Journal of International Technology and Information Management

2006

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ABSTRACT

The rapid growth of e-commerce makes it important for the success of companies to understand both the factors that facilitate and are barriers to these transactions. Therefore, the purpose of this study is to investigate the relationships between perceived Internet risk, personal innovativeness and computer/web self-efficacy, and online purchases intentions as three of these factors. Results indicate that perceived Internet risk, personal innovativeness and computer/web self-efficacy are all strongly related to online purchasing intentions. There is also a strong relationship between computer self-efficacy and personal innovativeness, two of the values-compatibility variables related to intention to purchase on-line.

Suggestions for future research to test the applicability of the Technology Acceptance Model and/or its extensions in the e-commerce sector, as well as the antecedents of perceived usefulness in this setting, are discussed.

INTRODUCTION

Commerce conducted electronically (e-commerce) represents an increasing component of the global economy. Some suggest that in the future we will no longer use the designation e-commerce as most commerce will be conducted electronically. Data suggest this trend may become reality in the B2C marketplace. The U.S. Census Bureau (2005) has found that total e-commerce sales for the year 2004 were $71 billion dollars with e-commerce sales rising each quarter during 2004. Similarly, Jupiter Research suggests that the market will climb to $132.2 billion by 2005 (Narine, 2003). Jupiter further suggests that the surge in on-line sales during the 2004 holiday season was fueled by nearly 18 million new e-commerce shoppers. It has been found that 43 percent of on-line users believe that the Internet makes them more efficient, while 78 percent research a product or service before buying it. Similarly, 67 percent buy products while 62 percent buy or make travel reservations (Plunkett Research, 2005).

With this trend occurring, web vendors need to better understand who is buying, what they are buying, and what factors influence their purchase decision (Vijayasarathy, 2004). Unlike traditional brick-and-mortar businesses, on-line businesses do not have the ability to interact face-to-face with their customers. This lack of rich social cues and face-to-face feedback mechanisms means that on-line vendors must closely examine consumer attributes and structure their web pages to directly address consumer preferences by designing flexible, customizable web sites with broad appeal. The retailer must anticipate the needs and concerns of the consumer and address them with solutions that are clear and easy to locate.

Practitioners and researchers are attempting to better understand why consumers may be reluctant to purchase on-line as well as what entices them to purchase on-line. Initial beliefs were that purchasing through the Internet would provide consumers with greater convenience, lower prices, and a wider variety of sellers from which to choose. However, many consumers still prefer to shop for certain items in a face-to-face environment due to uncertainty about customer service, privacy concerns, the possibility of additional billing charges, credit card security, confusing web sites, not being able to physically feel the merchandise, and a general lack of trust in the web vendor (eMarketer, 2001). Factors which act as barriers to conducting commerce electronically need to be

understood to determine if a trend toward the majority of commerce being conducted electronically will actually occur. Likewise factors which facilitate e-commerce usage must be understood. In this study we look at the effect of the consumer's beliefs about his/her computer self-efficacy, personal innovativeness, and perceived risk as they affect his/her level of purchase intent for a product via an electronic transaction.

THEORETICAL FRAMEWORK

The model frequently used to explain the intention to use a technology usage by individuals in an organizational setting is the Technology Acceptance Model (TAM). In this model Intention to Use an innovation (anything that is new to the adopting organization or individual (Rogers, 1983)) is influenced by the Ease of Use of the technology and the Perceived Usefulness of the technology in the contextual organizational setting to accomplish job-related tasks (Rai, Lang & Welker, 2002). Within this contextual setting, the perceived usefulness construct is highly related to usefulness to accomplish job-related tasks and the use of the innovation may not be volitional (Rai, Lang & Welker, 2002; Ambrose, Rai & Ramaprasad, 2006). For instance, the use of the innovation may be mandated by a supervisor or the innovation may be the dominant channel to access critical information or conduct a transaction.

However, recently, the TAM model has also been applied outside an organizational setting to help explain the usage of on-line commerce by individuals (Chen, Gillenson & Sherrell, 2005; Vijayasarathy, 2004; Zhang & Prybutok, 2003; van der Heijden, Verhagen & Creemers, 2003; Koufaris, 2002; Childers, Carr, Peck & Carson, 2001; Devaraj, Fan & Kohli, 2002). The question remains as to whether this use of the TAM model in a non-organizational, voluntary setting is appropriate. Several of these studies found no significant link between perceived usefulness and purchase intentions (Vijayasarathy, 2004; van der Heijden, et al., 2003; Chen, Gillenson & Sherrell, 2002). This lack of finding for perceived usefulness may be the result of the fact that the original measure was designed relative to job-related tasks. In an on-line commerce setting this may not be appropriate. The determinants of perceived usefulness for on-line commerce may well vary considerably among individuals as well as in different contextual environments. Zhang and Prybutok (2003) found that perceived usefulness in on-line shopping was more important to males than to females. Also, Vijayasarathy (2004) found that while usefulness and ease of use were significant predictors of attitude towards on-line shopping, they did not directly impact the subject's intention to shop on-line.

Similarly, Chau and Hu (2001) suggest that a setting where a professional has a greater degree of discretion in adopting technology may not be comparable to the organizational setting with limited discretion proposed in the original TAM model. Thus, we suggest that a similar discretionary environment exists for e-commerce users as the usage of these systems is volitional. In their study context Chau and Hu (2001) augmented the TAM model with additional variables and stated that the innovation variable *compatibility* is "largely congruent with perceived usefulness in the context of TAM" (p. 703). Several studies have used the compatibility variable to extend the TAM model to e-commerce (Vijayasarathy, 2004; Chen et al., 2002; Van Slyke et al., 2004). Vijaysarathy (2004) suggests his findings support the argument that when TAM is applied to on-line shopping attitude other beliefs beyond those suggested by the TAM model (usefulness and ease of use) need to be explored. Moreover, constructs related to IS success, such as perceived usefulness, may need to be appropriated so that key aspects of the innovation context are effectively captured (Rai, Lang and Welker, 2002).

In the context of individual and voluntary usage of e-commerce, perceived usefulness is shaped by innovation compatibility. Past research can be used to inform the role of innovation compatibility in our present investigation. Klein and Sorra (1996) suggest that at the organizational level the effectiveness of a technology's use is a compatibility-related combination of the organization's climate for the innovation (absorptive capacity) and a fit of the innovation to the targeted users' values. The innovation-values fit construct describes the extent to which users perceive that the use of the innovation will aid in the fulfillment of their values by assessing "the objective characteristics of an innovation and its socially constructed meaning." (p. 1063). Therefore, the concept of compatibility rather than perceived usefulness in specific job tasks where usage is non-volitional is an appropriate operationalization of the usefulness construct in the on-line e-commerce usage context. This view of compatibility is also supported by the results of a study of web-based shopping which found that in a model that includes both compatibility and perceived usefulness a significant linkage from compatibility to usefulness was present in the final structural model (Chen, Gillenson and Sherrell, 2004). Similarly, Van Slyke, Belanger and Comunale (2004) found a very strong relationship between compatibility and the adoption of web-based shopping when perceived usefulness was not included.

MODEL DEVELOPMENT

Therefore in this context of greater discretionary use of shopping on-line and importance of compatibility in an on-line shopping context we propose the following theoretical On-line Purchasing Model (see Figure 1). The model consists of three compatibility variables. The first compatibility variable is Computer Self-Efficacy (CSE). The second compatibility variable we explore is Personal Innovativeness (PI) while the third compatibility variable studied is Perceived Risk (PR). As previously stated we believe that these compatibility variables will suggest how the individual consumer views the usefulness of on-line purchasing.

Figure 1. Online Purchasing Model
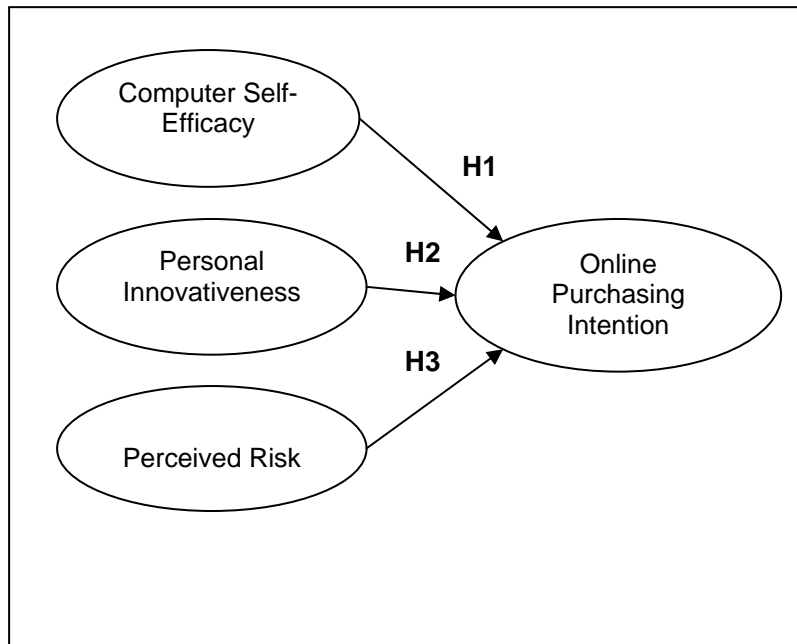
Computer Self-Efficacy, or "the belief that one has the capability to perform a particular behavior" (Compeau & Higgins, 1995), such as the use of the Web to conduct commerce on-line, is an important first step in engaging in e-commerce. Compeau & Higgins (1995) found that computer self-efficacy, or an individual's belief about their ability to competently use computers, had a significant influence on their actual computer usage. Computer self-efficacy has been widely studied across numerous referent disciplines and has been shown to be important in an individual's attitude toward the use of a computer to complete a task (Bandura, et al., 1977; Barling and Beattie, 1983; Webster & Martocchio, 1992). Chau (2001) stated that the addition of "self-efficacy into the TAM greatly improves the explanatory power of the model on the variance of perceived usefulness (p. 26)."

In this case, since computers have been in use for some time, we adapted the construct to also reflect Web self-efficacy rather than merely computer self-efficacy. Therefore we propose:

H1: Computer/Web Self-Efficacy will positively influence Online Purchasing Intention.

The second component of compatibility and its impact on On-line Purchasing Intentions is a person's beliefs and attitudes toward innovation and the Internet. The Internet is a relatively new shopping environment and people have little actual purchasing experience in this type of distributed environment (Shim, Eastlick, Lotz, and Warrington, 2001). Due to the newness of the on-line atmosphere we expect to see innovators as the first individuals actually purchasing on-line. The belief that the Internet is a new way to purchase goods and that it might offer advantages such as lower prices, convenience, and wider selection would tend to attract innovators despite higher levels of uncertainty and risk. An individual's level of innovative behavior has been shown to be a key

element in his/her acceptance of new technologies (Brancheau & Wetherbe, 1990). Venkatesh, Speier, and Morris (2002) attempted to tap a similar feeling with their construct Intrinsic Motivation.

An innovative person would enjoy the challenge of this new frontier. Similarly, Yoon (2002) used receptivity to innovation as a personal variable in his study of on-line-purchase decisions; however, it represented just one dimension of the personal variables scale. Chau (2001) uses a variable entitled Computer Attitude which is similar to personal innovativeness, particularly with respect to computers and found that also improved the TAM model. Therefore we propose:

H2: Personal Innovativeness will positively influence Online Purchasing Intention.

Some consumers see purchasing on-line as high risk due to the possibility of information theft, extraneous credit card charges, a lack of physical store presence, and the difficulty in addressing customer service issues (Shim, Eastlick, Lotz, and Warrington, 2001). We believe that the question a consumer asks himself/herself during an on-line purchase is "How risky is this transaction and do I consider the benefit of this transaction (i.e., price, availability, etc.) worth this amount of risk?" Research has supported this view by showing that risk is a key concern for consumers who purchase innovative products (Holak & Lehmann, 1990). This perceived risk may be decreased either by trusting the on-line company or by the existence of control mechanisms to protect the consumer (van der Heijden, et al., 2003). This view is consistent with Mayer, Davis and Schoorman (1995) who define trust as a willingness to take a risk. This willingness may be the result of trust or the existence of a control mechanism such as credit card protection (including identity theft protection), the existence of user rating, or third party payment systems that reduce the perceived risk to the consumer.

Findings suggest perceived risk is negatively related to attitude towards on-line purchasing at a significant level (van der Heijden, et al., 2003). Since trust serves to reduce the perceived risk findings from e-commerce, tests of trust (Van Slyke, et al., 2004; Serva, Benamati and Fuller, 2005) can also be used to suggest the negative direction of the relationship between perceived risk and on-line purchase intentions. Sampson and Hulet (2003) suggest that to overcome the perception of risk, e-commerce companies spend expensive trust premiums over conventional stores to send signals to on-line shoppers.

Therefore if trust, which reduces the perceived risk in an e-commerce transaction, has found to be positively related, we propose:

H3:   Perceived Web Risk will negatively influence Online Purchase Intention.

METHODOLOGY

Participants were undergraduate and graduate students at a public university in the U.S, specifically in the state of Florida. Age ranged from 18 to 40 with a mean of 23.1 years. The sample included 48.2% majors in Information Systems (IS), 10.9% majors in Marketing, and 40.9% in other majors. With respect to gender, the sample included 64% males and 36% females. Participants had taken an average of 3.8 computer courses. Of the participants 32.7% had purchased electronics on-line before and 89.1% own a computer. Participants made an average of 0.63 purchases per month using the Internet, and 18.2% currently own a digital camera. This percentage suggests that this is an item that the study participants would be interested in purchasing, however, a majority have not yet done so. Also a digital camera was chosen as an appropriate product since we felt that the price of the product would warrant considerable thought prior to purchase.

STUDY PROCEDURE

Subjects completed a short survey designed to test the theoretical model in Figure 1. Participants were not offered any incentive to complete the questionnaire and were informed that participation was completely voluntary and anonymous. Information Systems and Marketing students of a public Florida state university completed the questionnaires in class and non-business majors completed them outside class. A total of 110 useable responses were collected while four participants chose not to participate thus suggesting a very high response rate.

Participants were given a short description of the study and asked to take as much time as they needed to complete Part I of the questionnaire. Part 1 of the survey can be found in Appendix A. We have shown the purchase intention portion and included a sample page for one of the cameras. There was a corresponding page for each camera. After selecting a digital camera, the Part I was collected and participants were asked to fill out the second part of the questionnaire that dealt with questions regarding the process he/she used to arrive at his/her decision. Each part of the questionnaire was matched to the participants using a numerical coding technique.

Study Measures

The measures used are shown in Table 1. Purchasing intention was measured using two items asking whether or not they would actually purchase a digital camera on the Internet. These measures were adapted for this study consistent with marketing and consumer behavior research (i.e., George, 2002; Chandon, Morwitz, and Werner, 2005).

Personal innovativeness was measured using four items aimed at capturing a person's tendency to experiment with new technologies. These items have been widely used and have been validated through several studies by Ritu Agarwal (Agarwal, 2000; Agarwal and Prasad, 1998). These measures have focused on dimensions such as experimentation, willingness to try new technologies, and early mover tendencies.

Table 1

Items	Loadings	Reliability
Computer Self-efficacy		
1. I expect to become very proficient in the use of the Web	0.88	
2. I feel confident that I can use the Web	0.91	
3. Using the Web is probably something I will be good at.	0.88	
4. I believe that navigating the Web is a skill that I can use easily.	0.90	0.94
Personal Innovativeness		
1. If I heard about a new information technology, I would look for ways to experiment with it.	0.79	
2. In general, I am hesitant to try out new information technologies.	0.72	
3. Among my peers, I am usually the first to try out new information technologies.	0.73	
4. I like to experiment with new information technologies.	0.74	0.81
Perceived Web Risk		
1. Entering credit card information over the Web is unsafe.	0.90	
2. I think it is risky to provide one's credit card information to Web-based vendors.	0.91	
3. I hesitate to enter my credit card information on the Web.	0.87	
4. Entering personal information over the Web is unsafe.	0.87	
5. I would hesitate to enter personal information like my name, address and phone number on the Web.	0.77	0.92
Purchasing Intention		
1. If I were to actually purchase a digital camera I would purchase it on the Web.	0.91	
2. I would prefer to buy a digital camera on the Web than from a local retailer.	0.92	0.87

- All item loadings are significant at a 0.01 or greater level.

Computer self-efficacy was measured using five items designed to capture a person's belief that they are able to use a computer to achieve their goals. These measures have been widely used in Information Systems research and have been shown to accurately represent a person's underlying belief about his/her ability to perform

tasks with a computer (Martocchio and Webster, 1992; Webster and Martocchio, 1992; Webster and Martocchio, 1995). These measures deal with dimensions such as proficiency, confidence, and use of computer skills.

Perceived Internet risk was measured using six items validated by McKnight, Kacmar & Chaudhury, 2004). These items have been shown to accurately predict an individual's perceptions of risk, hesitation, and lack of safety when dealing in an on-line environment.

DATA ANALYSIS

Preliminary analysis was run on the collected data through the use of histograms and scatter-plots. These results indicate that items are normally distributed with no significant outlying values. The partial least square (PLS) method of structural equation modeling (SEM) was used to test the research model. The PLS analysis, including the significance tests for the path coefficients, were performed using PLS-GRAPH. Significance tests for the path coefficients are not directly provided by the PLS software. In order to estimate the significance of path coefficients, a bootstrapping technique was used to generate 500 samples (approximately five times the sample size). The path coefficients were re-estimated using each of these samples of observation. This vector of parameter estimates was used to compute parameter means, standard errors, path coefficient significance, indicator loadings, and indicator weights. This approach is consistent with recommended practices for estimating significance of path coefficients and indicator loadings (Löhmoller, 1984) and has been used in prior IS studies (Chin & Gopal, 1995; Ravichandran & Rai, 1999).

RESULTS

Measurement Model

Factor analysis was performed to test whether the measures loaded as separate components and four factors appeared as expected. All measures load in a Varimax rotation factor analysis at acceptable levels. Reliabilities, as measured by Cronbach's alpha, as well as the factor loadings can be found in Table 1. The PLS loadings below in Figure 2 also show the inter-item consistency between the measures and the construct.

Ho	t-values	p-values
H1	1.69	0.001
H2	3.12	0.046
H3	2.71	0.004

Figure2. Online Purchasing Model
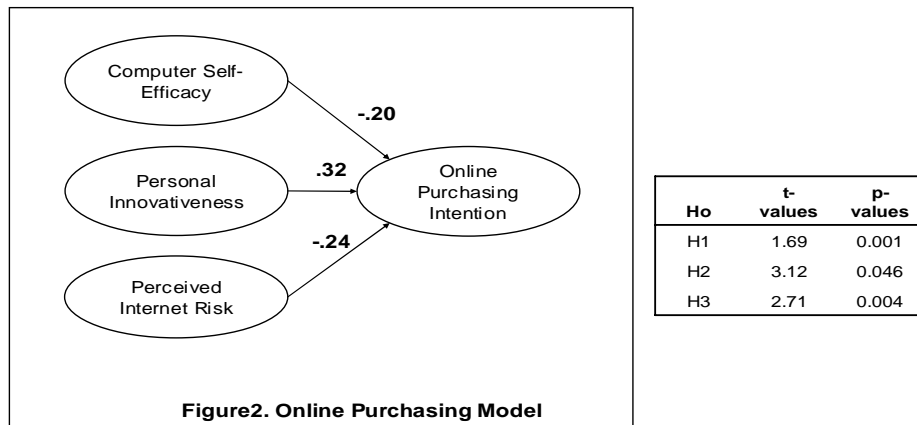
Structural Model

Results from the PLS analysis are shown above in Figure 2. As can be seen in the table above all paths have p-values which are less than 0.05. As can be seen in Figure 3 below another path emerged. This is the path between Personal Innovativeness and Computer Self-Efficacy. The t-value for this path is 10.97 and is significant at less than 0.001 thus indicating the significance of the relationship. Koufaris (2002) used a construct in his study which he labeled perceived control. In this construct he includes self-efficacy as a similar construct. It may be that while personal innovativeness and computer self-efficacy loaded as individual constructs they are related to one another, perhaps under an umbrella term such as perceived control. It makes sense that those who perceive themselves as more innovative would also have greater computer self-efficacy. Similarly, Venkatesh, et al. (2002)

have enhanced the TAM model to include a construct they label intrinsic motivation. While this model is designed for use in a corporate setting it is possible that for an individual the enhancement of the TAM model equivalent of intrinsic motivation is a combination of personal innovativeness and computer self-efficacy. Chau (2001) found that computer self-efficacy and computer attitude both contributed to perceived usefulness however these variables did not have a path between them reported in his study. This relationship warrants further research to understand on-line shoppers and their motivation.

LIMITATIONS

This data were collected using paper-based questionnaires. Paper-based surveys were chosen over web-based surveys to ensure that all subjects were given the same information without the possibility of gathering additional information via Internet searching. We expect the differences in the responses to be minimal due to the fact that the pages were exact copies (screen prints).

This survey was conducted with current college students as subjects therefore care should be taken when attempting to generalize these findings across a more general population. However many other e-commerce studies use student subjects since they are in fact also consumers. In future studies, given the proper facilities, we would first gather data using real web pages and automatically gather the data. This would allow a comparison between the paper-based version and the electronic version. This would also allow us to gather responses from participants in a typical on-line environment.

It is interesting to note that some respondents commented that while they would not purchase a digital camera on-line they do most of their "research" about a camera on-line before buying it locally. Others said the exact opposite. This is insightful in that some felt that buying on-line was just as safe and cheaper, while others said that they just wanted to price check on-line and felt more secure buying in a brick-and-mortar store. Examining this search-buy relationship would provide tremendous insights.

IMPLICATIONS FOR RESEARCH AND PRACTICE

A goal of this study was to explore compatibility/usefulness factors related to on-line purchasing intent. This information is important to those organizations hoping to successfully compete in an on-line environment. It is also important to innovation researchers who are hoping to build a comprehensive model to explain the use of business-to-consumer (B2C) e-commerce.

The TAM model that is frequently used to explain individual adoption within an organizational setting has been questioned as to its applicability to other situations such as professional environments and environments in which organizational decision-making and control are not present, and where the individuals have a greater amount of discretion with respect to usage. Business-to-consumer e-commerce is a situation in which individuals are more difficult to influence than they are in an organizational setting. Even in these organizational settings, particularly where usage is voluntary, extensions to the TAM model have been proposed. Many of those proposed are related to the antecedents of the traditional TAM variables perceived usefulness and perceived ease of use.

The literature has suggested that in the case of e-commerce the perceived usefulness, which is a TAM variable, is highly influenced by compatibility, a traditional innovation variable. This research has begun to collect some of the important compatibility factors suggested by other on-line purchase intention studies and to combine them into one key modality of compatibility, i.e., value compatibility. This study substantiated three significant findings for the proposed relationships to purchase intent. These values compatibility variables, while not part of the original TAM model, have been suggested by the extensions and augmentations to the TAM model previously discussed. The values relevant in non-organizational settings appear important to individuals for whom the usage is voluntary. These variables have been added to many of the e-commerce studies cited, however, the reasons for the extensions have often not been stated beyond increasing the explanatory power of the models.

As expected, perceived risk has a negative influence on on-line purchase intent. As proposed by Ring and Van de Ven (1992), Ring (1996) and van der Heijden, et al. (2003), risk can be mitigated by both developing trust in an on-line company and/or by putting extensive control mechanisms into place. Therefore, any on-line business should pay considerable attention to both building trust into their website through the use of clearly stated privacy

policies, easy to invoke return policies, shipment tracking, etc. as well as building control mechanisms, perhaps through third parties, into their payment systems. Also perceived risk may be lessened by obtaining seals of approval (such as Good Housekeeping's on-line seal) and maintaining high customer ratings. This study suggests that failure to reduce the perception of these risks in your on-line enterprise will result in lower sales.

Computer/Web self-efficacy is also highly related to on-line purchase intent. This suggests that businesses that are targeted to demographic groups with traditionally high computer/web self-efficacy should be more successful. On-line retailers would do well to study the reports of organizations such as Pew who frequently publish computer and Internet usage statistics to use as part of their due diligence and market research. It also suggests that strong support systems such as customization and help systems are necessary to raise consumer confidence in their ability to maneuver on your site successfully.

From a research perspective, while computers may be widely used in organizations, and thus computer self-efficacy may not represent a major concern in the use of the technology acceptance model (TAM) in organizations, it should be considered when used outside the organizational setting and when usage is voluntary. The implicit assumption that computers are used in the workplace is not necessarily valid in other settings, therefore in more discretionary settings an effect in for computer self-efficacy may be noted.

There was also a finding for the importance of Personal Innovativeness to on-line purchase intention. However, in a practical sense this finding is more difficult to put into practice. It is more difficult to identify people who enjoy, and are stimulated by the use of, technology outside of the arena of selling technical gadgetry. Other than marketing a product as innovative and sophisticated to increase on-line sales and to tap into the market most likely to purchase on-line, there is a line that should not be crossed to inhibit those who view themselves as less innovative from intending to purchase through this channel. We suggest that future research efforts attempt to find an alternative measure that can be used to tap this factor while still being easily identifiable.

An additional relationship that emerged from the study is the relationship between computer self-efficacy and personal innovativeness. While both were individually related to the intention to purchase on-line, a strong relationship between them emerged. This relationship bears further investigation. Are all individuals who perceive him/herself to be innovative more confident in their computer abilities? Is this a reciprocal relationship? Is this relationship limited to an e-commerce setting? A deeper understanding of this relationship may lead to insights into innovation adoption in discretionary environments.

Thus from a theoretical viewpoint this study suggests these three variables, web self-efficacy, personal innovativeness and perceived risk, may represent a way to operationalize the TAM variable perceived usefulness in a voluntary setting such as e-commerce. In an organizational setting perceived usefulness, and its components have been studied. For example, Venkatesh and Davis (2000) have proposed a TAM2 extension of TAM that includes items such as image, job relevance, experience and output quality as contributing to Perceived Usefulness. Likewise, Venkatesh, Speier and Morris (2002) proposed an integrated model that includes such factors as training and intrinsic motivation. There is also a middle-of-the road situation such as the use of technology-related innovations within an organizational setting but whose use is highly discretionary such as physicians in a hospital setting. This situation has been examined by a few studies (Chou & Hu, 2001; Ambrose, et al.,2006) and support the addition of variables to the TAM model in those settings also. However, entirely outside the organizational setting the values that contribute to a perception of usefulness have remained virtually unexplored in this framework.

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ACKNOWLEDGEMENTS

APPENDIX A

Online Purchasing Survey

Introduction

The main objective of this survey is to better understand online buying habits. You will be given information about five *digital cameras* and asked to evaluate them as if you were planning on *purchasing* one of them. After evaluating the digital cameras ***you will be asked to choose which camera you would buy*** and some questions regarding your understanding of the information presented. Remember, this survey is VOLUNTARY and ANONYMOUS you do not have to participate and all of your responses will remain confidential. If you require any further information regarding this survey you can contact Randall Boyle at <u>rjb2578@cob.fsu.edu</u> or at 850-644-2038. Thank you for participating in this study.

I. Demographics -- So that we might better understand your answers, could you please provide the following information.	
Sex: θ Female θ Male	
Age _____	On average how many items do you purchase on the Internet per month:_____
Year in school: θ Senior θ Junior θ Sophomore θ Freshman θ Other _____	I have purchased electronics online before : θ Yes θ No
I am majoring in: θ Marketing θ Information Systems θ Other	I own a computer: θ Yes θ No
Number of computer courses taken: _____	I own a digital camera: θ Yes θ No

II. *Web Preference* -- Please circle the number that best represents your attitude to the following statements.	Strongly Disagree		Neutral			Strongly Agree	
1. Learning to operate the Web is easy for me.	1	2	3	4	5	6	7
2. I find it easy to get the Web to do what I want to do.	1	2	3	4	5	6	7
3. It is easy for me to become skillful at using the Web.	1	2	3	4	5	6	7
4. I find the Web easy to use.	1	2	3	4	5	6	7
5. If I heard about a new information technology, I would look for ways to experiment with it.	1	2	3	4	5	6	7
6. In general, I am hesitant to try out new information technologies.	1	2	3	4	5	6	7
7. Among my peers, I am usually the first to try out new information technologies.	1	2	3	4	5	6	7
8. I like to experiment with new information technologies.	1	2	3	4	5	6	7
9. I expect to become very proficient in the use of the Web	1	2	3	4	5	6	7
10. I feel confident that I can use the Web	1	2	3	4	5	6	7
11. Using the Web is probably something I will be good at.	1	2	3	4	5	6	7
12. It just will not be possible for me to use the Web as well as I would like.	1	2	3	4	5	6	7
13. I believe that navigating the Web is a skill that I can use easily.	1	2	3	4	5	6	7
14. Entering credit card information over the Web is unsafe.	1	2	3	4	5	6	7
15. I think it is risky to provide one's credit card information to Web-based vendors.	1	2	3	4	5	6	7
16. I hesitate to enter my credit card information on the Web.	1	2	3	4	5	6	7
17. Entering personal information over the Web is unsafe.	1	2	3	4	5	6	7
18. I think it is risky to provide one's social security number to Web-based vendors.	1	2	3	4	5	6	7
19. I would hesitate to enter personal information like my name, address and phone number on the Web.	1	2	3	4	5	6	7

III. *Usage* – On average, how much time per week do you spend on each of the following web activities?	0-30 None min	min. 30-60	hrs. 1-2	hrs. 2-4	hrs. 4-8	hrs. 8+
20. . . . reading newspapers on the Web?	O O	O	O	O	O	O
21. . . . reading and/or posting messages to newsgroups?	O O	O	O	O	O	O
22. . . . accessing information on the web about products and services you may buy?	O O	O	O	O	O	O
23. . . . shopping (that is, actually purchasing something) on the web?	O O	O	O	O	O	O

Fill in the circle completely that corresponds with your answer.	**Canon** A20	**Kodak** DX3500	**KonicaE** MiniM	**Nikon** Coolpix880	**Sony** DSCP50
Based on the information provided in the attached pages which camera would you purchase?	O	O	O	O	O

Note: Take as much time as you need to make your decision.

Cameras | Reviews | Prices | Tech Update | News | Handhelds | Desktops | Notebooks | Downloads |

ZDNet **DIGITAL CAMERA** SUPERCENTER

> Buy On
> Find Tr
> Entern

= advertisement =

SmartPlanet
Get the skills you need and the job you want!

Lea
Onl
Tod

dust.

KEY FEATURES
(Click on any feature to learn more)

> Weight: 9.3 oz.
> Removable memory amount: 4MB
> Closest macro focus distance: 1.2 in.
> Sensor resolution: 2.11 megapixels
> Accepts interchangeable or additional lenses: Yes

> Removable memory type: Me
> Image capacity (standard reso shots
> Highest optical image resoluti 1600x1200
> Uncompressed output: Yes

✉ E-MAIL THIS!   🖨 PRINT THIS!

Digital Cameras
Scanners
Digital Audio Hardware
Digital Audio Software
Handhelds
Notebooks
Desktops

OVERVIEW | REVIEW | USER RATINGS | SPECS | COMPARE | LATES PRICE

Sony Electronics Cyber-Shot DSC-P50   📷 View in

More views of this product

Editors' Rating 7.6

DESIGN ▇▇▇ 7
VALUE ▇▇▇▇ 8
FEATURES ▇▇▇ 7
EASE OF USE ▇▇▇▇ 8
PERFORMANCE ▇▇▇▇ 8
IMAGE QUALITY ▇▇▇▇ 8

PROS
-Single menu con
-Takes standard l well as recharge
-Zoom doesn't po
-Convenient cont placement
-Sharp images

CONS
-No slow shutter normal mode
-No manual expo
-Only 4MB Mem included
-No AC adapter i

LATEST PRICES
Premier Vendors
CDW Computer Centers $399.95
Computers4SURE.com $399
Gateway Accessories $384.95
J&R Music and Computer World $399.99
Outpost.com $399.95
Additional Vendors

USER RATINGS
10 users have rev product
Overall Score: 8.9
🔲 Read user r
> Rate this produ
What these scores mean

More Sony Electronics Digital Cameras
Sony Electronics: Company Info
(click on any product to read its review)

> Sony Electronics CD Mavica MVC-CD300 $684.99 - $999.99 (28 vendo
> Sony Electronics Cyber-Shot DSC-P1 $525 - $749.95 (31 vendors)
> Sony Electronics Cyber-Shot DSC-S70 $592.50 - $754.78 (6 vendors
> Sony Electronics Cybershot F505V $579 - $1,012.30 (27 vendors
> Sony Electronics Mavica MVC-CD1000 $629 - $999.99 (30 vendors)
> Sony Electronics Mavica MVC-FD90 $489 - $610.78 (5 vendors)

Compare these products side-by-side

Comparable Models

> Ricoh RDC-5000 $329 - $358.95 (3 vendors)
> Kodak DC280 $349 - $765.99 (3 vendors)
> Toshiba PDR-M5 $299 - $798.99 (12 vendors)
> Ricoh RDC-5300 $358.95 - $449.99 (4 vendors
> Kodak DC290 Zoom $324 - $549 (11 vendors)
> Nikon Coolpix 800 $299.95 - $749.77 (12 vendo
> Olympus America C-2020 $338 - $389 (6 vendors)
> Fujifilm FinePix 4700 Zoom $364 - $499.99 (20 vendors)
> Olympus America D-490 Zoom $297.95 - $449.99 (15 vendo
> HP PhotoSmart C618 $328 - $399.99 (13 vendors)
> Olympus America Camedia C-2040 Zoom $341.77 - $499.95 (24 vendo
> Olympus America Camedia D-510 Zoom $295 - $399.99 (22 vendors)
> Nikon Coolpix 775 $335 - $449.95 (29 vendors)
> Canon PowerShot A20 $298 - $413.99 (32 vendors)

THE LOWDOWN
The Sony CyberShot DSC-P50 gives you a lot of camera for a little money. A g camera for families, students, or businesspeople, it captures sharp, colorful pictu Although it's a little shorter on exposure options than many of its competitors, th compensates with a great macro mode, extended video capture, and creative eff fast and easy-to-use digicam could soon have your old 35mm snapshot camera g

Compare these products side-by-side

Camera Express Search
All Prices
All Release Dates

All Companies
Agfa
Canon

SEARCH

Select multiple companies by pressing the CONTROI or COMMAND key

> **POWER SEARCH**

ZDNet
Tech Jobs | Price Guarantee | Search Alerts | Newsletters | Auctions
IT Solutions | Security | Classes | Downloads | Members | Web Service
CNET Networks: CNET | GameSpot | mySimon | TechRepublic | ZDNet
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