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## Can We Help Product-dominant Firms Innovate and Generate Value More Effective? A Customer Value Creation Perspective

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**Abstract:** To co-evolve with changes in the complex and competitive environment, firms are forced to redesign their business models and to adopt new innovation approaches. While most leading product-dominant enterprises have paid significant attention on creating value from both the economic and technological viewpoints, the semantic perspective is still less emphasized which then leads to challenges in retaining customer values. To explore the empirical challenges and conceptual dilemmas, this study identifies key sources of customer value creation and clarifies the corresponding innovation strategies for product-dominant firms. A survey was conducted to compare commonalities and unique characteristics, as well as perceived customer value generation patterns based on four products in Asian contexts. This study yields several findings. First, a revised framework of value dimensions for customers composed of eight factors and 51 elements is proposed. Second, composition of the perceived customer values of the selected four products are analyzed and compared. Finally, practical guidelines for product-based firms to articulate efficient innovation strategies through customer value creation are discussed.

**Key words:** Customer value creation, innovation strategy, product-dominated firm

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### INTRODUCTION

As Kotler raises the important concept called Total Customer Value (TCV), how to generate value through a user-centric viewpoint has been gradually recognized by firms. This is especially obvious in case of product/ service innovation, development, design, as well as new business start-ups (Smith and Colgate, 2007).

Current studies demonstrate that customer values could not only be created from functional or monetary aspects but also from semantic ones, such as hedonic and symbolic aspects (Battistella *et al.*, 2012; Roland Berger, 2007; Smith and Colgate, 2007). These findings imply that perceived customer values might not come from the explicit aspects of products or services, as argued by Pine and Gilmore (1998) for the era of the experience economy.

Similar evidence could be also found in government policies and leading company projects. For instance, in Japan, Sony proposed the Qualia project for a new series of product development in early 2000s. It then

indirectly fostered a couple of government-led projects based on customer value creation in Japan in the late 2000s. The above work led to a common belief that firms might make improvement during the process of designing and developing new products/services by providing different types of customer value.

However, the implicit links between innovation and customer value are still nascent and in the early stage for concept development (Smith and Colgate, 2007), let alone guidelines on how product-dominant companies could formulate efficient innovation strategies based-on customer value creation principles for retaining competitive advantages and ensuring differentiation (Bettencourt and Brown, 2013). What is worse, as current literature demonstrates that customer value should be examined from both customers' and firms' viewpoints, how to validate through the perspective with which to study customer value is still unseen (Landroguéz *et al.*, 2013).

Consequently, this study is interested in understanding the connection between customer value

creation and innovation strategy for product dominant sectors. Specifically speaking, in order to bridge the aforementioned gap in the literature, this article puts its emphasis on investigating different types of customer value and on understanding implicit rules of customer value-based innovations strategies for product dominant sectors. The authors also conducted a survey on examining the feasibility of the proposed framework for developing products under Chinese market context.

In the next section, literature review on the current understanding of customer value creation and innovation strategy is provided which helps highlight the potential research gap. Collecting and analyzing previous studies and extracting relevant factors as well as corresponding elements are then conducted before proposing our framework. Moreover, to offer supportive evidence and to provide practical implications, a quantitative survey on four different types of products in the same context is conducted.

## LITERATURE REVIEW

**Links among innovation, customer values and product-dominant firms:** In the past decades, firms have been operating in a new and complex competitive environment, particularly when the knowledge economy and the experience economy show that the value is increasingly conveyed by the sense and the meaning of things (Battistella *et al.*, 2012; Pine and Gilmore, 1998). It follows that more and more firms are regarding customer value as the key factor for seeking new ways to obtain and maintain corporate competitive advantages (Laudroquez *et al.*, 2013).

From the very nature, the fundamental purpose of innovation is to achieve personal, organizational and societal objectives through creating superior customer value for market segments through a sustainable strategy. Such claim leads to the paradigm shift and theory of customer value which addresses that firms exist to create value for buyers and to satisfy their own needs, even if they are neither efficient nor effective (Anderson *et al.*, 2006; Smith and Colgate, 2007).

In other words, since customer perceived value is vital for retaining and improving customer satisfaction and brand loyalty, how to understand and manage customer needs and perceived values becomes a critical issue (Nezakati *et al.*, 2013; Wang and Chou, 2013). Therefore, not surprisingly, in order to create and deliver superior value to customers, there is growing recognition of opportunities through experience staging based innovation (Candi *et al.*, 2013; Laudroquez *et al.*, (2013).

As service innovation is increasingly seen a source of competitive advantage for product-dominant companies, some other research highlights that similar trails and possible patterns have been investigated and discussed in product dominant sectors (Bettencourt and Brown, 2013). According to the research stream of innovation management field it is claimed that the semantic dimension (i.e., the aesthetic, symbolic and emotional messages) carried out by products and by companies would be a powerful source for gaining competitive advantage (Battistella *et al.*, 2012). For instance (Candi *et al.*, 2013) shows that the experiential nature of the product core can indeed result in competitive advantage over more functional competitors; and, firms with experiences at the core of product offering are found outperforming their competitors in terms of corporate image and new market entry. Such argument implies that products are not represented only by form and function but also by meaning; meanwhile, the entire business model of a company does not transmit economic and technological value only but also represents the company from a semantic point of view (Battistella *et al.*, 2012). However, when the generalizability of the above argument is emphasized, most studies narrow their focus on high-profile examples of firms from largely hedonic sectors which may then fail to address how firms outside these sectors (e.g., product-dominant sectors) can join the experience economy by developing new products and services with experiences as their core (Candi *et al.*, 2013).

In a nutshell, the primary goal of product dominant companies seek for service innovation should not be to innovate services but to retain their sustainability and compatibility. Competitive markets call for innovation that goes beyond technology and functionality to provide less tangible but potentially more valuable and experiential benefits. The progression is from extracting fungible commodities, to manufacturing tangible goods and to delivering intangible services. Each stage in this profession represents a superior value proposition with higher potential for differentiation and margins (Candi *et al.*, 2013). However, as Bettencourt and Brown (2013) argues, only when product-dominant companies truly recognize services as solutions to customer needs, will meaningful and valuable service innovation be successfully applied.

**Typologies of customer values:** Despite the centrality of customer value to marketing thought and despite the popular works on normative customer value creation strategies, customer value research is still at the early stage for concept development (Smith and Colgate, 2007). However, we can still learn a lot from previous studies.

In terms of theoretical research (Park *et al.*, 1986) generalizes three basic customer needs that reflect value dimensions: Functional needs, symbolic needs and experiential needs. Sheth *et al.* (1991) categorizes five types of value derived from customer choice: Functional value, social value, emotional value, epistemic value and conditional value. Woodall (2003) identifies five forms of value for customers, even though the framework is criticized as overlapping among categories. Holbrook, (1999, 2005) proposes three dimensions for classifying types of customer value: The source of motivation behind value assessment, the orientation of value assessment and the nature of value assessment. Under Holbrook's framework, eight types of value are identified: Efficiency, excellence, status, esteem, play, aesthetics, ethics and spirituality. Smith and Colgate (2007) presents a framework based on previous works about customer value creation which aims to help firms distinguish themselves in the eyes of the customers. In Smith and Colgate's study, four types of value are identified: Cost/sacrifice, functional/instrumental, experiential/hedonic and symbolic/expressive values. More than 70 value items from current literature are mapped and identified in this framework which is with strong belief that each value item is able to be created by firms through the corresponding five major sources of value.

With regard to practical research, two studies are worth further investigated; the first one is Roland Berger's RB profiler value system matrix, while the second one is Mizuho Research Institute's customer value framework in Japan. With regard to the case of Roland Berger, based on the needs of customers and values addressed by brands, the RB profiler value system matrix which is composed of 20 general customer values, desires and aspirations, is proposed. In general, those values are divided into six value clusters indicating different groups of values. Roland Berger, moreover, provides steps for utilizing the matrix for market segment diagnosis and customer value creation (Roland Berger, 2007).

MRI (2009) categorizes customer value into seven factors and 21 elements based on the Qualia project sponsored by the Japanese Government. According to Mizuho Research Institute, most of the value elements are found relevant to physical products (e.g., materials, manufacturing processes, culture-based design), whereas only few of the elements are direct relevant to dimensions of service and the delivery processes. However, implications on customer value framework and innovative value creation is less discussed in this study, unfortunately.

To react to what has been found in Japan and what can be applied outside Japan (Kuo *et al.*, 2011a) applies

similar practices in Taiwan based on a qualitative approach. The data is gathered through two resources: Diaries and activity reports. Kuo *et al.* (2011a) invited 14 people to keep a diary and recode what they receive from products or services being perceived as of high value. Besides, six people who are good at selected products/services are asked to describe their purchase experiences and perceptions of their daily lives. Based on the findings, nine factors composed of 51 elements are proposed. In particular, the nine factors are: Creativity, delicacy, emotional link, elegance, experience, functionality, price, self-expression and trust-worthy. These nine factors for customer value creation, in general, are not all the same as those presented in previous studies. Particularly, elements relevant to delicacy and social meaning (i.e., self-expression and emotional link) are found gradually recognized in Asian context. Such findings are believed reasonable in reflecting the trend that Asian people are gradually enjoying the symbolic value and start pursuing for total experience and social feelings through the whole value delivery system. Such claims echo what have been highlighted by Chiu *et al.* (2011), Lu and Gilmour (2004) and Pine and Gilmore (1998). Moreover, to validate the applicability of the proposed concepts and frameworks, Kuo *et al.* (2011b) further examines on three fashion products and receives supports based on a customer survey.

## RESEARCH DESIGN AND FINDINGS

**Stage 1: Customer value framework construction:** By comparing the customer value frameworks mentioned above it is believed that (Kuo *et al.*, 2011a, b) framework might be much more applicable regarding to capturing types of customer values from different angles (i.e., which covers value from creation processes, types of outcomes and emotional links). Therefore, as Table 1 illustrates, after a minor revision, the customer value framework of this study is proposed which covers eight factors (i.e., creativity, delicacy, emotional expression, elegance, functionalism, holistic experience, moneyism and trust-worthy) and the corresponding 51 value items. To ensure the compatibility and generalizability of our proposed framework, mappings of value factors in our framework with those of others are depicted in Table 2.

If an in-depth understanding on value factors is taken, the first factor called "Creativity" covers elements relevant to progressive hedonism; four elements are identified for this factor: Cool and fun, innovation, surprise and thrill.

**Table 1: Comparison of current frameworks of value dimensions for customers**

This study	Smith and Colgate (2007)	Roland Berger (2007)	MRI (2009)
Creativity (4)	Experiential/hedonic	Progressive hedonism	Japanese elements
Delicacy (3)	N/A	N/A	Manufacturing progress and elements
Emotional expression			
Emotional links (11)	Symbolic/expressive	Altruism	N/A
Self-expressions (6)	Experiential/hedonic		
Elegance (4)	Experiential/hedonic	Traditional hedonism	N/A
Functionalism (6)	Functional/instrumental	Traditional performance	Quality and functions
Holistic experience (3)	N/A	Progressive performance	Service in general
Moneyism (8)	Cost/sacrifice	Moneyism	Ease of access
Trust worthy (6)	Symbolic/expressive	Traditional performance	Image and reliable

**Table 2: Details of the proposed customer value framework of this study**

Factors	Elements
Creativity	Cool and fun, innovation, surprise, thrill
Delicacy	Best collection, processes of production, pursuing excellence
Emotional expression-Emotional link	Cordial, learning, emotional reflection, environment protection, health, nostalgia, relax, sense of belonging, story- telling, tedious-free, well-being
Self-expression	Customized, fashion, individual style, low profile luxury, profession, show off
Elegance	Ease of collection, flavour, outlook, vogue
Functionalism	Durability, guarantee, number of functions, property, quality, safety
Holistic experience	Atmosphere, comfort, service offering
Moneyism	Cost-performance ratio, ease of access, ease of use, limited series, practicability, price, special events, variety
Trust worthy	Awareness of brand, endorser, image, place of origin, past experience, word of mouth

“Delicacy” addresses the carefully design processes and material selection in order to pursue excellence; three elements are highlighted: best collection, processes of production and pursuing excellence.

“Emotional expression” helps spotlight possible connections between subjective feelings of human being with the context (called Emotional links) and those relevant to self-recognized style and personalization (namely self-expression). Those subjective feelings are highly related to altruism. Therefore, cordial, learning, emotional reflection, environment protection, health, nostalgia, relax, sense of belonging, story-telling, tedious-free, well-being, customization, fashion, individual style, low profile luxury, profession and show off are all categorized as the elements of the factor.

“Elegance” highlights the outlook issue and is relevant to that of traditional hedonism. Particularly, the four elements called ease of collection, flavor, outlook and vogue are included.

To echo Smith and Colgate (2007), “Functionalism” mainly concerns about the performance of products/ services, such as quality and properties; elements of durability, guarantee, number of functions, property and quality safety are especially highlighted.

“Holistic experience” addresses the possible perceived customer value receiving from or creating by the last mile delivery process and its corresponding moment of truth. Elements such as atmosphere, comfort and service offering are especially emphasized.

Supported by Roland Berger, “Moneyism” represents the value concept of smart shopping and total cost. This factor is composed of eight elements: Cost-performance ratio (C/P ratio), ease of access, ease of use, limited series, practicability, price, special events and variety.

“Trust-worthy” concerns on images, trust and reputation; awareness of brand, endorse, image, place of origin, past experience and word of mouth are regarded as major elements of this factor.

**Sampling, data collection and measurement:** To further investigate and validate the linkage between customer value and innovation in product dominant sectors based on our framework, a customer survey is taken.

In terms of surveyed target, to cover the variety of products and to conduct cross-culture comparison, four consumer products namely bags, furnishings, appliances and vehicles are selected.

With regard to sample design, a survey with quota sampling technique is applied. At least 300 respondents are drawn for each product. Amongst them, 56% are chosen from northern, 20% from central and 24% from southern Taiwan for fitting the general population structure. In addition, the sample is composed of 41% from male and 59% from female, ranging from 20- 55 years old (mean = 33.7 years old). Owing to the above setting, the study is believed to be substantially representative.

With respect to the questionnaire itself, each respondent is required to rate the importance of the 51 value elements based on the given product he/she perceived. The 7-point Likert scale measurement is applied (1 = strongly disagree, 7 = strongly agree).

**ANALYSIS AND RESULTS**

Table 3 depicts the composition of perceived customer value of each product. The importance of each value factor is calculated based on factor loadings of

**Table 3: Composition of perceived customer values of the selected products**

Factors	Bags (%)	Furnishings (%)	Appliances (%)	Vehicles (%)	Average(%) (Rank)
Creativity	11.77	12.63	11.96	10.74	11.78 (8)
Delicacy	12.68	12.83	12.85	12.88	12.81 (2)
Elegance	12.93	12.92	12.50	13.28	12.91 (1)
Emotional expression	12.59	13.22	12.66	12.12	12.65 (4)
Functionalism	12.76	12.82	12.29	12.87	12.69 (3)
Holistic experience	12.58	11.91	13.11	12.78	12.60 (5)
Moneyism	12.59	12.41	12.13	12.02	12.29 (6)
Trust worthy	12.11	11.26	12.50	13.30	12.29 (6)

each value factor to total customer value. The reduction of elements (or measures) of each factor (or construct) is taken based on the improvement of reliability figures. Regarding the stability of each customer value factor, the results of the pilot survey reveal that the eight value factors are all satisfied the basic requirements. Meanwhile, all the reliability figures of each factor of these four products perform satisfied (i.e., Cronbach alphas of the eight factors for these four products are all above 0.8).

When the importance of customer perceived values (measured by composition portion of each value factor) are taken into account, a similar pattern can be found from the four products. More specifically, the relative importance of the so-called basic customer values or regarded as measurement of traditional performance (i.e., moneyism and functionalism) are decreasing for all these four surveyed products. In contrast, the symbolic values derived from delicacy and elegance are viewed as the most important value factors which is consistent with findings of MRI (2009) and the nature of traditional hedonic highlighted by Roland Berger (2007).

Meanwhile, different patterns of value composition amongst four products can be also identified. Particularly, the importance of holistic experience and emotional expression are found varying amongst these four products. It implies that the importance of these two value factors will be heavily rely on the product delivery context itself. Such findings, from the very nature, are in line with MRI (2009).

Finally, according to Table 3, the perceived value derived from “Creativity” is found less recognized among these four products, surprisingly. Such findings seem to against values and importance highlighted by traditional product innovation. However, with respect to the importance and implications of customer-based meaningful service innovation highlighted above, our findings might offer a much clearer clue herein (i.e., purely creative product innovation may be hardly help firms retain values).

**CONCLUSION AND LIMITATIONS**

**Conclusion and implications:** This study adopts a quantitative approach to investigate the relationship

between innovation strategies and sources of perceived customer value creation for product dominant sectors.

Based on our findings, a revised framework of value dimensions for customer composed of eight factors and 51 elements is proposed and validated. Generally speaking, the results go beyond the findings of previous research by demonstrating the difference of factor components. In particular, the two seldom-discussed factors (i.e., delicacy and emotional expressions) in customer value studies are validated As delicacy and emotional expressions are perceived as important value factors for B2C products in Asian or Chinese markets it is suggested that those who are interested in exploring potential high value market segments for products in Eastern markets are worth further investigating.

In addition, categories of the proposed value factors in this study echoes (Laudroguez *et al.*, 2013) argument on the importance of the dynamic processes of value creation. More specifically, even in case of B2C product context, customers will also evaluate the total customer value by taking into account the feeling of the whole delivery process, thus making value factors of holistic experience and delicacy worth further explored and emphasized by product dominant firms. Such findings may indirectly support the claims made by the research stream of servization or Product-Service-System (PSS). In other words, when the issue of how to raise the adoption rate in markets or perceived customer value of PSS is explored, our findings may be applied as the starting basis.

Finally, based on the analysis of the four identical products, the authors once remind that, there is no “one size fits all” answer. A successful marketing campaign should be tailored to a particular segment and to a particular product. Meanwhile, the reason why creativity contributes less in customer value creation in the given survey context is also worth further exploration and making reactions to innovation strategies of manufacturing firms (i.e., product/process based innovation vs. service innovation).

**Contributions:** With respect to contributions, this article provides a framework for identifying types of customer value. This study also provides strategic implications for the connection between customer value creation

and innovation strategy. However, while the proposed framework is believed suitable for innovative customer-driven value creation, we do not claim to offer a magic bullet. Instead, the authors suggest a reference contingent customer value-product market alignment perspective for product-dominant sectors in increasing perceived customer value of products through successful innovation and marketing strategies.

To conclude, the authors believe that this study have implications for researchers or practitioners who are looking for customer value-based innovations strategies for product-dominant firms to understand how to improve perceived customer values efficiently and effectively.

**Limitations and future researches:** A few limitations of this study along with questions for future research should be noted. First, the survey was conducted in Taiwan, raising the challenges of transferability of results to other countries. While this study is not internationally comparative therefore cannot generalize over all product categories.

Considering the dearth of empirical research on customer value creation, there are relevant questions to be addressed by further research. First, owing to the findings derived from four products it is worth examining the differences of customer value combination amongst different product sectors (or even in B2B contexts). Second it would be interesting to develop new concrete product offering based on the results of this study. In particular it is worth exploring the corresponding business models, as well as innovation and marketing strategies that could be implemented for these product-dominant firms. Finally it would be of great interest in investigating customer value creation patterns and corresponding innovation/marketing strategies in different cultures and compare the results from different countries. This would allow researchers to understand the applications and implications of semantic value-based innovation strategies across nations or cultures and help raise the generalizability of our findings.

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#### REFERENCES

- Anderson, J.C., J.A. Narus and W. van Rossum, 2006. Customer value propositions in business markets. *Harvard Bus. Rev.*, 84: 91-99.
- Battistella, C., C. Biotto and A.F. de Toni, 2012. From design driven innovation to meaning strategy. *Manage. Decision*, 50: 718-743.
- Bettencourt, L.A. and S.W. Brown, 2013. From goods to great: Service innovation in a product-dominant firm. *Bus. Horizons*, 56: 277-283.
- Candi, M., A. Beltagui and J.C.K.H. Riedel, 2013. Innovation through experience staging: Motives and outcomes. *J. Prod. Manage.*, 30: 279-297.
- Chiu, H.C., Y.C. Hsieh, H.J. Yeh, C.L. Kuo, M. Lee and D.J. Yu, 2011. The connection between happiness and service businesses: A preliminary study. *J. Happiness Stud.*, 12: 841-860.
- Holbrook, M.B., 1999. *Customer Value: A Framework for Analysis and Research*. Routledge, London, ISBN: 9780415191937, Pages: 203.
- Holbrook, M.B., 2005. Customer value and autoethnography: Subjective personal introspection and the meaning of a photograph collection. *J. Bus. Res.*, 58: 45-61.
- Kuo, C.L., C.C. Lin and Y.K. Wu, 2011a. Customer value creation strategies and its connection with NPD and NDS: A preliminary study. *Proceedings of the QUIS 12*.
- Kuo, D.C.L., C.C. Lin and Y.K. Wu, 2011b. The connection between customer value creation and innovation strategy: A proposed framework and its implication in fashion products. *Proceedings of the IEEE International Conference on Industrial Engineering and Engineering Management*, December 6-9, 2011, Singapore, pp: 1175-1179.
- Laudroguez, S.M., C.B. Castro and G. Cepeda-Carrion, 2013. Developing an integrated vision of customer value. *J. Serv. Mark.*, 27: 234-244.
- Lu, L. and R. Gilmour, 2004. Culture and conceptions of happiness: Individual oriented and social oriented SWB. *J. Happiness Stud.*, 5: 269-291.
- MRI, 2009. *Qualia in Japan: Market potential prediction and consumer survey*. Mizuho Research Institute.
- Nezakati, H., C.P. Yem and M. Akhouni, 2013. Antecedents impact on brand loyalty in cosmetics industry. *J. Applied Sci.*, 13: 126-132.
- Park, C.W., B. Jawarski and D. MacInnis, 1986. Strategic brand concept-image management. *J. Mark.*, 50: 135-145.

- Pine, B.J. and J.H. Gilmore, 1998. Welcome to the experience economy. *Harvard Bus. Rev.*, 76: 79-105.
- Roland Berger, 2007. RB profiler at a glance. Roland Berger.
- Sheth, J.N., B.I. Newman and B.L. Gross, 1991. *Consumption Values and Market Choices: Theory and Applications*. South-Western Publishing Company, Cincinnati, Pages: 218.
- Smith, J.B. and M. Colgate, 2007. Customer value creation: A practical framework. *J. Mark. Theory Pract.*, 15: 7-23.
- Wang, M.Y. and M.J. Chou, 2013. Behind the mask: The impact of service quality on consumer satisfaction and loyalty intentions. *J. Applied Sci.*, 13: 348-353.
- Woodall, T., 2003. Conceptualization value for the customer: An attributional structural and dispositional analysis. *Acad. Market. Sci. Rev.*, Vol. 2003.