

A Customer Value Perspective Motivates People to Purchase Digital Items in Virtual Communities

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Abstract. Most virtual community (VC) providers lack profitable business models. The challenge for VC providers is to generate and increase revenue from sources other than advertising. The sale of digital items (e.g., avatar) to VC members is a recent revenue generation method. This study examines how VC members decide to purchase digital items from the customer value perspective. Based on customer value theory, this study identifies five factors over three dimensions of customer value and examines their effects on VC members' intention of purchasing digital items. Our finding suggests that the effect of value on members' purchase intentions is significant in the emotional and social value dimensions as compared to the functional value, since digital items are more hedonic in nature and possess a high level of symbolic meaning for others to gauge one's personality in a conspicuous community setting. This study provides important implications for practitioners to understand how they can foster an ideal environment for customers to perceive more value in their digital items so that it would be more compelling to make purchases in a VC.

Keywords: Digital items, Customer value, Virtual Community.

1. Introduction

In the recent years, majority of virtual community (hereinafter, VC) providers have faced the lack of a profitable business model. Since Hagel and Armstrong (1996) published insights on the commercial expediency of VCs, many researchers and practitioners have begun looking into how owners should manage their online communities and businesses to maximize their economic potential [10]. Most VC providers derive their revenues mainly from advertising but are still bordering on profitability although they might have a significantly large member base. However, there is a rising web phenomenon of VCs employing an innovative kind of revenue generation method which earns primarily through the sales of digital items to virtual community members [13]. "Digital items" known as "virtual assets", can include online avatars, accessories for the avatars, and decorative ornaments like furniture, digital wallpapers, skins, background music and virtual weapons used for Internet games. These digital items are employed by users for representation and articulation in the online space, especially to create and enhance their online profiles in webs and games.

This study aims to examine digital item purchase behaviours of SNC users from the value perspective based on customer value theory. From marketing and e-commerce literature, customer value is known to be an important predictor of consumer buying behaviour as it is found largely to influence customers' purchase decisions [9, 1, 5] how VC providers and Internet companies can realize revenues and profit by capitalizing on their member base through the sale of digital items.

2. Conceptual Background

2.1. Customer Value Theory

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Among the various concepts discussed by marketing and e-commerce literature, the notion of "customer value" is often found to be an important predictor of buying behavior and a significant influence of customers' purchase decisions [7, 12, and 14]. The central role of consumer value has been conceptualized [9] and empirically demonstrated [13] in traditional marketing literature. Value is regarded as a strong predictor for favorable behavioral intentions such as purchase intentions [4, 7]. In terms of value perceptions, a broader theoretical framework of perceived value was developed by Sheth et al. (1991), who explained that consumer choice is a function of multiple 'consumption value' dimensions and that these values make differential contributions in different choice situations. As the dimensions they proposed are comprehensive to a variety of fields and has been deemed to establish good foundation for extending existing value constructs, it largely forms the basis of research for in other newer relevant studies [3, 5]. The value frameworks discussed by Sheth et al. (1991), Sweetney and Soutar (2001), and Rintamaki et al. (2006) all incorporated three pertinent dimensions of customer consumption values, namely (1) Functional Value, (2) Emotional Value, and (3) Social Value. All of them found that functional, emotional and social values were key influencers to consumer behavior in each of their context. Functional value of a product means "the perceived utility acquired from a product's capacity for functional, utilitarian or physical performance"[11]. A product acquires functional value through the possession of salient functional, utilitarian, or physical attributes. Functional value is measured on a profile of choice attributes. Traditionally, functional value is presumed to be the primary driver of consumer choice. This assumption underlies economic utility theory advanced by Stigler (1950), and popularly expressed in terms of "rational economic man." A product's functional value may be derived from its characteristics or attributes such as reliability, durability, and price.

Emotional value of a product means "the perceived utility acquired from a product's capacity to arouse feelings or affective states" [6]. A product acquires emotional value when associated with specific feelings of when precipitating or perpetuating those feelings. Emotional value, also commonly known as hedonic or experiential value, has been influenced by theory and research in several other pertinent areas of inquiry. Research in advertising and atmospherics has suggested that marketing and promotional mix variables arouse emotional responses that may be generalized to marketed product [12, 7]. According to Holbrook and Hirschman (1982), hedonic consumption involves the multi-sensory, fantasy and emotive aspects of one's experience with products.

Social value means "the perceived utility acquired from a product with one or more specific social groups" [1]. Consuming a product can represent a social act where symbolic meanings, social codes, relationships, and the consumer's identity and self may be produced and reproduced [8]. The motive of buying and using products depends on how a customer wants to be seen and/or how he wants to see himself by others [8, 2, and 5]. Products have been known to possess symbolic or conspicuous consumption value in excess of their functional utility. Based on the above discussion, this study identifies factors representing each type of customer value associated with digital items in the context of VC. First, we define functional value as *the utility of a digital item based on the perceived ratio or trade-off between its quality and the price to obtain it* [6]. This study identified two factors corresponding to the functional value of digital item, price utility and quality. Product utility represents the perceived efficient use of money to minimize what is sacrificed to obtain the digital item [12]. Quality represents the perceived overall excellence and expected performance of digital item [10]. This study defines emotional value as *the utility of a digital item derived from the perceived feelings or affective states that it generates* [14]. We identify one factor corresponding to emotional value, playfulness. Playfulness represents the perceived intrinsic enjoyment, interest, fun and curiosity generated from engaging in absorbing interactions with the digital item [3].

We define social value as *the utility of a digital item derived from its perceived ability to enhance social well-being*. This study identifies two factors corresponding to social value, social self-image and social relationship. Social self-image represents the digital item's perceived capability to enhance social self-image i.e., the projection of how one appears to others [4]. Social relationship represents the digital items' perceived capability to help form, maintain, and enhance interpersonal relationships.

3. Research Model and Hypotheses

We develop the research model and the corresponding hypotheses based on the above conceptual discussion. Price utility here is a component of functional value which positively contributes to total customer value. Adapted mainly from Zeithaml (1988), price utility is defined in our context as the utility derived due to the perceived efficient use of money to minimize what is sacrificed to obtain the product. From the transaction utility theory [11], the more favorable the price of a product, the higher the perceived price utility from the customers' point of view as they perceive that their money would be used more efficiently. Therefore, with a higher price utility, the higher the perceived acquisition utility, and the higher their purchase intentions because they view the transaction as more valuable.

H1: Price utility positively influences digital item purchase intention.

In marketing and e-commerce literature, quality and price are commonly associated with the functional dimension of customer value. Digital items are products which are characterized by indestructibility, transmutability and reproducibility. Digital items, which appear mainly in the form of multimedia elements can encompass more abstract dimensions of quality, such as aesthetics, features and perceived quality image. In particular, aesthetic quality is one of the most prominent dimensions of quality for digital items like graphical icons or online music tracks, since these digital items generally seem to be more aesthetic or pleasure-related in nature. Hence, digital items with higher perceived quality may lead to greater perceived customer value, inducing higher purchase intentions from consumers.

H2: Quality positively influences the intention to purchase digital items.

Previous research found that attitudinal outcomes, such as positive affect, pleasure, and satisfaction, result from the playful experience [2]. Playfulness is expected to be associated with increased behavioral intention, and possibly purchase intentions. Sheth et al. (1991) posited that the consumption of goods and services are frequently associated with emotional response, such as the romance aroused by a candlelight dinner, which contributes to increased value for the consumer in the emotional dimension. Perceived playful responses of fun and fantasy evoked through consuming digital items can be seen as a kind of emotional value for consumers. Therefore, this intrinsic value brought about by perceived playfulness during the consumption process may trigger purchase intentions of community members.

H3: Playfulness positively influences the intention to purchase digital items.

People consume products to enhance their social self-image because the purchase, display, and use of goods can communicate symbolic meaning to the individual and to others. The purchase and use of products is a means by which an individual can express self-image socially to others. Therefore, products are consumed for their social meanings as symbols [9]. Digital items can help to enhance representation and articulation in the online space, so it is likely for consumers to buy and use digital items as symbolic goods to enhance their social self-image. Hence, we propose:

H4: Social self-Image positively influences the intention to purchase digital items.

Baumeister and Leary (1995) addressed the need in humans to form and maintain strong, stable interpersonal relationships. The need is for frequent interactions within an ongoing relational bond. VCs are places where individuals can find and give emotional support, companionship and encouragement [14]. Walker (2003) found that people created extrinsic home pages to maintain pre-existing relationships. By embellishing homepages with attractive digital items like great music, members can expect to lure in more visitors to their homepages, such as friends or strangers whom they can potentially build relationships with. With more friends and strangers attracted to visiting their homepages, it takes less effort for owners to keep up with these social relationships. Therefore, digital items are believed be useful for social relationships and this value can lead to members motivation to purchase them. Hence, we propose:

H5: Social relationship positively influences the intention to purchase digital items.

4. Research Methodology

This study adopted an online survey approach as the research methodology. We selected Cyworld as the context of our study because it is a successful VC in terms of profiting from the sale of digital items.

Although in some aspects similar to U.S. social networking sites such as MySpace (www.myspace.com) or Secondlife (www.secondlife.com).

The study adopted existing validated scales whenever possible. These scales were adapted to reflect our research model. The price utility items were taken from the perceived value for price measurement scale developed by Sweetney & Soutar (2001). For the quality construct, one item was adapted from Sweetney & Soutar (2001) while three other items were based on the concept of quality as explained by Zeithaml (1988). As for the playfulness construct, three items were adapted from Moon & Kim (2001) and two variations of these items were added on. Social self-image measurement items were adapted from Sweetney & Soutar (2001). Items assessing social relationship were developed with relevance to our construct definition which is built upon the definitions of Maslow (1968) and Bowlby (1969). To measure purchase intentions, purchase intention scale was adopted from Dodds et al. (1991). All items were

Table I. Correlation Analysis; (*:p<0.05; **:p<0.01)

	Mean	S.D.	1	2	3	4	5
1. Price Utility	2.999	1.267					
2. Quality	4.400	1.390	.276**				
3. Playfulness	3.847	1.278	.262**	.562**			
4. Social Self-Image	3.714	1.523	.233**	.436**	.449**		
5. Social Relationship	3.859	1.357	.140*	.349**	.468**	.511**	
6. Purchase Intention	4.301	1.849	.181**	.391**	.522**	.498**	.389**

measured along a seven-point Likert scale (1= strongly disagree, 7 = strongly agree). Online members of the Indian Social Networking Community, Cyworld, were the respondents being surveyed. Empirical data was collected using web-based survey which was made available through a homepage to members of the SNC. The survey questions were formulated in English and double-checked by an IS professor.

The survey was conducted over a period of 6 week with each respondent receiving 3,000 Indian in exchange for completing the online questionnaire. A total of 225 completed and usable responses were obtained as the final sample. There are more male respondents than female, with males making up 60.9% of the sample size. Majority of the respondents are between 20 to 29 years old (68.8%) with the mean age being 23.06 years, indicating a youthful group of VC users. In terms of profession, about 91.1 % of the respondents are employees and students. The respondents are generally proficient with Internet usage as 85.3% of them have at least 7 years of Internet experience. 96.4% of those surveyed have been using Cyworld for at least a year.

5. Data Analysis and Results

A Pearson correlation analysis was conducted before hypothesis test. The correlation coefficients, means, and standard deviations of all variables are summarized in Table 1. Since a few correlations among some independent variables were considered relatively high, potential multicollinearity among the independent variables was checked before the multiple regression analyses. Their variance inflation factors (VIP) values was lower than 10, indicating that multicollinearity is not likely to distort testing results substantially in our research.

Multiple regression analysis results, show that Playfulness ($\sim = 0.328$, $p < 0.001$) and Social Self-Image ($\sim = 0.292$, $p < 0.001$) have significant relationships with Purchase Intention of Digital Items. Thus, hypotheses H3 and H4 are supported. However, Price Utility, Quality and Social Relationship were not found to have a significant relationship with Purchase Intention. Therefore, hypotheses H1, H2 and H5 are not supported. The five independent variables totally explained about 37% of the variance for Purchase Intention.

6. Discussion of Findings

The major finding of this study is that perceived *playfulness* and *social self-image* are significant factors influencing consumers' intention of purchasing digital items in VCs. Our finding that playfulness affects the purchase intention is similar to marketing research which suggests that emotional or hedonic values gained by customers through product consumption lead them to form more positive intentions towards purchase and

usage of these products. As Csikszentmihalyi (1975) noted, a positive subjective experience becomes an important reason for performing an activity. This is also consistent with what other researchers like Mathwick et al. (2001) have validated in other contexts.

Social Self-Image was also found to have a significant positive effect on the purchase intention. From the symbolic interactions perspective, individual's self-image is largely based on others' appraisals [12]. VC members especially in the Social Network Communities are concerned with the projection of how they appear to others, especially in this online social networking environment where the display of self or identity can be highly visible to others through personal profiles and reputation indicators. As Boyd et al. (2004) suggested, digital items can provide visible and audible cues to better present the portrayal of their identities to others, reducing the difficulty of for others to gauge them. Members strive to enhance their social self-image through the consumption of digital items because these items can offer them a greater level of representation and articulation in the online space, allowing them to better craft the image of themselves which they wish others to have of them. Therefore, the consuming behavior of an individual will be directed toward enhancing social self-image through consumption of digital items as symbols.

However, price utility was found to be insignificant to the purchase intention. This means that although the price of the digital items are perceived to be reasonable, SNC members may still not be interested to purchase and use them if they do not perceive value from aspects like Playfulness and Social Self-Image. However, the insignificance of price utility might be due to the fact that survey respondents who have not purchased any digital item before tend to hold a fuzzy perception of the prices of the digital items.

Quality was also found to have insignificant relationship with the purchase intention, indicating that subjects do not perceive quality of digital items as an important subcomponent of value leading to their purchase intentions. Since digital items generally are not subject to tangible quality degradation like non-digital products in the real world, consumers might be indifferent to the value deriving from quality in the context of digital items. As digital items constitute higher level abstract dimensions of quality [11], assessing the notion of quality can be more subjective. Social relationship was also insignificant to the purchase intention. It might be because not many members in the context of this SNC have discovered or experienced the usefulness of digital items for Social Relationship, making them more indifferent to the perceived value that can come from Social Relationship during the consumption of digital items. More studies need to be conducted to investigate the consistency of this finding.

7. Conclusion

Several VCs (e.g., Cyworld, HabboHotel, and SecondLife), especially social network VCs other than online game web sites, have started generating revenue from the sales of digital items (e.g., avatars) to their members. It is clear that the sale of digital items to VC members has been a prominent revenue model for VC service providers. However, there has been lack of understanding about why members purchase digital items in the VCs. Going beyond previous research, this study investigated what motivates VC members to buy digital items from the customer value theory perspective and identified five factors over three dimensions of customer value. From the empirical validation, the two variables of playfulness and social self-image were centered in affecting the intention to purchase digital items in a VC. Furthermore, we found that the effect of customer value on VC members' intention to purchase digital items is important in the emotional and social value dimensions rather than the functional value. These findings provide significant implications for practitioners who want to develop a unique, profitable business model and increase the sales of digital items in the VC context.

8. References

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