, to develop customer knowledge and the organization’s innovation capabilities it is important to recognize that customers’ needs and preference formation will evolve over time as they are influenced by the development of new technology, new ideas, products and services. As such, customer involvement should be seen as a continual approach and be based on interaction and dialogue.

REFERENCES

Determinant Factors of Turnover Intention: A case study of Air Conditioning Company in Bangkok, Thailand

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Abstract -- This study aims to help a Thai air conditioning company to understand the turnover intention of employees based on their perception towards the company. Turnover intention revealed the likelihood of leaving the current job by an employee. If turnover rate of skilled professionals was high, the organization might lose the human capital, such as skill, knowledge, and trained human resources to his competitors. Thus, turnover of these individuals incurred both replacement costs and a competitive loss. This research studied factors influencing employees’ turnover intention. A total of 400 questionnaires were distributed in an Air Conditioning Company located in Bangkok. Census survey was adopted. The influences of perception, job satisfaction, and turnover intention were identified through structural equation modeling (AMOS). The casual relationships among perception, job satisfaction, and turnover intention were also confirmed.

Keywords – Service quality perception, job satisfaction, turnover intention, air conditioning, Thailand

I INTRODUCTION

In 2010, about 90% of new office buildings were fitted with air conditioning. This indicated the tendency appeared in renovation and maintenance of the air conditioning industry [9]. A competitive advantage is to hire skillful employees in order to increase production efficiency. However, it is hard to satisfy employees and also ensure their loyalty. Employees continually change their expectations. Therefore, a company tries to maintain their loyalty by sustaining their interest and improving satisfaction. Employees’ recognition is crucial.

The most important organizational objective is employees’ job satisfaction. The organization successfully satisfies customers’ needs if so far as their workers feel satisfied with their jobs [26].

Job satisfaction is vital for profitability and success while turnover is a loss of output, productivity and growth manpower to determine a company’s success. This research relates the perception of service quality (comprising Tangibles, Reliability, Responsiveness, Assurance, and Empathy) provided by an Air Conditioning company in Bangkok [19], job satisfaction, and turnover intention.

II LITERATURE REVIEW

A. Service Quality

[18] defined satisfaction on service quality provided to employees’ perception and expectation. [19] proposed service quality in five dimensions: - Tangibles were illustrated as visible facilities, equipment, building, and location; Reliability was the capability to carry out the assured service reliably and accurately; Responsiveness was the company support by enthusiastic gesture to help its employees, such as insurance, commission, and training programs; Assurance was the knowledge and politeness of the learning hosts or staff and their ability to communicate trust and confidence; and Empathy was the caring and, exclusive attention of the company for its employees. This study examines service quality perception of employees in an air conditioning company in Bangkok.

B. Factors Affecting Employee Satisfaction

Fringe benefits include compensation, wages, salary, allowances, pension, and holidays. Fringe benefits can demand less tax than wages; they increase job satisfaction.

[21] found that doctors in Russia felt satisfied with clinical freedom, well paid, have less excessive technical intervention, and less positive relationships with patients and co-workers. [28] found that employees’ satisfaction was a crucial variable to explain about common feelings and thinking of employees regarding their job and place of work. Therefore, expectations on workplace and attitude towards jobs could measure employee satisfaction. Job satisfaction was a part of the scope to which one’s needs are satisfied.

[22] found that factors that led to job satisfaction were called “motivators”: achievement, recognition, the work itself, responsibility, and progression. Factors led to job dissatisfaction are called “hygiene” factors and include “administrative procedure, supervision, salary, interpersonal relations, and working conditions”.

[10] found the relationship between job satisfaction and national culture from European Employees. It indicated that cross-national job satisfaction study considering the potency of national culture should be much better on performance assessment. People from different cultures should be evaluated in relation to their capability and national culture to gain better job satisfaction. [1] found in the pharmaceutical industry that organizational culture had