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Adoption of Internet Shopping: Cultural Considerations in India and Australia

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Abstract

The current research paper examines the adoption of internet shopping patterns exhibited by Indian women currently residing in India and Australia emphasizing on the prevailing cultural dimensions. A conceptual framework has been developed based on the theoretical background which links intention to shop over internet and Hofstede's cultural dimensions to adoption of internet shopping. In order to test the stated hypotheses, the proposed relationships between the variables were empirically verified. A web based survey was employed by using online questionnaire as a research instrument and the respondents were approached by posting the questionnaire to various newsgroups. The results of the study reveal that intention of internet shopping as measured with the perceived attributes significantly influences the actual adoption of internet shopping. With regard to the prevailing cultural dimensions in the country of origin (India), the results obtained are as expected and significantly influence the internet purchases. Where as with regard to the prevailing cultural dimensions in the country of residence (Australia), most of the results obtained are as predicted except for the dimension masculinity versus femininity. The results obtained are promising for internet

marketers to formulate effective marketing strategies apart from venture capitalists and e-commerce business strategies.

Keywords: **Internet shopping adoption; Intention to shop online; Culture in country of origin; Culture in country of residence; Indian women**

INTRODUCTION

The internet has been identified as the world's fastest growing market place with an enormous increase in the globalization environment for marketing products and services (Domains 1999). Projected estimates indicate that the worldwide internet population may reach 1.35 billion by the end of current year (Internet World Stats 2007; eTForecasts 2004; Gong *et al.,* 2007). The present scenario depicts that globally Asia scores the highest global online percentage (34%), followed by Europe (29.2%) and North America (24.9%) (Internet World Stats 2007).

Though the internet has been utilized widely through out the world, internet access is uneven across countries. Considering, the internet usage in Asia-Pacific region alone, variations do persist across different countries. Current internet usage with the population is forecasted to be 63.3% of South Korea, 35.9% of Malaysia, 12.8% of Thailand and 3.6% of India (Internet World Stats 2005). It has been projected that enormous growth of internet users in near future could be expected from populous countries such as China, India, Brazil and Indonesia (eTForecasts 2004). Internet shopping is becoming increasingly popular and internet sales are estimated to grow from $172 billion in 2005 to $329 billion in 2010 (Johnson 2005). According to the worldwide statistics, there are 32 countries with more than 50% of internet penetration rate (http://www.internetworldstats.com). The ability of the internet users has been increased from 16% to 32% (Zhou *et al.,* 2007).

Internet shopping adoption has initiated the research in recent years, apart from attracting consumers either from a consumer oriented or technology oriented view (Jarvenpaa and Todd 1997). Reinforcement of these views focus on consumer's beliefs of internet purchases integrating with the technical specifications of these internet purchases (Zhou *et al.,* 2007). Consumer research is critical to the success of any market (Lohse and Spiller 1998). However there might be differential adoption patterns among the consumers, due to a completely new and innovative place (internet) of purchase (Wang *et al.,* 1998).

Intensification of competition of the e-commerce paves the way to understand the antecedents that influence the consumers to internet shopping as it is critical for building customer relationship. This practice has been identified as the key aspect of effective business strategy in obtaining success in the e-markets (Vrechopoulos *et al.,* 2001). As such internet marketers need to assess the varying receptivity levels of consumers in different countries and factors that affect the internet use and access across countries.

Although a significant body of literature exists addressing the influence of national

culture on cross-national adoption of internet practices, results have not been featured prominently (Kumar *et al.,* 1998; La Ferle *et al.,* 2002; Yeniyurt and Townsend 2003). So far, in the existing literature there is no formal research on the concepts of country of origin and country of residence and the prevailing cultural impact on the adoption of internet shopping. Therefore the present study makes an attempt to study internet shopping patterns adopted by Indian women residing in India (country of origin) and Australia (country of residence). Further more, the present research extends the existing research on adoption of internet shopping by incorporating all the cultural dimensions.

ORGANIZATION OF THE PAPER

A conceptual model has been presented from the existing theoretical background. Indian women residing in Australia, apart from India form a rich source of database for the study. Further factors influencing their intention to shop online and its subsequent effect on adoption of actual internet shopping are portrayed. The impact of prevailing culture in country of origin (CCOO) and culture in country of residence (CCOR) are compared and the effect of socio-demographics on adoption of internet shopping has been studied in detail. A brief relevant review of literature leading to a conceptual framework is presented. Results are presented and analyzed followed by discussion. Implications for managers are provided and limitations are addressed.

THEORETICAL FRAMEWORK

The theory of reasoned action (TRA), theory of planned behaviour (TPB) and technology acceptance model (TAM) have been used extensively in the existing literature to explain and predict consumer behaviour in an online environment (Ajzen and Fishbein 1980, Ajzen 1991, Pavlou 2003). TAM explains how actual adoption is influenced by intention to use, which is in turn influenced by consumer's attitude towards usage. Perceived use and perceived ease of use directly affect the consumer's attitudes (Davis 1986).

Where as, diffusion of innovations (DOI) theory explains how adoption takes place within a social system (Rogers 1983). In the present study adoption of internet shopping is considered as an innovative method of shopping contrast to the traditional mall shopping. The adoption rate of an innovation is further influenced by characteristics of the innovation itself; communication channels, time elapsed since the introduction of the innovation and the social system in which the diffusion of innovation takes place (Gong *et al.,* 2007).

DOI research has widely focused on the perceived attributes of an innovation that affect the rate at which it is adopted within a social system. The schema for evaluating the perceived attributes of an innovation involves five constructs relative advantage, compatibility, trialability, observability and complexity. A large number of studies later incorporated the construct perceived risk which is of a particular relevance in a service context (Lockett and Littler 1997, Black *et al.,* 2001).

With reference to the DOI theory, studies can be conducted both at individual and aggregate levels. The rate of adoption of different innovations and the extent to which an innovation is adopted within communities, countries or social units of varied demographic, economic and cultural situations could be studied (Tornatzky and Klein

1982). The role of culture may be either implicit or explicit in these types of comparisons (Maitland and Bauer 2001).

Although TAM model has been used extensively to study different environments, characteristics that are specific to internet shopping are not captured by this model. The generic information provided by the TAM model alone is not sufficient to motivate the consumer's to perform online shopping. Therefore in the present study an attempt has been made to integrate TAM and DOI models and an extended model is presented in the conceptual framework. Further study progresses by empirically studying the effects of the cultural dimensions prevailing in the country of origin and in country of residence on adoption of internet shopping by Indian women.

CONCEPTUAL MODEL AND PROPOSITION DEVELOPMENT

Based on the theoretical framework the following conceptual model has been developed and hypotheses are stated to empirically test the expected relationships between the variables.

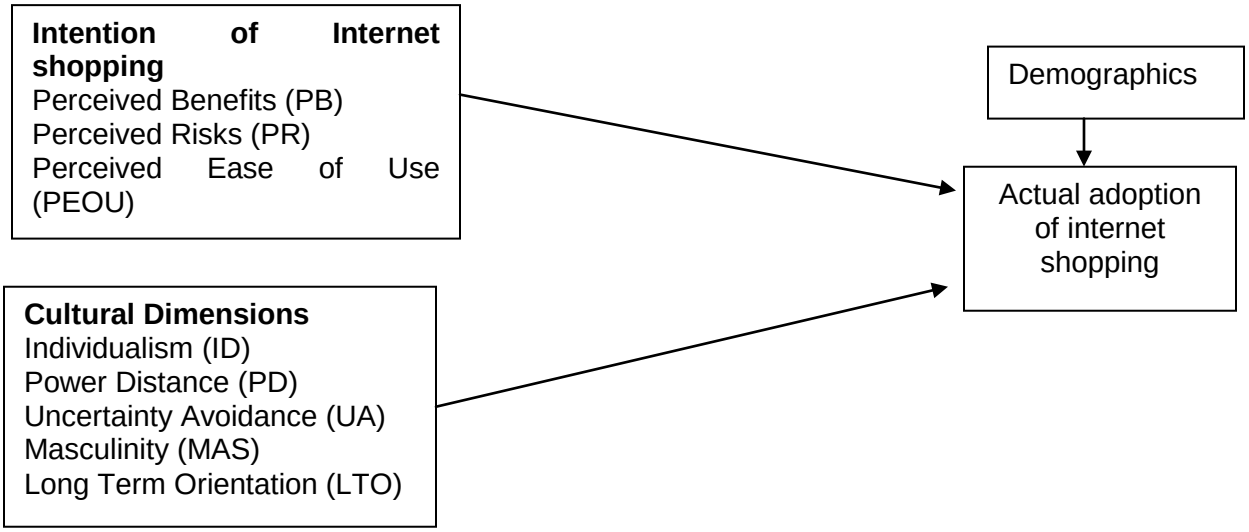

Figure 1: Conceptual Model

The perceived attributes of an internet shopping affect initially the intention to shop online and subsequently affect the actual adoption of internet shopping within a social system Perceived attributes according to the existing literature includes five constructs: relative advantage, compatibility, observability, trialability and complexity. Later the construct perceived risk has been added in many studies. The above mentioned attributes are incorporated as they have a profound influence in affecting the consumer's intention to shop online. The cultural classification by Hofstede depicts five empirically derived cultural dimensions: individualism-collectivism, power distance, uncertainty avoidance, masculinity-femininity and long term-short term orientation (Hofstede 2001). Therefore in the present study the cultural framework proposed by Hofstede has been used. Though Hofstede's framework is based on the work related values, has been used

in marketing studies and has received much attention from scholars (Van Everdingen and Waarts 2003).

Intention and Adoption of Internet Shopping

Various constructs of perceived attributes are explained as follows: ***Relative advantage*** is the degree to which an innovation (in the current study internet shopping is considered to be an innovation) is perceived by potential adopters as being better than the idea, product or service it supersedes (Rogers 1962). It is not the superior performance of an innovation, but rather the superiority of performance as perceived by the consumer (Szymigin and Bourne 1999). ***Compatibility*** is the degree to which an innovation is perceived as consistent with past values, experiences and needs of the potential adopter (Rogers 1962). This concept relates to the consumer's familiarity with the use of internet. ***Trialability*** refers to the degree to which an innovation is perceived as being trialable on a limited basis prior to any decision to adopt (Rogers 1962). It is often identified as an opportunity to trial and is an effective means of reducing the perceived risk. ***Observability*** of an innovation is the degree to which an innovation is visible to the other members of a social system (Rogers 1962). The more visible is an innovation and its potential benefits, the more the rate of its adoption. The above mentioned constructs for the purpose of the present study are considered as the perceived benefits (PB).

Complexity is the degree to which an innovation is perceived as relatively difficult to understand (Rogers 1962). *Uncertainty* plays a key role in adoption decision in the form of perceived risk (Murdock and Franz 1983). ***Risk*** is often associated with outcome uncertainties such as lack of knowledge regarding distribution of potential outcomes and uncontrollability of outcome attainment (Vlek and Stallen 1980). ***Security*** is the extent to which an individual believes that internet is secure for transmitting sensitive information. It is a relevant construct as internet shopping often involve transfer of secure information in the form of credit card numbers, bank account details etc., (Salisbury *et al.,* 2001). Another interesting construct is trust. ***Trust*** is the extent to which an individual trusts internet purchases as well as internet transactions. Trust is important for performing repeat transactions and often attracts a good number of potential consumers through word of mouth communication from satisfied existing consumers (Crosby *et al.,* 1990, Seibel and Hous 1999). These constructs in the current research are considered as the perceived risks (PR) associated with the internet shopping.

Ease of use is defined as the degree to which an individual believes that using a particular system would be free of effort (Davis 1989, p.985). Technology comfort level, length, intensity and type of internet use are treated as perceived ease of use (PEOU). ***Internet experience*** is likely important in understanding its influence on intention of internet purchases. Adoption of computer technology by internet users often creates a belief in their ability to use internet for commercial purposes (O'Cass and Fenech 2003). ***Type of internet usage*** depends upon the consumer's orientation towards internet purchases. These could be utilitarian (dealing with a specific information) or hedonic (for fun or pleasure). These constructs simplify the consumer's intention of adopting online shopping.

Perceived attributes play a key role in influencing the consumer's intention to shop online. Intention to shop online paves way for actual adoption of internet shopping (Davis

1989). Positive associations are exhibited between intention and actual adoption of internet shopping (Limayem *et al.,* 2000, Sin and Tse 2002). Intention of purchases on internet exhibited varied effects ranging from very strong to optimum on actual adoption behaviour (Chen *et al.,* 2002, Limayem *et al.,* 2000).
H_1: Intention of internet shopping will be affected by perceived attributes such as perceived benefits, perceived risks and perceived ease of use.
H_2: Intention of internet shopping will be positively associated with the actual adoption of internet shopping.

Culture in Country of Origin (CCOO) and Culture in Country of Residence (CCOR)

Culture represents a shared set of values consisting of objective and subjective realities which comprise socialized predispositions and beliefs that guide individual's perceptions of observed events and personal interactions, and the selection of appropriate responses in social situations (Johansson 1997). Based on Hofstede's typology of culture, there are five cultural dimensions: individualism-collectivism, power distance, uncertainty avoidance, masculinity-femininity and long-term versus short-term orientations (Hofstede 1984, 1991). Culture is defined as the collective programming of the mind which distinguishes the members of one group or category of people from another (Hofstede 1991, p.5).

Individualism-collectivism dimension describes the relation between the individual and the group. Members from individualistic cultures tend to exhibit more favorable attitudes towards uniqueness and differentiation (Aaker and Maheswaran 1997). Power distance relates to the extent to which the members of a society accept that power is distributed unequally (Hofstede 1991). Cultures that exhibit large power distance are predicted to be less innovative (Herbig and Miller 1991). Uncertainty avoidance is the degree to which societies can tolerate uncertainty and ambiguity (Hofstede 1991). Cultures with low uncertainty avoidance tend to more innovative due to greater tolerance for risk (Yeniyurt and Townsend 2003). Masculinity-femininity refers the extent to which a society is closely related to the gender roles (Hofstede 2001). Masculinity is often related to the diffusion of technological product innovations and femininity is more related to diffusion of cosmetics and apparel (Steenkamp *et al.,* 1999). Long-term versus short-term orientation measures people's consideration of the future (Hofstede 2001).

While purchasing products, consumers may face many decisions with respect to its purchase and intended usage. The effect of country of origin and its conspicuousness on purchase of products is evident from the existing literature. However, as of now there are no studies relating to country of residence and its further impact on internet purchases. In the present study, country of residence is defined as "the country the individual is currently residing with a different country of origin (India)".

H_3: Culture in the country of origin and culture in the country of residence will influence the actual adoption of internet purchases.
H_3a: Individualism (ID) is positively associated with the adoption of internet shopping in country of residence.
H_3b: Power distance (PD) is negatively associated with the adoption of internet shopping in country of residence.
H_3c: Uncertainty avoidance (UA) is negatively associated with the adoption of internet

shopping in country of residence.
H_3d: Masculinity (MAS) is negatively associated with the adoption of internet shopping in country of residence.
H_3e: Long term orientation (LTO) is positively associated with the adoption of internet shopping in country of residence.

Demographics

Consumer demographics impact on adoption of internet shopping has been studied frequently since 1990's with reference to gender, age, education and income. From the existing literature, the effect of age on internet purchases is unclear. Some studies identified a positive relationship and others reported a negative relationship (Stafford *et al.,* 2004, Joines *et al.,* 2003). However, few other studies depicted no relationship between age and adoption of internet shopping (Li *et al.,* 1999, Rohm and Swaminathan 2004). Similarly, with regard to education also, mixed effects are identified. Some results indicate a positive relationship and others negative between the variables education and internet shopping (Liao and Cheung 2001, Mahmood *et al.,* 2004). Income exhibited a positive relationship with the adoption of internet shopping (Donthu and Garcia 1999, Susskind 2004).
H_4: Demographics will influence the actual adoption of internet purchases.

Choice of Countries

Women of Indian origin, but currently residing in India and in Australia are selected. The traditional roles exhibited by Indian women are changing at a faster pace due to increased levels of education and changing societal situations. Also currently more number of women are entering into the information technology sector with technological advancements (http://www.internetworldstats.com). Therefore, it is worthwhile to examine the patterns exhibited by Indian women in the adoption of internet shopping. Cultural patterns exhibited by the people residing in these countries are different based on the Hofstede's typology of cultural dimensions. India as a developing country, culturally is collectivistic with masculine culture and exhibiting high levels of power distance, high uncertainty levels and with low long-term orientation. Australia is a developed country with prevalent individualistic and feminine culture, low levels of power distance, uncertainty avoidance and focusing more on long-term orientation (Hofstede 2001). Apart from the prevailing cultural differences, differences across countries may also relate to gross domestic product (GDP) per capita, infrastructure of the country, literacy levels, openness, media access etc., (Maitland and Bauer 2001, Robison and Crenshaw 2002). Strong associations between the cultural considerations in the country of residence and the penetration rates of internet as well as adoption of internet shopping are focused in the present research.

RESEARCH METHODOLOGY

Data Collection

A self administered questionnaire has been distributed online to the respondents. 50 questionnaires were distributed through internet to the respondents in each country. Out of 100 research instruments sent, only 86 valid questionnaires were obtained. The response rate was 86 % indicating a favorable response. The valid questionnaires after

sorting out for missing data, from each country pertain to 42 from India and 44 from Australia. Convenience sampling technique has been employed. The basis for participation in the survey was that the participants were women of Indian origin. The questionnaire was pre-tested for identification of possible problems of clarity and accuracy before it was given out to the sample. The sample derived was more balanced in terms of basic demographic characteristics (gender, age, marital status) of the respondents and was more skewed in terms of the family income.

Intention to shop online was measured based on the perceived attributes on a five point Likert scale (1= strongly agree and 5= strongly disagree). Adoption of internet shopping as a dependent variable was measured by way of asking the respondents their usage of internet for purchasing online. The response scale included ten points ranging from zero to ten or more times (Citrin *et al.,* 2000). Cultural dimensions were measured by incorporating the items adapted from CVSCALE (Yoo, Donthu and Lenartowicz 2001). These items were measured on a five point Likert scale (1= strongly agree and 5= strongly disagree). For all the scales employed in the current research the alpha coefficient of reliability is more than the average of 0.70 recommended (Nunnally and Bernstein 1994). Also a factor analysis employing principal axis factoring and varimax rotation on the scales showed that all the items loaded on 1 factor.

Deriving from the earlier discussion and the expected relationships between intention of internet shopping, cultural dimensions and adoption of internet shopping, the following multiple regression model is estimated. It has been expected that intention of internet shopping is influenced by perceived attributes such as perceived benefits, perceived risks and perceived ease of use. The actual adoption of internet shopping is expected to be influenced by the variables, intention of internet shopping and cultural dimensions.

$$AIS_{ij} = \alpha + \beta_1 PB_{ij} + \beta_2 PR_{ij} + \beta_3 PEOU_{ij} + \beta_4 ID_{ij} + \beta_5 PD_{ij} + \beta_6 UA_{ij} + \beta_7 MAS_{ij} + \beta_8 LTO_{ij} + \mu_{ij} \quad \ldots\ldots\ldots (1)$$

Where AIS represents the actual adoption of internet shopping, α and β are the parameters to be estimated, PB is perceived benefits, PR is perceived risks, PEOU is perceived ease of use, ID is individualism, PD is power distance, UA is uncertainty avoidance, MAS is masculinity, LTO is long term orientation and μ is the random error term with standard assumptions. The subscripts 'i' stands for individuals and 'j' stands for countries.

Performing regression analysis by assuming a significant importance to intention of internet shopping and cultural dimensions may result in a biased estimate of the parameter actual adoption of internet shopping. In order to overcome this, controlling for other relevant variables which might have an impact on the results is an essential requisite. Therefore, from the extant literature it is evident that the level of income in a country plays a significant role in determining the adoption decisions of the individuals. Also the level of education in a nation may influence the adoption patterns of internet shopping as reflected in education attainment and the knowledge of internet. Hence the final model is as follows, by incorporating income and education as control variables.

$$AIS_{ij} = \alpha + \beta_1 PB_{ij} + \beta_2 PR_{ij} + \beta_3 PEOU_{ij} + \beta_4 ID_{ij} + \beta_5 PD_{ij} + \beta_6 UA_{ij} + \beta_7 MAS_{ij} + \beta_8 LTO_{ij} + \beta_9 IC_{ij} + \beta_{10} EDU_{ij} +$$

μ_{ij} ..... (2)

Where IC represents the income and EDU the education and the other variables as explained in equation (1).

ANALYSIS OF RESULTS

Profile of the Sample

A brief profile of the sample respondents has been presented in Table I including their demographic characteristics relative to both the countries. Cross-tabulations and frequency distributions are obtained by subjecting the data to descriptive statistics. From Table I it is depicted that the maximum number of respondents are within the age range of 26 to 30 years. More than half of the respondents are post graduates. The largest income range of the sample comprises to 30000 to 40000 Rs. Later for the analysis purpose, age and income are used as continuous variables. Due to the existence of more skewness with the income variable, conversions are made depending upon the country's Purchasing Power Parity (PPP). With regard to the working status, most of the women are in the work force. PPP conversions are performed to obtain uniformity of income levels for both the countries. Irrespective of the country's currency levels, by way of performing PPP conversions, the respondent's level of income confronted to American dollars. (India PPP= Actual Income in Rupees/ 9.989, Australia PPP= Actual Income in AUS$/ 1.477) (International Financial Statistics, IMF).

Table I: Demographic Characteristics of the Sample

Demographics	**India**	**Australia**	**Total No of Respondents**
Age (Years)			
20-25	6	11	17
26-30	17	17	34
31-35	16	12	28
36-40	3	4	7
Education Level			
Under Graduate	9	7	16
Post Graduate	25	25	50
PhD	5	5	10
Income			
< 30,000 Rs	7	5	12
30,000-40,000 Rs	22	16	38
40,000-50,000 Rs	12	16	28
> 50,000 Rs	1	7	8
Working Status			
Yes	39	36	75
No	3	8	11

(Note: Where Rs is the Indian Currency Rupees)

Effect of Demographics on Actual Adoption of Internet Shopping

Among the demographics, age and working status are studied in relation to the actual adoption of internet shopping by Indian women in India and in Australia. Results reveal that both the variables age and working status do significantly influence the adoption patterns of internet shopping in both the countries. However, both in India and in Australia the variable age is inversely related to adoption of internet shopping though significant. Where as the variable working status is positively associated with the adoption of internet shopping in both the countries.

Table II: Impact of Demographics on Actual Adoption of Internet Shopping

Variable	Beta	T - value	Adjusted R2	F
India				
Age	-0.26*	2.049	0.051	4.206*
Working Status	0.30*	2.350	0.074	5.529*
Australia				
Age	-0.29*	2.319	0.076	4.538*
Working Status	0.34*	2.732	0.081	5.602*

*$p < 0.05$

Effect of Intention of Internet Shopping, Cultural Dimensions and the demographics Income and Education in Country of Origin and Country of Residence on the Adoption of Internet Shopping

To study the impact of intention of internet shopping and cultural dimensions on the actual adoption of internet shopping in country of origin and country of residence multiple regression analyses has been performed and presented in Table III and Table IV in Model 1 without controlling for any other relevant variables in the study. Results reveal that the variables perceived benefits and perceived ease of use are associated positively with the adoption of internet shopping in country of origin and country of residence and the variable perceived risks is negatively associated with the adoption of internet shopping. Among the cultural dimensions, in India the variables individualism and long term orientation are associated negatively with the adoption of internet shopping and the dimensions power distance, uncertainty avoidance and masculinity are positively associated with the adoption of internet purchases. Where as in Australia, the variables individualism, masculinity and long term orientation are associated positively and the dimensions power distance and uncertainty avoidance are associated negatively with the adoption of internet shopping. Most of the results obtained are in conformity with the previous studies. However, Australia as a developed nation, the expected relationship of Indian women residing in Australia tend to exhibit increased levels of internet shopping is void as the results indicate positive association of the masculinity dimension with the adoption of internet shopping thus partially contradicting the earlier stated hypothesis.

Table III: Influence of Intention of Internet Shopping and Cultural Dimensions on Adoption of Internet Shopping in Country of Origin (India)

Parameter	Model 1 without control variables	Model 2 with income	Model 3 with income and education
Constant	0.3923*	0.3424*	0.3117*
	(0.1009)	(0.0832)	(0.0728)
Perceived Benefits (PB)	0.0011	0.0013*	0.0013**
	(0.0003)	(0.0004)	(0.0004)
Perceived Risks (PR)	-0.0014*	-0.0016	-0.0016*
	(0.0003)	(0.0004)	(0.0004)
Perceived Ease of Use (PEOU)	0.0019	0.0021*	0.0023**
	(0.0007)	(0.0008)	(0.0008)
Individualism (ID)	-0.0023	-0.0025	-0.0028**
	(0.0007)	(0.0007)	(0.0008)
Power Distance (PD)	0.0027*	0.0015	0.0009*
	(0.0009)	(0.0009)	(0.0008)
Uncertainty Avoidance (UA)	0.0030	0.0026*	0.0027*
	(0.0008)	(0.0009)	(0.0008)
Masculinity (MAS)	0.0026	0.0023	0.0024*
	(0.0007)	(0.0008)	(0.0008)
Long Term Orientation (LTO)	-0.0019*	-0.0017	-0.0016*
	(0.0007)	(0.0006)	(0.0007)
Income (IC)	-	0.0115*	0.0068*
		(0.0028)	(0.0015)
Education (EDU)	-	-	0.1211*
			(0.0209)
Adjusted R^2	0.459	0.537	0.613

*Note: *significant at 1 percent level*
***significant at 5 percent level*
Figures in parentheses are standard errors and the results are corrected for heteroskedasticity.

Table IV: Influence of Intention of Internet Shopping and Cultural Dimensions on Adoption of Internet Shopping in Country of Residence (Australia)

Parameter	Model 1 without control variables	Model 2 with income	Model 3 with income and education
Constant	0.4120*	0.3618*	0.3726**
	(0.1104)	(0.0969)	(0.0828)
Perceived Benefits (PB)	0.0018*	0.0021**	0.0023**
	(0.0004)	(0.0005)	(0.0005)
Perceived Risks (PR)	-0.0015*	-0.0017**	-0.0018*
	(0.0006)	(0.0006)	(0.0006)
Perceived Ease of Use (PEOU)	0.0023*	0.0023*	0.0025**
	(0.0007)	(0.0007)	(0.0008)

Individualism (ID)	0.0009*	0.0011***	0.0013*
	(0.0006)	(0.0007)	(0.0007)
Power Distance (PD)	-0.0029*	-0.0026*	-0.0027**
	(0.0008)	(0.0008)	(0.0009)
Uncertainty Avoidance (UA)	-0.0020*	-0.0023**	-0.0025*
	(0.0009)	(0.0009)	(0.0007)
Masculinity (MAS)	0.0007	0.0009	0.0012*
	(0.0006)	(0.0005)	(0.0005)
Long Term Orientation (LTO)	0.0023*	0.0019**	0.0021*
	(0.0007)	(0.0007)	(0.0006)
Income (IC)	-	0.0121*	0.0079*
		(0.0029)	(0.0017)
Education (EDU)	-	-	0.1338**
			(0.0317)
Adjusted R^2	0.573	0.658	0.739

*Note: *significant at 1 percent level*
***significant at 5 percent level*
****significant at 10 percent level*
Figures in parentheses are standard errors and the results are corrected for heteroskedasticity.

In order to avoid the biased parameter estimate, later in Model 2 the level of income has been introduced as a control variable. The income variable has been replaced with a dummy, which takes the value of 1 for low income country and 1 for high income country. Based on the available World Bank statistics, India is categorized as a low income country and Australia as a high income country (www.worldbank.org/data/countryclass). Model 3 has been estimated controlling for the effects of the variables income and education. All the Models 1, 2 and 3 are presented in Tables III and IV. The regression results obtained are in conformity largely with the preceding discussion. Model 1 largely depicts the expected relationships and the results remained to be unaffected even after controlling for level of income and level of education.

DISCUSSION

The main purpose of the present study is to examine the impact of intention of internet shopping and cultural dimensions on actual adoption of internet shopping by Indian women taking into consideration their country of origin and country of residence effects. By studying the Hofstede's cultural dimensions, this study extends the existing literature on the adoption of internet shopping and the impact of culture on its adoption in general and the persisting cultural variations in the adoption of internet shopping in country of origin and country of residence in particular.

Culture in the country of origin demonstrated a negative effect of individualism and long term orientation and a positive impact of power distance, uncertainty avoidance and masculinity on the adoption of internet shopping. These results are consistent with the past research findings (La Ferle *et al.,* 2002). Based on the Hofstede's typology, India as a developing country is dominated by masculinity and present situations are no exception. Though the current scenario of India depicts increased levels of economic growth and increased levels of women entering the work force, shopping over the

internet is still at its infancy. Women currently residing in India are not receptive to the adoption of internet shopping. Most of the women exhibited concerns over security issues such as disclosure of credit card numbers and lack of trust in internet shopping.

On the other hand culture in the country of residence exhibited a positive effect of individualism and long term orientation and negative effect of power distance and uncertainty avoidance on the internet shopping adoption thus, consistent with the past research (Yaveroglu and Donthu 2002). However, with regard to the cultural dimension masculinity, women residing in Australia though of Indian origin are also not much receptive to the adoption of internet purchases thus contradicting the expected relationship. Since Australia is a developed country and the socio-economic status of the country is far ahead than India, we expect the cultural dimension masculinity to be negatively associated with the adoption of internet shopping. Though Indian women currently residing in Australia are affected by other cultural dimensions such as individualism, power distance, uncertainty avoidance and long term orientation, with regard to the masculinity dimension, the result obtained reveals the positive significant association with the adoption of internet shopping. Indian women residing in Australia are not affected much by the country status and are less influential in the adoption of internet purchases. One possible reason for this unexpected inconsistency could be the very diverse nature of internet as a medium of purchase. Also it could be estimated that the type of product to be purchased as well as the level of involvement associated with the purchases should be given due importance in assessing the internet shopping patterns.

Among the demographics, the negative association of age with the adoption of internet shopping is consistent with few other studies. With the increase of age the amount of time spent over the internet may decrease drastically thus reducing the interest to do online shopping. Income, level of education and working status of the women are positively associated with online shopping indicating that level of income is still a key determinant factor in influencing the adoption decisions of online shopping. Level of education increases the knowledge of internet, thus increases the comfortability level of the user to quickly adopt online shopping. Similarly, working status of women exposes them to varied situations and particularly women working in the information technology associated sectors are more comfortable and are more innovative in the adoption of internet shopping. These findings indicate that the adoption of internet shopping apart from the cultural dimensions, takes into account individual inherent traits as well as the security, trust and perceived risk associated with the country of origin and country of residence.

CONCLUSION

Results obtained have implications on venture capitalists and e-commerce business strategists. As venture capitalists increasingly try to invest in overseas operations, it is important to consider prevailing cultural situations for diffusion of the internet as well as for the development of e-commerce. The role of women is constantly changing in today's competitive world due to increase in their level of education and working capabilities. The internet usage rate of the women is also increasing at a faster pace than in the past. Therefore it is important for marketers to understand their consumers and formulate effective marketing strategies. Marketers need to monitor and evaluate the cultural

conditions both in the country of residence and in the country of origin and their further impact on the adoption of internet shopping.

As with any research, this study has several limitations. Only the adoption and usage of one technological innovation is used and limitations may pertain to the convenience sampling technique employed. Only the variable culture had been used in a broader domain. Future studies could incorporate more number of countries and country of origin and residence effects could be studied with a wider scope. Specific products and services inclusion could further enhance the research. Further extension of the study could incorporate the influence of personal traits and profiles of innovators and early adopters with late adopters could be compared.

Despite these limitations, the results obtained are promising and revealing. The study is important both from the theoretical and practical perspectives. From the theoretical point of view, the effects of CCOO and CCOR and their further impact on adoption and diffusion of internet purchases is important. Where as, from the practical orientation, the study provides insights to guide venture capitalists, strategists and for marketers.

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