

THE INFLUENCE OF PRODUCT CHARACTERISTICS ON ONLINE PURCHASE INTENTION AMONG WHITE COLLAR WORKERS

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Abstract

The study examined the influence of product characteristic on online purchase intention among white-collar workers in Petaling Jaya. A simple random sampling method was used to select the private companies in Petaling Jaya and the respondents (i.e., the staffs in the particular companies) were then selected via convenience sampling. This sampling strategy was chosen because it requires minimum involvement from the companies, and it was also the most practical and appropriate strategy for the present study. The data were collected using self-administered questionnaire. SPSS and hierarchical multiple regression were used to determine the most influential product characteristic which may influence the online purchase intention. Results indicated that more than half of the respondents had high level of online purchase intentions and they were more willing to make purchases in internet store in future. The result of multiple regression analysis showed that low cost, frequently purchased and intangible products had significant influences on online purchase intention ($\beta = 0.295$, $p \leq 0.01$).

Keywords: Online Purchase Intention, Product Characteristic, White-Collar Workers

Introduction

Technology took internet just few years to reach an audience of 50 million. This mean that the internet was the fastest-growing tool of communication ever than radio and television broadcasters which took about 38 years and 13 years respectively to reach the similar number of audiences (Women's Learning Partnership, 2009). International Data Corporation (IDC) Malaysia Telecommunications has expected that internet business-to-consumer market which includes bill payments of online purchase of goods and services being augmented to RM15.3 billion in 2009 (Lee and Leong, 2009).

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According to the survey conducted by A.C Nielsen Company among 500 Malaysian internet users, in 2008, online shopping habit study has revealed that about 30% of Malaysian internet users have experienced online purchases (Lee and Leong, 2009). Airline ticket reservations (55%), tour or holiday reservations (41%), computer hardwares (22%), online books (21%) and event tickets (18%) were found to be the most commonly online purchase items by Malaysian internet shoppers.

Although online purchase behavior is an increasingly common practice for consumers in Malaysia, a great segment of consumer still does not prefer online purchasing. These consumers rather prefer “brick and mortar” shopping whereby they have the chances to actually see and touch the items. Besides, online purchase poses potential insecurity to them as they have to reveal their credit cards details.

On the other hand, although the burst of internet bubble left many people thinking that electronic commerce is dead, the actual picture is actually better (Chang, Cheung and Lai, 2005). The growth of interest in the internet as a shopping medium is extremely interesting for practitioners and researchers alike. Moreover, many well-established companies operate the shops by using the internet as a real world business nowadays (Zhou, Dai and Zhang, 2007). The internet exerts an increasingly strong influence on people’s everyday life.

Although many research have been conducted on online purchasing behavior, there is a necessity for additional research (i.e., this study) to understand more about this topic. For example, Lee and Leong (2009) found that up to 80% of Malaysian internet users have purchased travel items online but only 69% of Malaysian internet users have shopped for books. Furthermore, according to Rhee, Riggins and Kim (2009), product variety is widely noted as an important variable for e-business success. The potential of consumers to shop online is mainly attributed to a great variety of products. This implies that the characteristics of products will influence consumers’ choices of the shopping channels. Thus, to have a better understanding, this study will examine the possibility of products’ characteristics provided in website in influencing the online purchase intention.

Along with this, Vijayasarathy (2002) argued that consumers’ actual decisions to repeat internet purchases are actually differing from the initial intention when they want to do the online purchasing. This is due to the fact that the repetition behavior can be influenced by consumers’ experiences on previous transactions on the web. Thus, there is also a need to compare the online purchase intention among the internet buyers and potential internet buyers.

Literature And Background Of Study

According to Vijayasathy (2002), products and services can be classified according to inherited, conferred, and perceived product characteristics, specifically in tangibility, cost, differentiability, utility and information intensity. However, according to Peterson, Balasubramaniam and Bronnenberg (1997), products can be categorized along several dimensions which are cost/frequency of purchase, and value and proposition. Along with this, the framework of this study suggests that a variety of product characteristics, i.e., i) low cost and tangible products; ii) low cost and intangible products; iii) high cost and tangible products; and iv) high cost and intangible products will affect consumers' online purchase intentions.

In this study, the dimensions, i.e., cost and value proposition were included in the classification scheme. The first dimension refers to the cost of a product which can be distinguished based on low cost products (e.g., milk) and high cost products (e.g., refrigerator). Similarly, value proposition, which is an indication of the tangibility of a product can also be differentiated at two levels, i.e., tangible (e.g., clothing) and intangible (e.g., insurance). Combining the levels of the two dimensions yielded four product types mentioned earlier. Meanwhile, the online purchase intention which is referring to the consumer's willingness to make purchases in an internet store (Crespo, Bosque and Sanchez, 2009) and to return for additional purchases at the online store (Li and Zhang, 2002) was measured in terms of consumer's intention to buy the different types of products and services through internet.

The consumer's choice in deciding on shopping at a retail store or internet may be influenced by the type of products and services offered (Girard, Koeganonkar and Silverblatt, 2003; Phau and Poon, 2002). That is, these characteristics are important factors that may influence consumers' selection of shopping channels and their choices of specific products. Similarly, Kacen, Hess and Walker (2008) found that product characteristic has a fifty percent greater influence on impulse purchasing than do merchandising factors.

With regards to online purchase intention, many studies have found that behavioral intention is an important determinant of online purchasing behavior (Chen, Gillenson and Sherrel, 2002; Goldsmith, 2002). The purchasing intention was investigated in various ways such as likelihood, probability, expectation and so forth, and was measured at different time points such as currently, at the next visit, or in the future (Cao and Mokhtarian, 2005). For example, Jarvenpaa, Tractinsky and Vitale (2000) assessed consumers' intentions to shop online by asking a series of questions assessing the likelihood of returning to a store's website and general likelihood of ever purchasing from a particular store again.

Influences of Product Characteristic on Online Purchase Intention

Previous research suggests that consumers' purchasing behaviors can vary according to product characteristics (Girard et al., 2003; Vijayasathy, 2002; Yeh, Wang and Huang, 2007). Based on the dimensions of product classification proposed by Peterson et al. (1997), Phau and Poon (2000) in their study, products and services which have low cost are frequently purchased and intangible are more suitable to be purchased over the internet. For example, online newspaper and magazines are more likely to be purchased online than some grocery products, car loans, and insurance products. Similarly, books and gifts cause less worries among consumers when compared with clothes because these products would not require fitting and size specifications (Wai, Chang, Moon, and Hsia, 2004; Vijayasathy, 2002).

Vijayasathy (2002) also found that intangible/information products are more suitable to be purchased over the internet. For example, media products include books, music and videos are believed to be able transferred to online shopping from physical stores more easily than other categories. Consumers also thought that CDs or videos could be shopped online to save time and for ease of making purchases from other countries. Specifically, consumer intentions to shop online for intangible products were higher than their intentions to shop for tangible products (Norazah, 2003; Phau and Poon, 2000). In addition, intangible/information products can be evaluated directly using downloaded information, while information products are conducive for search and browsing because degraded version of information products can be easily sampled online (Peterson et al., 1997). Thus, based on the findings of previous research and arguments above, this study aims to describe the characteristics of product provided in website which will influence the online purchase intention and to determine the most influential product characteristics that may influence the online purchase intention.

Research Methodology

A simple random sampling method was used to select the private companies in Petaling Jaya. The present study involved a total of 120 respondents in which they have been selected by using convenience sampling method. This sampling strategy was chosen because it requires minimum involvement from the companies, and it is also the most practical and appropriate strategy for the present study. Furthermore, the convenience sampling method was also used because it is difficult to get the companies' list of workers from the management of the companies. With regards to the sample size, according to Salant and Dillman (1994, p.55), minimum sample size for the population ranging from 2500 to 5000 is 93 respondents with the assumption that the population must be heterogeneous. The white collar workers involved in this study were the corporate executives in various departments, who perform semi-professional office, administrative or sales coordination tasks.

The main instrument for this study is a questionnaire, which is divided into four sections, i.e., respondent's socio demographic background, patterns of using internet and purchasing online, product/service classification, and online purchase intention. SPSS and hierarchical multiple regression were used to determine the most influential product characteristic that influence the online purchase intention.

The literature from information technology (e.g., Jarvenpaa et al., 2000) and marketing (e.g., Peterson et al., 1997), provided the basis to measure the product/service classification and internet purchase intention respectively. In this study, product/service classification was evaluated based on respondents' likelihood to purchase each of 22 listed products/services through internet on a five-point Likert scale. The list was adopted from Peterson et al.'s (1997) classification scheme. The products/services were classified into various categories according to costs, purchase frequency and product tangibility. Meanwhile, online purchase intention was measured using the measurement adapted from Jarvenpaa et al. (2000), which demonstrated an average reliability score of 0.623.

RESEARCH FINDINGS AND DISCUSSION

Profile of Respondents, Pattern of Internet Usage and Online Purchase Experiences

A total of 120 respondents in this study has consisted of 56.7% males and 43.3% females. This shows quite a balance between the gender group. The results also showed that the highest percentage of the respondents were aged between 25-34 years old (35.0%), followed by those who were aged between 18-24 years old (23.3%) and 35-44 years old (23.3%). Only 3.3% were aged between 55 years and older. In terms of ethnic groups, almost half of the total respondents were Malays (48.3%) and Chinese (42.5%), while the remaining were Indians (9.2%). Interestingly, the study reported that almost equivalent percentage of respondents who were single (50.0%) and married (48.7%). More than half of the respondents with education up to tertiary level (diploma or university degree) (60.8%), working as semi-professional (80%), and had an average personal monthly income of RM2,272.00.

The respondents were also evaluated based on the patterns of their internet usages and online purchase experiences. The particular internet usage patterns were measured in terms of their experiences of using internet and the duration of internet usage in a day. Meanwhile, the information about the experience of purchasing online was used to categorize the respondents into two categories, i.e., internet buyers and non-internet buyers. The results of the current study showed that all the respondents (100.0%) had prior internet usage experiences and most of them have used the internet for more than four years (75.8%) and more than four hours a day (64.2%). Based on the

experience of purchasing online, more than half of the respondents were categorized as internet buyers (59.2%) and the remaining 40.8% were non-internet buyers, who had never purchased via online before.

Product Characteristics

The descriptive analysis was used to measure the tendency of the respondents to purchase the 22 listed products/services through internet and the results were summarized in Table 1. The analysis had been divided into three levels; unlikely, neutral and likely. The results showed the favourite purchase items (at least more than 60.0%) were concert/play tickets services (74.9%), travel arrangement (72.1%), online books/journals (66.0%), online magazines/newspapers (62.9%), and online videos/movies/music (62.8%). Conversely, there were also some products found to be significantly unlikely to be purchased by the respondents. These include generic grocery items (95.9%), soft drinks, wines, cigarettes (93.8%), vegetables (96.9%), precious metals (75.3%), home electronics/appliances (79.4%), jewellery (86.6%), and stereo systems (78.4%).

Table 1
Descriptive Analysis of Product Characteristic

Category	No.	Items	Unlikely (%)	Neutral (%)	Likely (%)
Category 1					
	1	Generic grocery items (e.g., milks, eggs)	95.9	4.1	0
	2	Flowers	54.7	21.6	23.7
	3	Soft drinks, Wines, Cigarettes	93.8	6.2	0
	4	Clothing/Shoes	47.4	33.0	19.6
	5	Vegetables	96.9	3.1	0
	6	CDs/Albums	19.6	43.3	37.1
Category 2					
	7	Online Videos/Movies/Music	7.2	29.9	62.8
	8	Online Magazines/Newspapers	4.1	33.0	62.9
	9	Concert/Play tickets services	1.0	24.7	74.3
	10	Online Books/Journals	4.1	29.9	66.0
	11	Stock market quotes	16.5	47.4	36.1
Category 3					
	12	Computer hardware	48.5	40.2	11.4
	13	Precious metals (e.g., gold, silver)	75.3	23.7	1.0
	14	Home electronics/appliances	79.4	15.5	5.2
	15	Jewellery	86.6	12.4	1.0
	16	Stereo systems	78.4	19.6	2.1

Category 4				
17	Investment choices (e.g., stocks)	38.1	47.4	14.4
18	Insurances services	30.9	56.7	12.4
19	Legal services	27.8	46.4	25.8
20	Online computer software/games	13.4	40.2	46.4
21	Real estate	49.5	44.3	6.2
22	Travel arrangement	4.1	23.7	72.1

Note: Category 1 = Low outlay, frequently purchased and tangible products
 Category 2 = Low outlay, frequently purchased and intangible products
 Category 3 = High outlay, infrequently purchased and tangible products
 Category 4 = High outlay, infrequently purchased and intangible product

Based on cost outlay and tangibility, category 1 products, those with low cost, are frequently purchased and in the contrary tangible items were unlikely to be purchased by the respondents. This is because these products are easily available in the neighborhood shops at low prices. Moreover, these products are usually bought when the need arises and very little search is needed as for the pre-purchase. For example, consumers are more likely to buy drinks from retail stores than through online sources.

Besides that, category 3, those with high cost, are infrequently purchased and tangible items also were unlikely to be purchased by the respondents via online. These products require more visual inspection than other product categories and high monetary risks involved in buying these high cost products/services. Meanwhile, the study also found that the respondents seem to be quite neutral for products/services in category 4, those with high cost, infrequently purchased and intangible products. This may be due to the characteristics of the products/services themselves which require them to have more information prior to buying decision.

Among the four categories, category 2 was those with low cost, are frequently purchased and intangible products were likely to be purchased by the respondents. Internet enables online trial of this group of products before actual purchase (for example, online books/journals can be previewed through downloadable preface as to guide purchase decision better).

Online Purchase Intention

A total of 12 items was used to examine the respondents' online purchase intention. Table 2 showed the descriptive analysis of each question for online purchase intention. The analysis has been divided into three levels of online purchase intention: agree, neutral

and disagree. The results displayed that the difference in percentage between agree and disagree level were not very significant, while the percentage of the respondents who had more intention to purchase online was slightly higher than those who had low online purchase intention. For example, 34.2% of the respondents has agreed that for them, online shopping would be much better as compared to traditional methods. Meanwhile, there was 27.5% of the respondents fall into disagree group. Similarly, there were more respondents who will consider their purchases virtually in short term (32.5%) in contrast to 22.5% of them who will not consider at all.

Table 2
Descriptive Analysis of Online Purchase Intention

No.	Statement	Disagree (%)	Neutral (%)	Agree (%)
1.	I intend to purchase using the internet.	18.3	38.3	43.4
2.	I plan to do more of my purchasing using the internet.	22.5	38.3	39.2
3.	I intent to use the internet to collect information about product.	5.0	14.1	80.9
4.	I think it would be very good to use the internet for my shopping activities in addition to traditional methods.	25.8	32.5	41.7
5.	I think it would be very desirable to use the internet for my shopping activities in addition to traditional methods.	28.3	32.5	39.2
6.	I think it would be much better for me to use the internet for my shopping activities in addition to traditional methods.	27.5	38.3	34.2
7.	The thought of buying at the website is appealing to me.	19.2	46.7	34.1
8.	I will consider the purchasing at the website in the short term.	22.5	45.0	32.5
9.	I will consider the purchasing at the website in the long term.	24.2	36.7	39.1
10.	I will consider the purchasing at the website if I need the product.	6.7	25.8	67.5
11.	Overall, I like to use the internet for my shopping activities.	20.0	45.0	35.0

The results also showed that majority of the respondents were intended to use the internet to collect information about product (80.9%) and more than half of them will consider purchase virtually if they need the product (67.5%). This is consistent with the argument proposed by Phau and Poon (2000) that the rapid adoption of internet resulting the internet users to compare similar products across different websites more easily with a click of the mouse since the search costs for the product information through the internet are low.

The online purchase intention level was then determined based on the mean scale (mean = 36.0) of the online purchase intention scales. Respondents who scored equal and above the mean were categorized as having high levels of online purchase intention and respondents who scored below the mean were categorized as having low levels of online purchase intention. Referring to Table 3, the result showed that more than half of the respondents (68.3%) had high level of online purchase intention; they were more willing to make purchase in the internet store in future.

Table 3
Level of Online Purchase Intention

Intention Level	%
Low Intention	31.7
High Intention	68.3

Independent samples T-test was then performed to examine the difference in online purchase intention among the internet buyers and potential internet buyers. The result found that there was no significant difference in online purchase intention among these two groups ($t=0.847$, $p>0.05$). This result could not be compared with other studies since there was no past study had addressed similar issue of online purchase behaviour among white collar workers. However, when this result is viewed together with the result of the level of purchase intention, it can be concluded that the intention to shop online is high regardless of whether the white collar workers are internet buyers or potential internet buyers.

The Influence of Product Characteristics on Online Purchase Intention

Multiple regression analysis was used to determine the unique predictor that will influence the online purchase intention. Table 4 showed the most influential product category that influence the online purchase intention. The result indicated that low cost, frequently purchased and intangible products had significant influences on online purchase intention ($\beta= 0.295$, $p\leq 0.01$).

Table 4
The Result of Multiple Regression Analysis

Product Categories	Online Purchase Intention (β)
Category 1: Low outlay, frequently purchased and tangible products	ns
Category 2: Low outlay, frequently purchased and intangible products	0.295**
Category 3: High outlay, infrequently purchased and tangible products	ns
Category 4: High outlay, infrequently purchased and intangible products	ns
Adjusted R ² = 0.138	
F = 4.829***	

Note: **p<0.01; ***p<0.001

The result was consistent with the finding in descriptive analysis which indicated that category 2, those with low cost, are frequently purchased and intangible products were likely to be purchased by the respondents via the internet. The finding was also found consistent with previous research done by Phau and Poon (2000), stating that consumers' intentions to shop online for low cost and intangible product/services were higher than their intentions to shop for high cost and tangible products/services.

The F statistics for the overall goodness-of-fit of the model is 4.829 which is significant at p<0.001. However, the result showed that the adjusted R² was relatively low which was only 13.8% of the variance in online purchase intention can be explained by the characteristics of products. This has indicated that there are other factors which may influence the online purchase intention, besides the product characteristics.

Implication Of The Study

The results of this study have several marketing implications. Firstly, with the bombardment of online purchasing in Malaysia in the recent years, it is important to determine the influence of product characteristics on online purchase intention. This research has provided useful information for marketers interested in online marketing.

They will have more understanding of online purchase intention among white collar workers. Acknowledgement of the intention and the identification of target consumer would be beneficial to the marketers since they are one of the groups that will use internet extensively in their workplaces.

Secondly, promotions could also be tailored to this segment. For example, findings from this research has indicated that low cost are frequently purchased and intangible products have significant influences in online purchase intention can disseminate information to the marketer that they are more likely to buy online video/ movies/music, online magazines/ concert/play tickets services, online books/journal and travel arrangement.

Limitations And Future Research Directions

The findings of this study must be interpreted in light of several limitations. These limitations, along with the findings, suggest directions for future research. Firstly, as mentioned earlier, only two of the three dimensions cost and tangibility suggested by Peterson et al., (1997) were incorporated in distinguishing product types. Degree of differentiation may also play a vital role and it may have interaction effects with either or both cost and tangibility. Future researchers can examine the relationship between intentions to use online purchasing and product types that are differentiated on all the three dimensions by employing a more diverse sample.

Secondly, this research had only examined the influence of product characteristics on online purchase intention. Future researchers are suggested to determine other factors that may influence online purchase intention such as web design characteristics. This suggestion is based on the result of multiple regression which reported only 13.8% of the variance in online purchase intention can be explained by the characteristics of products. Therefore, it can help them to understand other factors that may influence the online purchase intention. Finally, future research should also examine the influence of product characteristics on other online purchase behavior, such as online purchase adoption and online purchase continuance.

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