MODELS OF INNOVATION SERVICE THROUGH CUSTOMIZATION BY DESIGN FIRMS: AN EXPLORATORY STUDY

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ARTICLE INFO

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KeyWords: Design firm, customization, service innovation

ABSTRACT

As a means of meeting competitions, enterprises have moved from sheer product design to a more customized comprehensive innovation design, but in doing so firms have to seek innovation services from design firms. Consequently design firms would have to develop strategies in handling these innovation design services. This research studies three Taiwanese design companies to assess their approaches to innovation services. Their approaches can be summed up into a customization innovation service model that consists of three stages: 1) Internal Innovation: Strategically extend and expand the design service type to offer additional information and products; 2) External Innovation: The inclusion of various professionals in the discussions, and designers must be able to integrate and communicate from several diverse perspectives; and 3) Services Design: The design thinking process is based on the customization requirements. This integration is a combined internal knowledge with external innovation knowledge.

1. INTRODUCTION

1.1 Research Motivation

As a means of meeting the international competition, enterprises have looked for help from domestic and overseas design companies to help their R&D departments create or rebuild product shapes and brand images (Hsu, 2009). For design services companies, innovation is more than a part of competitive advantages – it is the critical element (Liao, 2002), and innovation has been found to be the effective, and lasting, survival tool (Hamel and Skarzynski, 2001).

Typically the design industry is grouped into the knowledge services industry (Xu and Yu, 2004). Porter (1985) suggests that an enterprise must manage a series of value chain activities to deliver superior values to customers through exploring new ways to manage. That is how competitive advantages could be realized, and this series of management activities can be defined as the innovation activities.

Innovation applies new knowledge to elevate corporate capabilities, especially in developing new products and/or services to create enterprise values. Many companies today have already seen their technologies and infrastructures obtained adequate improvements. As the market matures, lowering production costs, creating new product shape designs, elevating productivity, and improving production techniques by themselves can no longer ensure a company's continuous growth (Lee and Kim, 2008). More are required.

Even though innovation services can greatly lift a company’s economic value, most researchers have focused on the product innovation and not the service innovation (Moritz, 2005). Consequently, firms have devoted their effort on areas such as improving the quality of consumer electronic products: through satisfying partial consumer needs with tangible designs; through exploring designs other than shape and with different perspectives (a.k.a. intangible designs), and through converting these intangible designs into tangible assets via unique management and operations processes.

This study surveys three design companies in Taiwan to explore how they evolve from providers of only case-based design services to become providers of comprehensive, customized innovation service designs, with emphasis placed on their strategy transformation and service innovation models.

2. Literature Review

2.1 The Definition of Services

“Service” is an act of giving assistance or advantage to others, and in business it means the activities, benefits, or satisfactions provided by the sales or the sales accompanying products. At the end of any service, the well-being of the one being served would improve.

Tax and Stuart (1997) propose two ways to define new services. One is based on the modification of the current service systems, and the other is based on the changes on the operational procedures and/or participants. Storey and
Kelly (2000) defines the new “products” of service type enterprise to be 1) the core product is new to the company or new to the world, 2) the core products are improvements upon the current products, and 3) supplement to and with added value. Kotler (2003) defines the service to be that of a group (consisted of either organizations or individuals) providing activities or performances to other group; it is intangible, without actual "ownership," and the provision of service may or may not relate to certain tangible products. In summary, services provide intangible values and not tangible objects.

2.2 The Characteristics of Services
The service industry has seen rapid development in recent years; however, there is quite a bit of variability among the service contents provided. No matter the diversity, Parasuramer et al. (1988) consider services all have certain common attributes, and Kotler (2003) indentifies four characteristics of services: 1) Intangibility: services cannot be seen, touched, heard, tasted, or smelled prior to purchase – in other words, they cannot be sensed through physical faculty. Because of this characteristic, services cannot be displayed nor have their quality evaluated like tangible products, and their features cannot easily be recognized or remembered. Also because it is difficult for consumers to preview, consumers consider the purchase of services to be a high-risk purchasing behavior. Due to this intangibility, it is difficult to standardize services, which, in turn, makes their evaluation practically impossible prior to purchase. 2) Inseparability: the production and consumption of services occur simultaneously while typical tangible products are produced and sold prior to their consumption. Thus, the service quality cannot be previewed to avoid flaws. Also due to such inseparability, service personnel and consumers must transact at the same place at the same time – which makes the interaction and vendor-consumer relationship that much more intimate and important in meeting consumer needs. Since there is a wide variety of consumers, service management and innovation is unique on its own. 3) Heterogeneity: services have high variability, depending on the service providers and the time or location of services. Thus the stability of service quality is extremely difficult to maintain; consequently strengthening the personnel training to lower this variability is always the primary goal in the service industry. 4) Perishability: services can not be stored like tangible goods, thus it is not possible to inventory services for the expected demand peaks. Managing the discrepancy between service demand and supply is always troublesome to the service industry, but it is also critical to the firm’s productivity measurement. These characteristics will be used in the analyses in this paper.

2.3 Classification of New Services
Johnson et al. (2000) summarized the classification of services from early studies into Table 1, and this classification ranges from radical to incremental.

2.4 The four forces in converting products to services
Gustafsson and Johnson (2003) suggest that there are four forces that compel the converting of products to services: 1) Time Demands, which are caused by the cultural, social, and economic changes; 2) Self-service Technologies, these technologies cause the restructuring of division of labor and bring out new business opportunities such as internet services; 3) Business Environment, which forces businesses to return to their core competence and look for external services to handle the uneconomical portion of the traditionally internal processes; and 4) Competition, which forces businesses to consider and add to their original model of “value through products” new values generated from services.

Table 1: The Classification of New Services

<table>
<thead>
<tr>
<th>New Categories</th>
<th>Service Description</th>
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<tbody>
<tr>
<td>Radical Innovations</td>
<td>New services for markets as yet undefined; innovations usually driven by information and computer-based technologies</td>
</tr>
<tr>
<td>Start-up Business</td>
<td>New services in a market that is already served by existing services</td>
</tr>
<tr>
<td>New Services for the market presently served</td>
<td>New services offerings to existing customers of an organization (although the services may be available from another companies)</td>
</tr>
<tr>
<td>Incremental Innovations</td>
<td>Augmentations of the existing service line such as adding new menu items, new routes, and new courses</td>
</tr>
<tr>
<td>Service line extensions</td>
<td>Changes in features of services that are currently being offered</td>
</tr>
<tr>
<td>Service improvements</td>
<td>Style changes The most common of all new services; modest forms of visible changes that have an impact on customer perceptions, emotions, and attitudes, with style changes that do not change the service fundamentally, only its appearance</td>
</tr>
</tbody>
</table>

Source: Johnson et al. (2000)

2.5 Service innovation
Damanpour (1991) divides organizational innovation into management innovation and technology innovation, in which the management innovation contains the concept of service innovation. Kotler (2003) in his book Marketing Management also argues that the most constructive answer is continuous innovation and improvement, thus leaders cannot possibly be satisfied by the status quo but must constantly look into possibilities in lowering the cost or increasing consumer services in order to maintain the industry leader status. Zeithaml and Bitner (2000), from a perspective of services as an entity, consider communication in services to be much more difficult than that in goods, and services is more complex and its contents and procedures more difficult to dissect into distinctive parts – to a point that some are not even compatible to one another. Gallouj (2002) believes that service innovation actually exists, and everyone actually has had some forms of exposure and experiences to service innovation. With all these conceptualization of what service innovation is, it seems to be promising that the intangible existence of service innovation may find an effective way to manage its process and result in the increase of product values. In summary, the literature shows that the definitions of services and service innovation have existed in the management field, and this paper would analyze the customization service innovation model from the perspective of the design industry.

3. Research Method
In addition to summarize previous service and service innovation-related literature, this research is a case study of existing company practices. A collection of domestic case design companies were observed for their approaches in moving their customization service innovation forward. A model for their strategy in promoting service innovation was then generalized.

3.1 Case Firm A
The NV Group Introduction is a well-established, large scale
domestic design group staffed with impressive professionals. The company's Unique Art, an integrated platform of creative products, is the foundation of its customization services. NV Group's brand awareness is reflected in its slogan "Ur ART Style, A Meaningful Living"; and the company expands design services based on its core strengths in graphic designs. In addition to providing design services, the company also integrates existing company resources to provide services in production and marketing integration for its clients.

3.2 Case Firm B

Springfield Creation is a design integration service firm that provides design services in commercial product, visual, Webpage, packaging, interface, and display, as well as conducts design research. The company was selected as the Top Ten Quality Design Companies in the industrial design category by Taiwan's Industrial Development Bureau of the Ministry of Economic Affairs in 2007. The company was responsible in overseas marketing for the Sprield brand, markedly in the brand's exhibition in the 18th International Stationary & Office Products Fair (ISOT 2007) in Japan. Springfield Creation's management model employs several different design management models and distinctively deviates from the typical organizational norms. For example, it adopts the concept of Mobile Office to allow working partners drastically different design environment in the company from their counterparts in the industry.

3.3 Case Firm C

Bright Ideas Design was established in 1999, specializing in making traditional culture and arts accessible to the public and in an intimate way. The company uses many different cultural motifs and with in-depth interpretation of their contents to provide design services to its clients, thus introducing intangible cultural resources into the professional realm of design. Bright Ideas Design has become the leading brand name in the multimedia arts in Taiwan. Among its many awards, the company won the Grand Prix AVICOM of France. From 2006, the company used multimedia production as its base and moved out of visual arts and into fields such as original designs and original publishing. This move allowed the firm to progressively develop design brands, enrich its own cultural creativity, and to redefine the strategies in design services. For example, in the area of culture marketing and promotion, the company applied the new concept of integrated design to plan for exhibitions and other activities to serve the design industry in Taiwan through a brand new perspective of culture services.

4. Findings and Discussion

4.1 Case Firm A

Firm A relies on its design specialty as the core competence. The company offers design services as well as marketing and customization services to clients; the other services offered include the integration of marketing, financial, management, and channel resource evaluation and analysis. The resources of the company's customized services can be summarized as in Figure 1.

Figure 1: An Integrated Platform for Customized Services (Firm A)

Figure 1 shows that the company offers not just product conceptualization and shape design, but a resource integration framework that encompasses a spectrum of services from the upstream design concept to downstream product introduction. The designers are treated as a medium of multi-dimensional integrative force during the customized innovation services, in possession of the capability of diverse thinking and visualized conceptualization and not just a mere technician. Designers assist cross-disciplinary professionals in design discussions to transform a single case design service into a multi-purpose, highly professional integration. The design concepts brought up by designers have the input of marketing personnel who then not only have an opportunity to understand the details of the designs but also inject their own market evaluations and analyses to help team members have different perspectives of the entire project. Through such integrated resource sharing among marketing firms and entertainment industry, clients may receive more professional information integration. In terms of the marketing plans for future product introductions, professionals are there to bring in their expertise for a comprehensive planning, costing, and price setting process. The contents would include proposals in product shape designs, visual graphic publication designs, promotion designs, even product endorsement activities. Designers then would integrate all these information in their final proposals.

4.2 Case Firm B

As mentioned in Section 3.2, this company offers design services in merchandises, visual graphics, web pages, packaging, interfaces, and product displays, as well as in design research and integration. The company's ability in the design research process management is considered to be of the highest value. Using different design management models, he company's service specialists help clients design a research method. These specialists begin with interviewing clients to assess details in client needs. They collect related design research data such as images, materials, and marketing trends, and these data would serve as the common ground for communicating with their clients. Through these "in-tune" communications, clients can better comprehend the trends in business models that are happening in other business fields in the market, enabling clients to see from new and different perspectives.

This approach clearly layout the process of discussion and bring in clients into the discussion during the design process before the actual implementation process take place. Firm B would break the client's product evaluation analysis down to finer details during this customization innovation process to communicate the needs assessment better; this breaking down can be used to communicate and collaborate with the first-line sales personnel. This model includes different professionals (see Figure 2) such as those actual users and operators, professional sales personnel, clients themselves, and design team members in the discussion before the designing team presents the requirements for integrated marketing as well as for manufacturing. The design strategy will be proposed based on results from social observation, locality imagination, product positioning, and concept development. This approach allows the design projects to venture into comprehensive design integration service and to assist clients to develop international markets.
Figure 2: Customization Service through Design Service Specialists (Firm B)
Case firm B converts intangible concepts into actionable steps to provide design services to client products through intense interaction and discussion from stakeholders. This approach also offers a research integration from multiple viewpoints that converts the traditional design into a comprehensive service design.

4.3 Case Firm C
Case Firm C offers from a single or a series of graphics design service, and it has converted into a design company that integrates much more client sources and ventured into diverse areas such as museum planning, character and action figures design, digital learning, cartoon productions, web page designs, exhibition planning, and gift item designs. Take its museum project as an example, it involves website planning, digital learning, multimedia touring guide system, digital archives value-addedness design, etc. This project aims to provide a comprehensive innovation service design solution to the museum.

Firm C uses a service project team to handle innovation design (Figure 3). Team members not only need to think about the product designs only but also must apply their rich experiences to the needs of future services. The team must consider issues such as product cross-licensing recommendations, future peripheral merchandize manufacturing and production provisions, and the shapes and styles of the products to be developed – all the while keep in mind the developing trends of technologies so proper usage of technologies can be ensured and amiable interaction between the new products and users would continue.

Figure 3 Services provided through Customization Service Team (Firm C)
Firm C divides its functional departments into multimedia design (website design and cartoon productions), events planning (thematic design planning, spatial planning, visual graphics design, and product design), and service-oriented design (extension learning, different service designs), with the service-oriented design as the company's core competence. This model of project management by customization service teams requires the collaboration between the corporate planning department and design department at the early stage and the inclusion of external professional at the late stage, and the project will be wrapped up at the end by the corporate planning department.

DISCUSSION AND CONCLUSION
The three companies analyzed in this paper have offered traditional design services but also have strategically expanded the types of services, including the lower-end of marketing and manufacturing consultations, and even extend to the marketing channel development.

Firm A uses an Innovation Merchandize Integration Platform as the means of information exchange. The company's project team is made up of professionals with different background and expertise; they would use cross-disciplinary professional thinking to stimulate multi-perspective innovation service design proposal to meet the design requirements. Firm B uses design specialists to run projects, serving both as enablers and coordinators in the planning and development of the product services. Firm C uses a customization team to plan and develop experiential services.

It is important to note all these designing approaches have increased communication complexity, yet alone the nature of designing innovation services itself. Not only designers need to have the know-how in the visualization of logical concepts, they need to assist the team members in an integrated communication. The design service is no longer limited to a single design project but to offer wide reaching design experiences to integrate, maximize the client’s (and the company's) existing resources to come up with solutions – all the while holding the service mission of the client's products and brands. This complex work involves the experienced design team and interdisciplinary professionals, and it requires the information sharing between the company and its clients. But the intangible value of the design results is higher than those obtained from the tangible products, because the consumer's comprehensive experiential benefits and the satisfaction from the service can be greatly enhanced. Figure 4 summarizes the research results into a model that consists of three components:

Figure 4: Customization Innovation Service Models
The following summarizes the research results into a model that consists of three evolutionary parts:

Internal Innovation: Strategically extend and expand the design service type to offer additional information and products;

External Innovation: The inclusion of various professionals in the discussions, and designers must be able to integrate and communicate from several diverse perspectives; and

Service Design: Begins with design thinking that is based on the customization requirements; the company then integrates internal knowledge with external innovation knowledge to provide an improved and comprehensive solution to product designs, including back-end production mechanism, marketing, and the extended consulting services.

ACKNOWLEDGMENTS
The authors would like to thank the National Science Council of the R.O.C., Taiwan for financially/partially supporting this research under Contract No. NSC 101-2410-H-131 -001.

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