

# Service Companies: Derived Value from Customers Serving as Co-producers

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**Abstract**— Does customer involvement lead to greater innovation in service firms? Customers usually are at the center of the service encounter and are familiar with the context of the service (Alam and Perry, 2002). Does this familiarity lead to greater idea generation resulting in increased innovation for service based companies? Services make up a preponderant of new businesses that are formed. With the globalization of service industries and the rapid changes in technology there is growing pressure being put on companies to be more innovative and continually improve their market offerings (Menor, 2000; Sundbo, RUC, and Gallouj, 1998).

A review of research has highlighted a dearth of information in new service development. Most product development research focuses on goods as opposed to services (Alam and Perry, 2002). This study addresses the gap in new service development literature and focus on the benefits of customer involvement, as co-producers, on innovation in service firms. Due to the intimate involvement of the customer within a service encounter, the customer's input in the service innovation process may prove to be more beneficial than in tangible products (Normann, 1991). The primary goal of this paper is to review the literature and existing empirical studies in new product development and derive research propositions that can be tested in future studies.

**Index Terms**— Services marketing, Customers as co-producers, innovation in service, idea generation, stage-gate model.

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## I. INTRODUCTION

Services account for approximately 60-80% of the GNP of leading nations (Baldwin and Peteres, 2001.) With the globalization of industries and the rapid changes in technology there is growing pressure on companies to continually change and improve their market offerings (Menor, 2000). Due to increased competition and a more educated consumer- base companies are being called upon to be more innovative and come up with new ideas and products At a rapid pace (Sundbo, RUC, and Gallouj, 1998; Flint, Larsson, Gammelgaard and Mentzer, 2005). One of the most important factors are indicative of a business's success is its level of innovation (Drucker, 1974; Flint, Larsson, Gammelgaard and Mentzer, 2005). The more innovative a company is the higher its chances of success. Companies are betting on new product development to be a catalyst in their growth and overall success. A Coopers and Lybrand survey reports that companies have increased their reliance on new product development for company growth and increased profits (1985). A significant share of the innovation being carried out is in new service development. However, since most product development research has concentrated on goods and technology there is very little in new service development literature (Alam and Perry, 2002, Menor, Tatikonda and Sampson, 2002). The primary goal of this paper is to review the literature and existing empirical studies in new product development and derive research propositions that can be tested in future studies.

There are fundamental differences in product development of services versus goods. Services differ from products in terms of intangibility, heterogeneity, perishability and inseparability and the customer is at the focal point of the

service development and is crucial to the service delivery (Alam and Perry, 2002). Due to the intimate involvement of the customer in service encounters, the customer's input in the service innovation process may be more beneficial than in tangible products (Normann, 1991; Vermillion, 1999; Alam, 2002).

There is an on-going debate in the new product development regarding whether a firm should employ a customer-led strategy or a market orientation. This paper explores the new product development literature to determine if service companies experience increased innovation as a direct result of their affiliation with their customer base. Do customers serve as a significant source of idea generation for new products and services, and if so, what type of innovation comes from customer ideation? If customers are consistently identified as sources of idea generation does the literature take this into consideration when discussing customers' lifetime values?

This paper explores innovation as it relates to new product development and considers the debate between customer- led and market-led orientations. The concepts of idea generation and customers as resources are explored through a review of current literature on customer value from a firm's vantage point. Several empirical studies revolving around new product development and idea generation are presented and used to illustrate the reasoning behind several propositions.

## II. LITERATURE REVIEW

Innovation is broadly defined in the new product development literature from the vantage point of multiple disciplines including Marketing, Management, and Economics. Schumpeter referred to innovation in terms of

improved efficiency occurring within services, processes, or any social system (1934). Roberts describes innovation to be the effective management of human and capital resources to create new knowledge, generate new ideas, develop concepts and launch new products (1988). For the purposes of this paper new product development is defined as an iterative process initiated by the perception of a new market or business through the addition of a new element or a new combination of old elements (Garcia and Calantone, 2002). More specifically service innovation is defined as a new service product or a new service procedure of delivering the service (Sundbo, RUC, and Gallouj, 1998; Garcia and Calantone, 2001; Reid and Brentani, 2004).

Not all products are equal in terms of innovation. A product's innovation is measured by its degree of newness to the firm, the market and the world. Innovation does not only imply major advances in technology, such as radical innovation, but also includes the minor changes in technology know-how evident in incremental innovation (Flynn, Dooley, O'Sullivan and Cormican, 2003). The innovation process is iterative in nature, Garcia and Calantone (p.112) go on to state that "this iterative nature results in a variety of different innovation types" and can be broken down into different levels ranging from incremental innovation to radical innovation, to discontinuous innovation (2002).

1) Incremental innovation consists of product improvements, new features of benefits and usually utilizes existing technology. This type of innovation usually occurs during the later stages of the products life cycle and tends to represent status quo within the industry (Garcia and Calantone, 2002). An example of an incremental would be a new and improved laundry detergent.

2) Radical innovations are new to the world products, which utilize existing technologies. Radical innovation occur in the early stages of the product life cycle and create new markets and in some cases new industries (Garcia and Calantone, 2002). An example of a radical innovation would be the initial invention of the fax machine.

3) Discontinuous innovation represent "really new" products that require either new technology or new marketing infrastructures. An example of a new to the world innovation would be the creation of the World Wide Web (Garcia and Calantone, 2001; Reid and Brentani, 2004).

The concepts of incremental, radical and discontinuous innovation also relate to Kleinschmidt and Cooper's characterization of innovativeness. Product improvements are characterized as existing on a continuum, ranging from low innovation to high innovation. Low innovation products consist of cost reductions and slight product modifications, moderate innovative products are product line extensions and new to the world products are characterized as high innovative products (Kleinschmidt and Cooper, 1991). A number of authors suggest that innovation in services tends to be more incremental than radical since customers usually are

at the center of the service encounter and are familiar with the context of the service. Whereas, with radical innovations consumers are not necessarily familiar with the context in which the product is being developed nor are they familiar with the new application of the technology required for the innovation (Sundbo, RUC, and Gallouj, 1998; Frishammar and Horte, 2005).

The superior management of the innovation process within a firm is essential to the overall health of the firm. Innovation has been identified in the literature as a necessary precursor to a firm's success (Drucker, 1974; Flint, Larsson, Gammelgaard and Mentzer, 2005). The development and exploiting of innovations is key to a company's performance and if well-honed becomes a competitive advantage (Chiesa, Coughlan and Voss, 1996). Innovation has been recognized as a process in the new product development literature (Cooper, 1990; Jong and Vermeulen, 2003).

Alam and Perry acknowledge that while the literature revolving around innovation in product development seems rich and well established, there is still very little known about innovation in new service development process (2002). Alam and Perry conducted a study of 12 financial service firms to investigate the process of new service development used by managers and their firms (2002). Multiple respondents, identified as key informants by other employees of the respective firms, were interviewed from each firm. By carrying out a thorough literature review and an in-depth analysis of interviews with these managers and their customers, Alam and Perry identify ten stages that are central to the new service development process (2002). These ten stages include the following:

- 1) Strategic planning,
- 2) Idea generation,
- 3) Idea screening,
- 4) Business analysis,
- 5) Formation of cross-functional teams,
- 6) Service design and process system design personnel training,
- 7) Personnel training
- 8) Service testing and pilot run,
- 9) Test marketing
- 10) Commercialization

According to Alam and Perry these ten stages should be modeled in a linear fashion to maximize the success of the new service development process. Of these ten stages managers identified idea generation as the most important stage of the new service development process (2002). Managers of the 12 firms provided archival records and documents, which supported the importance of idea generation. Customer input is built into each of these ten stages. The interaction between the firm and their customer is integral to the success of new service development. Their model incorporates the customer-producer interaction into the new service development process as a necessary component for new service development success. Alam and

Perry's new service development process model differs significantly from the new product development process models, in that it emphasizes obtaining customer input throughout the new service development process (2002).

Coopers recognizes the firm's overall innovation as a process and suggests the application of his stage-gate system as a likely process management methodology for innovation (1991). The stage-gate process breaks innovation down into a preset number of stages, involving anywhere from four to seven stages each with its own entrance gate. Typical stages and gates include: Stage 1 idea generation - Gate 1- initial screen, Stage 2 - idea assessment - Gate 2- Second screen, Stage 3 - detailed investigation - Gate 3 - decision on business case, Stage 4 - development - Gate 4- post development review, Stage 5 - testing and validation - Gate 5 - pre-commercial business analysis, Stage 6 - full production and market launch - Gate 6 - post implementation review.

A project must pass through one gate before going on to the next stage. The gates serve as quality assurance check points, and the idea or concept must satisfy certain criteria before receiving a "go" decision. The very first stage is initiated by idea generation and the first gate consists of the initial screening of the ideas that are generated (Cooper, 1990).

However, in discussing the stage-gate model Cooper makes no mention of where the ideas come from that are being input into the model. (1990). Cooper does mention the importance of homework in the predevelopment stage but does not address the issue of idea generation specifically (1990). Since the quantity and quality of new ideas seems to be inherently important to the overall success of new product development and overall success of the firm, it seems that the origin of these ideas warrants further investigation (Flynn, Dooley, O'Sullivan and Cormican, 2003). Idea generation suffers from the lack of attention both from researchers and practitioners. This is unfortunate because the ability of a company to grow is greatly enhanced by its ability to harvest new ideas (Coates, Cook and Robinson, 1997). Innovation depends on the continual generation of new ideas; it is the starting point of the process.

According to Flynn, Dooley, O'Sullivan and Cormican a firm's growth potential is directly related to its' ability to generate and exploit new ideas (2003). Idea generation is discussed in the new product literature as a part the fuzzy front end. The fuzzy front end of new product development is the first portion of the product development process which involves idea generation, idea assessment and concept development and refinement (Cooper, 1990). Flint (p.309) states that a "better and deeper customer understanding" is needed at the fuzzy front end to ensure improved idea generation and increased product development success (2002). However there has been little attention paid to the idea generation portion of new product development. Focus has instead revolved around other sub-processes that take place in the front end (Flint, 2002). This appears to be

short-sited because a firm' growth is related to its ability to generate new ideas. The more ideas that are generated within a company the greater the odds of the company developing more successful products. These ideas can come from both internal and external sources. Internal sources of idea generation include: marketing, engineering, sales, operations, customer service, IT and R&D. External sources include: customers, suppliers, competitors, consultants and private research institutes (Kelly and Story, 2000).

Customers are resources and can be viewed as sources of information and new ideas (Lundkvist and Yakhlef, 2004). According to Alam, firm's new service development processes need to focus on human resource and user collaboration in order to become successful (2002). The new product development literature does not adequately cover customer involvement in terms of the new service development process. There are various ways in which customers participate in new service development. Customer involvement has been referred to as lead-users (Von Hippel, 1986), co-producer, co-development and co-opting customer competence (Matthing, Sanden, Edvardsson, 2004), user involvement (Alam, 2002) and customer interaction (Grunerand Homburg, 2000). Customer involvement is operationalized in this paper as the process and interaction between a service provider and customer for the purpose of improving existing services or developing new services. A significant part of this interaction involves idea generation to improve or develop new services. Idea generation from customers can be divided into two distinct groups: 1) representative users and 2) lead users.

Traditional customers that approximate the center of a company's target market. Representative users tend to frame problems and solutions in terms of their own limited experiences. This is referred to in the literature as "functional fixedness," where a customer sees a product or service used in a certain way and frames their future ideas within this same framework (Lilien, Morrison, Sonnack, and Von Hippel, 2002). Under these conditions a traditional user is good at generating incremental ideas. Since it has been established in the literature that services have a predisposition to incremental innovation, traditional users may prove to be a good source of idea generation for service companies.

Lead users are experienced product users. They are motivated to innovate by the benefits they'll receive from the solution they help bring about. They tend to experience needs before the average consumer in the market and the ideas that they generate tend to experience higher degrees of market acceptance (Pitta, Franzk, and Katanis, 1996). Companies can learn about their products or services from studying their lead users because they represent the most advanced use of the companies' products or services and can serve as early predictors of demand as well as aide companies in speeding up their new product development process. (Lilien, Morrison, Sonnack, and Von Hippel, 2002; Athanassopoulou and Johne, 2002).

Since lead-users have been shown to gravitate more toward high-innovation, they may be more beneficial in generating ideas for goods as opposed to services (Lilien, Morrison, Sonnack, and Von Hippel, 2002). There seems to be different characteristics associated with representative users versus lead users. The company's new product development strategy needs to be taken consideration when defining the users that it wants to collect ideas from. Is the strategy one of incremental improvement or is the company built on radical innovation?

Von Hippel and Thomke extol the virtue of toolkits for the purpose of "tapping into customer innovation" and creating value (2002). Improved idea generation has been linked to increased innovation in the literature (Flint, Larsson, Gammelgaard and Mentzer, 2005). Understanding the importance of idea generation can alert companies to view their customers not only as buyers but also as resources, which can be optimized in terms of efficiency in idea generation. According to Lengnick- Hall (p. 798) "Valuable resources enable a firm to either exploit opportunities or avoid threats. Rare resources enable firms to either develop unique strategies or implement strategies in unique ways" (1996). The deployment of human resources and effective use of toolkits has been shown to result in increased innovation (Chiesa, Coughlan and Voss, 1996). User toolkits are designed to allow the consumers to design their own solution to their own problem through a process of trial and error. The use of this process increases creativity and results in greater idea generation and higher levels of innovation. An opportunity exists for toolkits to be even more effective in new service production, since the customer is at the center of the service encounter and by nature is more in touch with the situation. The use of virtual reality may be able to simulate a service encounter, allowing for that service to be customized along the way. Even in cases where the customer is not aware of their needs the toolkit provides an opportunity for idea generation by allowing customers to explore different options (Von Hippel and Thomke, 2002; Franken and Piller, 2004; Jeppesen, 2005). The use of toolkits is just one strategy available to companies that want to help their customers maximize their idea generation potential. Other ways of increasing idea generation include customer groups, formal depth interviews, joint strategy meetings, and extended customer retreats (flint, Larsson, Gammelgaard and Mentzer, 2005).

Regardless of the strategy imposed by a company, the literature and the empirical studies mentioned support the case that customers can be a significant source of idea generation. If a considerable amount of a firm's ideas originates from its customer base, resulting in increased product development successes, this suggests that there is inherent value in a company's customer base related to innovation.

The concept of a customer's lifetime value is important to the firm because it helps a firm identify who its profitable

customers are. Based on this information firms can make more informed decisions regarding how to allocate their marketing resources and which customers to target. Customer value is referred to in the literature as customer lifetime value, customer valuation and customer profitability, some of which are used interchangeable at times. The underlying theme interwoven into these concepts is that there is a lifetime value associated with a customer and certain benefits that make a life-long customer more profitable. The benefits to a company include; increased profits due to price premiums paid by loyal customers, additional profits earned from referrals, cost savings associated with retaining a customer, and revenue growth from cross-sales and up-sales (Jain and Singh, 2002). However, what seems to be missing is the value of idea generation that customers contribute to a company. According to Mulhern (p.36) firms need to treat customers as assets, since "these retained customers can form a basis of sustained competitive advantage" (1990). Part of the competitive advantage that firms receive is the source of idea generation provided by its customers. When you submit your final version, after your paper has been accepted, prepare it in two-column format, including figures and tables.

### III. EMPIRICAL STUDIES

The following empirical studies touch to some degree on customer involvement in ideation. Each study identifies customers as a considerable source of idea generation. A study by Kelly and Storey investigates how firms carry out their search for new service offerings (2000). The study focused on service firms' procedures to generate and screen new ideas for services. Mail surveys were conducted using executives in the United Kingdom. The firms surveyed were chosen from five different service industries including: banking, insurance, telecommunications, transportation and media. 43 executives responded to the survey out of 154 executives, with over half of the respondents coming from marketing. Respondents were surveyed regarding their firm's new service development strategy and how the firm generated and screened ideas for potential service projects.

To identify a firm's overall strategy regarding innovation respondents were also asked to classify their firm according to one of the following four typologies taken from Miles and Snow: prospector, analyzer, defender or reactor, with prospectors employing the most innovative processes and reactors employing the least innovative processes (1978). The majority of the firms, 32 out of 43, were classified as either prospectors or analyzers. Prospectors and analyzer firms new service offering contributed over 40% to the respective firm's total revenues, highlighting the importance of new services to a firm's overall success. However, the findings showed that only half of the company's sampled had some type of formal procedure in place for idea generation and the screening of new ideas, the other half worked on an ad-hoc basis when generating and screening new ideas. Firms were more likely to have a system in place for idea screening

then of idea generation, suggesting that the firms put more value on the screening portion of the development process versus idea generation. The study identified suppliers as the most frequent source ideas for new service offerings and customers as the second most frequent source of ideas (Kelly and Storey, 2000).

A study by Cooper and Kleinschmidt (1986) provided results similar to the Kelly/Storey study. The study is based on a survey of 123 industrial goods manufacturers located in Ontario and Quebec and focuses on 203 new product case histories taken from these manufacturers. The study attempts to determine which of Cooper's 13 activities were used in the actual practice of new product development within these companies and how well they performed these activities. Single respondents, managers that were responsible for new products, were interviewed for the study. The results showed that there was considerable disparity between what the literature prescribed and what firms actually did in terms of their new product process. There were fewer activities than were expected reported as being carried out, suggesting that new product development process is being shortened in practice versus theory. In terms of activity proficiency, marketing research, initial screening activities and preliminary market assessments were cited as weaknesses in the new product development processes of the companies. The study identified the sales force as the internal source contributing the largest number of ideas for new services. Customers were ranked first as the external source providing the largest number of new ideas, suggesting that customers are important in terms of idea generation. Customers were also ranked as the number one overall source of idea generation, contributing twenty percent of all new ideas. The majority of the new ideas were market driven as opposed to technology or in-house driven (Cooper and Kleinschmidt, 1986).

The study by Miller attempts to benchmark the idea generation and screening process of companies in the chemical industry (1998). A case study methodology is employed to look at 16 different industrial product companies in terms of the techniques used for generating and screening product development ideas. This study has a narrow focus of new product development limiting it to existing technology in existing markets. The majority of companies had some sort of systematic approach to their new product development process. More than 60% of the respondents identified their customer base as the most important sources of idea generation for their company. However, according to Miller (p.16) several respondents disclosed that the information provided by their customers was not the type of information "that leads to breakthrough new products" (1998). Marketing, sales and R&D were favored as second choices for idea generation (Miller, 1998).

Baldwin and Peters conducted a study based on historical data from the 1993 Survey of Innovation and Advanced Technology of Canadian Manufacturing Firms (1993).

According to Baldwin and Peters this survey was based on "a frame of all Canadian firms in manufacturing that was taken from Statistics, Canada's Business Register" (1993). Their sample was randomly drawn from a manufacturing population listed in the 1993 Survey of Innovation and Advanced Technology of Canadian Manufacturing Firms. The purpose of their study was to investigate the flow of trade and its relationship to customer innovation networks. In addition, this study focused on innovation and its reliance on the supplier and customer networks. The Innovation Survey had originally asked firms how important customers and suppliers were as sources for ideas and information for innovation. Baldwin and Peters analysis of the data illustrated that suppliers were ranked first, and customer ranked second as the sources that provided the largest number of new ideas to firms. 46% of firms considered customers to be the most important source of ideas and information for innovation. Baldwin and Peters also found the supplier and customer networks to be more important to the innovation process in small firms versus large firms (1993). In addition, these networks were shown to be used less in firms that produce novel innovations and more by firms that produce innovations that modify or improve existing products (Baldwin and Peter, 1993).

Von Hippel carried out two studies; both studies revolve around understanding user need and determining if users are a source of product innovation (Von Hippel, 1995 & 1996). The first study took place in 1975 and was conducted in the scientific instrument industry. Von Hippel chose a narrow field of goods to minimize any error that might occur due to process variation related to type of good involved. Scientific instruments were chosen because there had been previous research linking innovation as a response to user need (Von Hippel, 1975). The sample in this first study consisted of 113 different types of scientific instruments. The firms that developed these instruments were identified and interviewed via telephone. A number of the firms interviewed had been the first to commercialize several different instruments in the sample. When possible key individuals involved with innovation were interviewed. Respondents were asked to give information pertaining to identification of the innovation, contribution of first firm to commercialize the innovation, and pre-commercial events. 77% of the firms identified customers as their number one source of idea generation. The results indicate that the innovation process in scientific instruments is a user-dominated process (Von Hippel, 1975). According to Von Hippel, this user-dominated innovation pattern holds true for both established manufacturers of a given product line as well as first entry manufacturers into a product line.

A second pattern of innovation activity is described by Von Hippel as "manufacturer-dominated," in which user's maximum role is informing the manufacturer of a need for product innovation (1976). Von Hippel's 1976 study was conducted in the semi-conductor and electronic sub-assembly

industry and shared the same purpose as his previously mentioned study, which was to understand user need and determine if users are a source of product innovation (1975 & 1976). The sample consisted of 49 different types of machinery innovations. A number of the firms interviewed had been the first to commercialize several different innovations in the sample. Respondents were asked to give information pertaining to the identification of innovations, contribution of the first firm to commercialize innovation, and pre-commercial events. 67% of the firms identified customers as their number one source of idea generation. The results indicate that the innovation process in machinery innovations is a user-dominated process (Von Hippel, 1976).

Matthing, Sanden and Edvardsson designed a field of experiment to test if customer ideas are more innovative, in terms of creativity and user value, than professional service developers (2004). In this experiment customer involvement was compared to normal work routines, defined as getting customer information from the marketing department. The context chosen for the experiment was an end user service for mobile telecommunications. A new technology was chosen in order to replicate a real-life scenario, in which users' lack of experience would be central (Matthing, Sanden and Edvardsson 2004). Matthing, Sanden and Edvardsson partnered with TeliaSonera, a large Swedish telecom operator to come up with the technical platform, which enabled access to information on the internet from the mobile phone through sending and receiving telecommunications known as SMSs (2004).

86 participants took part in the experiment, 74 were current or potential customers of the company and frequent users of mobile phone communication and the remaining 12 were professional developers. Most participants were university students from Sweden. Participants were provided with toolkits which included mobile phones equipped with an account that provided access to the Unified Services platform. All participants were instructed to invent new service ideas. The customer participants were told to come up with service ideas that would provide them with added value. The professional service developers were told to come up with service ideas that would provide the customers with added value. All participants were encouraged to take part by a cash incentive offered to those who provided high-quality contributions. The participants were given 12 days to generate ideas. All ideas were recorded in a diary provided to each participant. Independent judges evaluated the ideas in terms user value and originality. The results show that the customer ideas received higher scores compared to those of the professional service developers. This experiment illustrates the customer involvement can have a positive effect on the innovativeness of created service ideas (Matthing, Sanden and Edvardsson 2004).

While the studies mentioned may possess certain shortcomings, they do share a unifying theme, that the customer plays a significant role in idea generation and is an

important element in the innovation process. It is interesting that even though the literature places more emphasizes on the back end of the new product development process, it is in the front end of the process where the firms, represented in the above-mentioned studies, seem to get a majority of their ideas that fuel their innovation process.

#### **IV. DEVELOPMENT OF PROPOSITIONS**

The literature review and empirical studies presented highlight, 1) the differences between new product development in services versus goods, 2) the customer as the focal point of the service development and delivery, and 3) the customer as a source of ideas and their effect on innovation (Normann 1991; Vermillion, 1999; Alam, 2002, Alam and Perry, 2002). The studies cited highlight the importance of customers as a source of idea generation and in fact list customers as the number one source of idea generation in the respective firms. According to Lilien, Morrison, Sonnack, and Von Hippel, firms can learn from their lead users because they represent the most advanced use of the companies' products and services (2002).

P1: Customers serve as an important source of idea generation in both goods and service firms.

Alam and Perry point out there are significant differences between new product development and new service development (2002). Services differ from goods not only in terms of intangibility, heterogeneity, perishability and inseparability but they are fundamentally different in respect to the customer. The customer is the focal point of the service encounter and crucial to the service development and delivery (Normann 1991; Vermillion, 1999; Alam, 2002). The intimate nature between the customer and the service encounter may make the customers input more beneficial in terms of services versus goods.

P2: Customer involvement in idea generation will lead to greater innovation process performance in service firms than in goods manufacturers.

Callahan and Larsy carried out empirical testing in the products arena. They tested 55 product development projects and found that the importance of customer input increased with the newness of a product up to a certain point and then decreased for radical or discontinuous innovation. Frishammar Horte (p. 266) also conducted a study in the product arena and found no support between customer input and increased radical or discontinuous innovation. However, in two studies carried out in services industries the results appear to be vastly different from the goods arena. The first is an empirical study by Kelly and Storey, where firms that rated themselves as highly innovative ranked their customers as the second most important source of ideas for new service development. The second is an experiment carried out by

Matthing, Sanden & Edvardsson, in the mobile telecommunications area. Participants were provided with mobile phone toolkits and instructed to invent new service ideas. There were given 12 days for idea generation. Independent judges evaluated the ideas in terms of user value and originality and awarded high scores to the customer group versus the professional service development group. In addition, idea generation has been cited as a precursor to innovation (Flint, Larsson, Gammelgaard and Mentzer, 2005).

P3: Customer involvement in idea generation will result in a greater increase in radical innovation in service firms than in good firms.

In Callahan and Lasry's study they found customer involvement and innovation had a positive effect on product innovation and reduced uncertainty, up to a point and then the impact of the customer input decreased significantly (2004). Freishammar and Horte's study suggested that customers tend to relate to what they know, and it is not possible for the customers to know what is technically possible, therefore customer input results in a litany of "me-too" products (2005). Slater and Narver suggest that customer involvement impedes innovation and leads to incremental innovations (1998).

P4: Customer involvement in idea generation will result in a greater increase in incremental innovation in service firms than in goods firms.

### V. FUTURE RESREARCH

This paper explored a theoretical basis for future empirical studies into service companies and the value they can derive from their customer-base in terms of idea generation. This paper provides propositions that suggest customer involvement may lead to more innovation services than goods. The fundamental differences between goods and services are documented as possible reasons for this difference. Due to the intimate involvement of the customer with the service encounter, the customer's input in the service innovation process may be more beneficial than in tangible products (Normann, 1991; Vermillion, 1999; Alam, 2002). Based on the literature and empirical studies explored in this paper it is suggesting that customer involvement may be more beneficial to innovation in service firms' than goods manufacturers. It is recommended that a survey instrument be developed, and an empirical study be conducted that encompasses both providers of goods-related and service-related products.

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