

ONLINE PURCHASE INTENTION: INVESTIGATING THE EFFECT OF THE LEVEL OF CUSTOMER PERCEPTIONS ON ADOPTION

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ABSTRACT

Online shopping purchase intention is influenced by several factors based on the literature review. Effort expectancy, performance expectancy, trust and self-efficacy are some of the most widely used factors. An empirical study was undertaken to investigate the impact of various levels of these factors on consumer purchase intention. High levels of the above factors are shown to have highly significant impact on customers' intention to purchase. On the other hand lower levels of these factors do not have an impact on customer's intention. The paper contributes by highlighting the level where the impact of the factors is getting more significant.

KEYWORDS

Online shopping, intention to purchase, customer retention.

1. INTRODUCTION

The constant increase of competition in online markets results in the change of the patterns that firms should follow to increase customer retention. Hence, academic studies are very important to identify such patterns and provide marketing information, as retaining customers is more profitable than creating new ones (Liao et al, 2006). Consumers, either using brick and mortar or electronic shops, have characteristics that do not change. Those characteristics might be psychological, such as self-efficacy or might relate to their behavior, such as trust.

This paper aims to examine how key factors, which derive from Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al, 2003), Social Cognitive Theory (SCT) (Bandura, 1986) and previous studies (Atcharyachanvanich et al, 2007) affect customers' intention to purchase from online shops. Most studies conclude that these factors have a significant effect on intention to use and by extension to purchase. Specifically, Dabhokar and Sheng (2009) believe that Self-efficacy (SEF) has a direct effect on a person's final behaviour. There is also a significant relation between Effort Expectancy (EE) and future behaviour of the e-customers (Lu et al, 2005; Thong et al, 2006) as well as between Performance Expectancy (PE) and e-customers' future behaviour (Thong et al, 2006; Shin, 2007). Although, Tsai and Su (2007) tested both EE and PE for significant relation with future behaviour they found only EE to be significantly related with future behaviour. Moreover, trust influences online purchase intention and loyalty, which is a basic factor for the customer to return and purchase again (Atcharyachanvanich et al, 2007; Chiu et al, 2009). Hence, it is very interesting to know how and when the perceptions of the individuals about every factor affect intention to purchase. This is one of few studies examining from what point the aforementioned factors start influencing significantly online shopping intentions.

This paper is organized as follows. The next section makes a brief reference to the theories that have been used. Section 3 discusses the research methodology, analyses the data and presents the findings. Finally, section 4 concludes with discussion on the results derived, implications, limitations and future research.

2. BACKGROUND THEORIES

Intention to adopt has been explained by many theories in the past (Venkatesh and Morris, 2000; Davis et al, 1989). In this study we integrate constructs from two different theories. The first (UTAUT) is about technology acceptance and the second (SCT) is a theory drawn from social psychology. Specifically, UTAUT designed to explain determinants of behavioral intention (70 percent of the variance in intention), analyzes user behavior by establishing eight key factors, from which we use two: Effort Expectancy and Performance Expectancy. Moreover SCT, which explains why people behave in different patterns taking into account their actions, defines self-efficacy as a person's belief in his ability to successfully perform a certain task (Bandura, 1977). SCT has been used before to study computer utilization and according to Venkatesh et al. (2003) it can be used to study technology usage and acceptance. Finally, to these three factors we embrace trust, which is the expectation of the customer that the retailer will perform in a certain ethical way - out of customer's control (Ba and Pavlou, 2002). Although, trust is not needed for a customer to visit an online shop it is a highly important and critical factor that significantly affects attitude towards online shopping (Pavlou and Chai, 2002), as without it users will never perform online transactions (Palvia, 2009).

3. METHODOLOGY

3.1 Sample and Measures

The data was obtained by conducting a survey through the delivery and collection of individual questionnaires. We aimed at about 800 users of online shopping, 357 of which finally responded. The participation in our study was voluntary. The vast majority of the respondents were male (73,5%) and single (81,3%). Moreover, most of them were graduates (52,5%) in the age group between 25 and 34 (46,6%).

The questionnaire included questions on the demographics of the sample and questions on the five principal constructs. In order to measure some indicators and to collect items, related studies have been reviewed (Table 1). All factors were measured using 7-point Likert scales. We distinguished the factors into 3 categories depending on customers' responses; low, medium and high level of each factor. Medium was defined as the mean value of every construct smaller than 5 and greater than 3. Similarly, the categories of low and high were defined.

Table 1. Measures and scales

Scale	Source Studies	Definition	Mean	S.D.	CR	Loadings
Self-Efficacy (SEF)	(Luarn & Lin, 2005; Hernandez et al, 2009)	Measuring how capable customers feel to shop online.	6,2045 6,0812 6,5602	1,15154 1,18351 ,86107	,807	,653 ,810 ,672
Effort Expectancy (EE)	(Devaraj et al, 2002; Chiu et al, 2009)	Measuring how easy it is for customers to shop online.	5,6022 5,3137 5,0616 5,7143 5,5546	1,20103 1,35005 1,26385 1,12786 1,19477	,854	,787 ,814 ,710 ,585 ,709
Performance Expectancy (PE)	(Devaraj et al, 2002; Chiu et al, 2009)	Measuring how useful it is for customers to shop online.	5,8908 5,8880 6,0644 5,7619 6,1373	1,32896 1,21729 1,11365 1,30337 1,10448	,896	,772 ,777 ,767 ,749 ,682
Trust (TR)	(Pavlou and Chai, 2002; Chiu et al, 2009)	Measuring the trust customers have at an online shop.	5,1064 4,6190 5,1597 5,2493	1,27415 1,30706 1,22921 1,22338	,879	,809 ,747 ,830 ,808
Intention to Repurchase (IR)	(Lin et al, 2005; Hsu et al, 2006)	Measuring the intention customers have to shop online.	6,3277 6,4017 5,8427	1,16679 1,06620 1,48721	,875	,815 ,794 ,790

3.2 Results and Findings

The constructs of our survey were evaluated in terms of validity and reliability. Reliability was based on Cronbach alpha indicator. The alpha coefficient for the five constructs was higher of 0.7, suggesting that the items have high internal consistency. We also investigated the unidimensionality of the scale through a factor analysis with principal components and varimax rotation. As summarised in Table 1, all items load highly (greater than 0.5) on their respective constructs.

We developed a Brown-Forsythe test in order to identify the significant difference in intention to purchase when the other variables increased. The significance value of all is smaller than 0.05, which recognized the important difference of intention to purchase. However, this result does not tell us in which level the difference is greater. In order to identify that difference we need post hoc test.

Table 2. Brown-Forsythe test

Independent Variables		Mean (SD)		Statistic ^a	Df	Sign.
		Intention to Purchase				
Self-Efficacy	Low	3,3333 (2,09497)		18,833	8,071	,001***
	Medium	4,7111 (1,40806)				
	High	6,3727 (.88983)				
Effort Expectancy	Low	4,0000 (2,33673)		8,006	10,533	,008**
	Medium	5,9379 (1,14584)				
	High	6,3657 (.95226)				
Performance Expectancy	Low	3,2381 (2,01581)		19,668	11,816	,000****
	Medium	5,4138 (1,34688)				
	High	6,4155 (.84505)				
Trust	Low	4,1042 (1,98408)		20,846	22,901	,000****
	Medium	6,0234 (1,10352)				
	High	6,5549 (.70216)				

a. Asymptotically F distributed **** p<0,001, *** p<0,005, **p<0,01, *p<0,05

Observing Table 2 we notice that EE has the lowest significance and from Figure 1 we notice that it has the lowest increase. In addition SEF, which has higher significance, has a higher increase from EE and both PE and TR, which have the highest significance also have the highest increases. Hence, it seems that the increase of every construct is related to its significance.

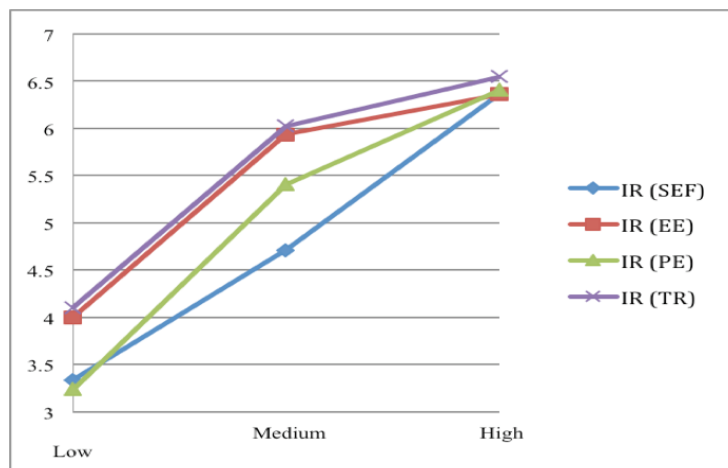


Figure 1. Customers IR based on the key factors

We conducted a Games-Howell post hoc test, which does not rely on homogeneity of variance. In this test we identify significant influence on intention to purchase when the other variables shift from medium level to

high, $p < .05$ (Table 3). This significant difference was found on all four constructs. This means that when a customer has low levels on SEF, EE, PE and TR the influence on IR is not significant. So, when he finds it difficult to shop online, feels incapable of doing that, does not find it useful or does not trust the online retailer his intention to purchase will not be influenced in a significant way. On the other hand when customer's perceptions about his abilities, the ease of use and usefulness of the procedure and the trust towards the retailer start increasing, beyond medium, there is a significant influence on online shopping intention.

Moreover, as seen on Table 3 the Games-Howell post hoc test reveals a significant influence of PE and TR on IR when there is a shift from low to high level. Although, this influence is less significant comparing to the medium-high shift, it seems that when customers' level of TR and PE towards an online retailer increases rapidly it affects significantly their IR, comparing with SEF and EE.

Table 3. Games-Howell post hoc test

	Independent Variables		Mean Deference (I-J)	Std. Error	Sign.
	(I)	(J)			
Self-Efficacy	Low	Medium	-1,37778	,97153	,525
		High	-3,03934	,93821	,066
	Medium	Low	1,37778	,97153	,525
		High	-1,66156*	,26181	,000
	High	Low	3,03934	,93821	,066
		Medium	1,66156*	,26181	,000
Effort Expectancy	Low	Medium	-1,93791	,83391	,115
		High	-2,36572	,82838	,056
	Medium	Low	1,93791	,83391	,115
		High	-,42781*	,12862	,003
	High	Low	2,36572	,82838	,056
		Medium	,42781*	,12862	,003
Performance Expectancy	Low	Medium	-2,17570	,78216	,065
		High	-3,17743*	,76351	,014
	Medium	Low	2,17570	,78216	,065
		High	-1,00173*	,18364	,000
	High	Low	3,17743*	,76351	,014
		Medium	1,00173*	,18364	,000
Trust	Low	Medium	-1,55496	,65294	,086
		High	-2,20020*	,64268	,016
	Medium	Low	1,55496	,65294	,086
		High	-,64524*	,13711	,000
	High	Low	2,20020*	,64268	,016
		Medium	,64524*	,13711	,000

4. DISCUSSION – CONCLUSIONS

This study aimed to integrate existing factors from UTAUT and SCT with trust in order to point out the significance of each one on intention to purchase. This would help explore factors affecting online shopping. Following previous studies (Atcharyachanvanich et al, 2007; Dabhokar and Sheng, 2009) all factors (SEF, EE, PE, TR) keep customers purchasing online. Our results indicated that the influence of every factor on intention is significant. Moreover, we found that the significance is greater on high levels, namely the shift from medium to high levels is the one with such significance. We also found a less significant influence of PE and TR on IR, when measuring shift from low levels to high. Additionally, we differentiate from previous studies (Vijayasarahty, 2004; Tsai and Su, 2007) that have found no significance at all between effort expectancy, performance expectancy and intention.

We have shown that the constructs affecting intention to purchase can be further analyzed in greater detail, as depending on low or high levels the significance is different. For managers, these findings not only will help them focus on factors affecting online shopping, but also understand their customers and focus on

specific ones in order to retain them as they are the ones providing more profit (Liao et al, 2006). This study is limited by the way our dependent variable of intention was measured; through users perceptions. Although this is frequent in similar studies (Table 1), objective measures (Szajna, 1996) could be used as well in order to compare results. In the future, studies should focus on more specific factors affecting online shopping.

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