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Moderating Effects of Gender on Online Shopping of Wooden Handicraft Items

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Abstract

Handicraft is one of the many productive sectors for developing countries. It contributes significantly towards economic growth. This study seeks to investigate consumers' perception (gender moderated) towards purchase of wooden handicraft items through e-commerce platform. The proposed model investigates the role of trust, website quality, service and product perception on consumers purchase intention towards wooden handicraft items online. The effect of website quality, service and product perception was analyzed for the Technology Acceptance Model constructs namely: Perceived ease of use and perceived usefulness. 234 respondents were surveyed and data was analyzed using Structural Equation Modelling technique. The results depict that gender is a crucial moderating variable for e-commerce customers. Identification of differences between male and female genders enables better understanding for practitioners towards online shopping behaviour. This allows development of efficient marketing strategies.

Keywords: Technology Acceptance Model; E-commerce; Online Shopping; Trust; Gender; Handicraft.

Introduction

Handicraft is an unorganized and essential segment of Indian economy. By definition, it is useful and decorative domestic items fully crafted by simple tools and hand. Operational instruments and techniques vary somewhat because of regional differences in craftsmanship. Industry employs skills of artisans like wood carving, weaving, leather work etc. This sector is growing annually at 20% growth rate and it also provides huge employment opportunities to local artisans (Yadav and Mahara, 2016). Despite being an essential component of Indian economy, it comes with added constraints of capital deficiency, lack of marketplace, lack of trained staff etc (Bhat and Yadav, 2016).

Wooden handicraft includes manufacturing and carving of wooden items. These include furnitures, gift and kitchen items and antiques. It has been acclaimed due to increase in customer base seeking novelty and appreciation. Manufacturing zones of wooden handicraft items are spread across India in places like, Saharanpur, Jaipur, Mysore, Jodhpur, Ernakulam and Cochin (Yadav and Mahara, 2016). Majority of wooden handicraft items are hedonic in nature. Hedonic utilization is experience of a product through touch, feel, visual image, sound and task (Hirschman &

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Holbrook, 1982). With ever increasing competition this sector has to innovate its sales techniques to keep going and stay competitive. A study by Paige & Littrell (2003) recommended that handicraft organizations must strategize their marketing and sales activities to supplement reach of offerings to plausible buyers. E-commerce holds potential to amend this situation by offering a fitting sales platform. Offline stores provide wooden handicraft buyers with ability to feel and touch a product prior to its purchase and it lacks in online shopping. On the other hand, ecommerce provides better product information and variety; multi-attributes comparison that leads to decline in buyer-search cost (Alba et al., 1997).

For the online sales strategy to succeed, it is essential to understand the purchase behaviour of Indian consumers towards handicraft items. Numerous researchers have studied concepts like retail practices in e-commerce (Batchelor & Webb, 2010), crafts knowledge progress (Nedelcheva et al. 2011; Klein, 2000), how to market handicraft products (Nagori & Saxena, 2012), how handicraft products in rural areas empower women (Ericsson, 2001; Wilkinson-Weber, 2004), tourists tendencies towards handicraft products (Müller & Pettersson, 2001), value chain analysis of wooden handicraft manufacturing from Saharanpur, India (Yadav & Mahara, 2016) and many more. However there is little literature on customers' purchase behavior towards wooden handicraft items, especially on Indian customers. Hence, this paper investigates the underlying factors affecting the intention to purchase wooden handicraft items online.

Recent time has seen significant increase in the number of Internet users in India with an increase of 30.5% since 2015 (internetlivestats) and specially people purchasing online in India. The number of online shoppers have increased from 20 million in 2013 to 40 million in 2016 and this number is expected to rise close to 240 million by 2019 (Indian Express. (2016). This number is showing a steady growth because of the extensive mobile e-commerce penetration (Indian Express. (2016). Although number of internet users is high overall, more males engage in online activities as compared to females (Bakshi, S., 2012). The distribution of female Indian shoppers is 35% as compared to 75% for male shoppers (Indian Express. (2016). Thus, gender difference in online shopping attracts researchers to understand consumer's behaviour towards online shopping (Gupta et. al, 1995; Sanchez-Franco, 2006; Rodgers & Harris, 2003; Van Slyke, Comunale, & Belanger, 2002; Haque et. al, 2007).

Role of gender has been examined nested with numerous viewpoints like website design and its usefulness (Cyr & Bonanni, 2005), risk in online shopping (Garbarino & Strahilevitze, 2004), acceptance of technology (Sanchez-Franco, 2006), online shopping behavior (Sharma S., Gupta B. & Sharma V., 2014), favourable likeness of a destination (Sharma, S., Shah, M. & Shukla, R.K., 2014) and organizational commitment of employee (Gupta B. & Sharma S., 2014). Thus, to better target customers and build better models for assessment of consumers' attitude, gender differences can help bring out more insights that will provide more focus and research it deserves (on topic and factors associated). Hence, this study aids by supplementing insights into gender moderated consumers' purchase behaviour towards wooden handicraft items.

Proposed Model

TAM (Davis, 1989) is one of the widely used models for assessment and explanation of technology behavior usage. In this section, an adoption of original TAM model is proposed to evaluate consumer's intention to purchase wooden handicraft items online with gender as a moderator. Along with the original constructs of TAM (Perceived Ease of Use, Perceived Usefulness), four constructs namely Product Perception (PP), Service Perception (SP), Website Quality (WQ) and Trust are proposed and evaluated for e-commerce adoption of wooden handicraft items.

Role of Gender

Many studies have been conducted on gender and its role in computing and technology like perception of website features (Cyr & Bonanni, 2005), risks of online shopping (Garbarino & Strahilevitze, 2004), acceptance of an email system (Gefen & Straub, 1997), Computer self-efficacy and system usage (Hartzel, 2003), acceptance of communication technologies (Ilie, Van Slyke, Green, & Lou, 2005), Computer ability, attitude, and use (Kay, 2006), E-learning acceptance (Ong and Lai, 2006), perceptions of website usage (Sanchez-Franco, 2006), Satisfaction with website design(Simon, 2001), Patterns of Internet usage (Teo & Lim, 2000), Perception of online shopping (Van Slyke et al., 2002), Technology use (Venkatesh & Morris, 2000) and Students' computer attitude (Young, 2000). Despite usage of many internet and commercial applications, males and females harbor different perception and attitude towards usage of online platform for shopping. Study by Dittmar et al. (2004) shows that male attitude remains fixed whereas female attitude can shift drastically and can become unfavorable towards shopping online.

Another viewpoint to the discussion is differences in style of processing. First one is item-specific processing by genders where attributes exclusive or distinct are more stressed. Secondly, relational processing where emphasis is laid on similarities in theme among different piece of information (Hunt and Einstein, 1981). Both genders socialize differently where male are taught or learn to prioritize strong sense of socialization (agentic sentiments) whereas women learn to value sense of unity (communal sentiment) (Eagly, 1987). Males are more concerned about self focused (agentic sentiments) goals, whereas females are driven more by sense of unity (communal sentiment). Therefore, processing by females is relational and by males is item specific (Putrevu, 2001, 2004). Studies conducted on gender specific role in offline shopping shows that females spend more time in shopping than males as they appear to enjoy it more than males and indulge in bargaining hunt and comparison amongst products (Wood, 1998). Study by Cho (2004) shows that difference in online shopping attitude exists as females enjoy and prefer physical assessment of products like view and touch a product prior to purchase. Although with better image enhancement tools sellers provides clear image and animation of items on website, still there is lack of feel or touch. In comparison, males tend to keep their information gathering limited to issue or relevant context and they end their search once information gathering for relevant context is finished. Thus, it is important to evaluate the role of gender for consumer's perception.

Therefore, the proposed extended TAM model is evaluated to investigate the factors that facilitate or impede intention of Indian consumers to shop online for wooden handicraft items with gender as a moderator.

Perceived Ease of Use and Perceived Usefulness

In this study, Perceived Usefulness (PU) is characterized as the degree to which a customer believes that e-commerce will enhance the efficiency/productivity to buy wooden handicraft items. PU is measured in regards of time, cost and exertion required to buy wooden handicraft items on the website. Perceived Ease Of Use (PEOU) is characterized as customer's belief that purchasing wooden handicraft items online will be free of effort. PEOU is measured as process easiness to search items, comparisons, transactions and finally purchase of wooden handicraft items. Past studies on e-commerce affirmed the positive impact of PU and PEOU on behavioral intention. PU and PEOU both impact Attitude toward usage (ATU) and this thusly positively impacts Intention to Use (ITU) (Zhang & Prybutok, 2003).

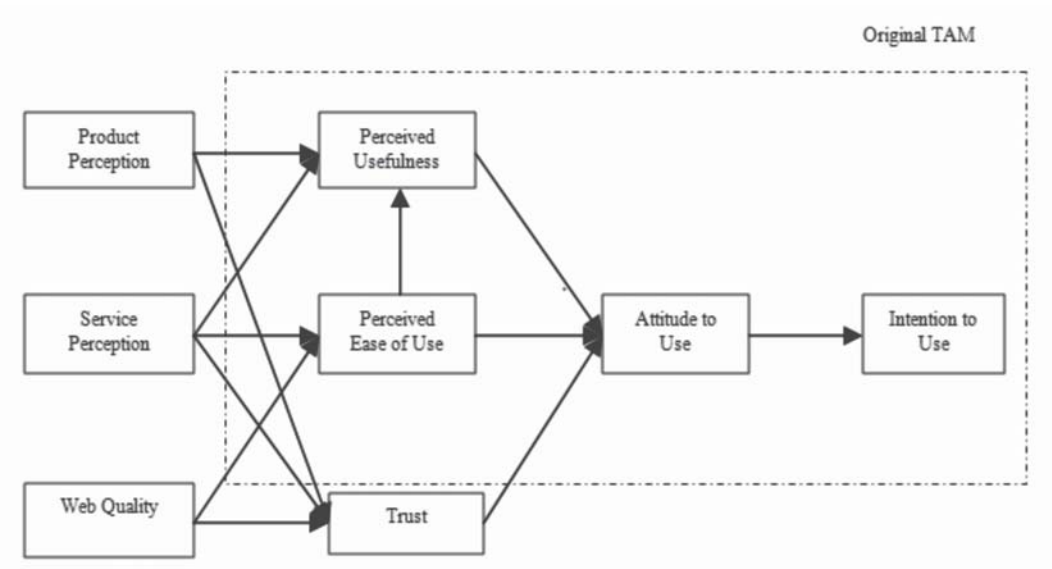

Fig 1: Proposed Model

The constructs of the proposed model are defined and explained further.

Trust

McKnight & Chervany (2001) define trust as the point of reliability and credibility on new technology by people. It remains one of the key effective tools to reduce uncertainty and risks (Suh & Han, 2003; Pavlou, 2003) and generate a sense of safety. As uncertainties exist in online transactions, numerous researchers agreed upon the role of trust in influence over customer to successfully adopt e-commerce (Gefen, 2000). Jarvenpaa et al.(2000) assessed relation between perception of internet retail stores reputation on customers trust on store. Failure to directly see and touch a product customer feels greater uncertainty and risk in their decisions. Trust remains one of the key effective tools to reduce uncertainty and risks (Suh & Han, 2003; Pavlou, 2003) and generate a sense of safety. Previous studies understood the role of trust in development of consumer intention and attitude to use new technologies (Chen & Tan, 2004; Childers et al., 2002; Davis et al., 1992; Gefen et al., 2003; Gefen, 2004; Pavlou, 2003). Hence, it can be said that consumers' trust on online retailers and Internet is understood to play a pivotal part in consumers' online shopping behavior. Therefore, in the present study, we attempt to examine the direct impact of trust on consumers' attitude.

Website Quality

It is defined as the degree of user friendliness in using a website (Kim & Lee, 2002) and is considered one of the important factors for online store (Lee & Lin, 2005). Numerous studies have assessed relationship amongst website quality and users' acceptance. Most consumers agreed that this factor influences perspective of consumer as it is the portal through which transaction can be directed. In this study, website quality is assessed as nature of website's user interface (UI) alongside features given to pursue search, operations and deliver helpful information in regards to wooden handicrafts items on the web.

Product Perception

Product/Item perception additionally termed as product value contains understanding an item towards price, quality and variety (Lee et al., 2009). Item Price is characterized as the cost paid for an item by the purchaser and it ought to be practically identical with costs accessible for a similar item at other option sources (online or offline). Product Variety is the quantity of choices that is accessible to the customer to pick an item. Long tail phenomenon influences the assortment of items accessible offline, yet numerous choices are accessible on the web (Hinz et al., 2011). Perception of quality of item is capacity to satisfy customers' need. Through purchase made online, a customer can't touch and feel the item; consequently perception of quality plays a fundamental part in deciding the item's perception and trust towards vendors.

Service Perception

Benefit Perception otherwise called E-Service Quality is characterized as general customer's assessment and judgments in regards to the nature of items/services (Santos, 2003). In this study, service quality assesses quality of service given by website to the customers. Rendered services incorporate reliability and receptivity of website. Reliability is measured as time of delivery and ease in return and refund while receptivity measures how quick the website reacts

Table 1: Proposed Hypotheses

	Hypotheses
H1	Perceived Usefulness will positively impact consumers' attitude to use e-commerce for purchase of wooden handicraft items.
H2	Perceived Ease of Use will positively impact consumers' attitude to use e-commerce for purchase of wooden handicraft items.
H3	Perceived Ease of Use will positively impact Perceived Usefulness towards adoption of e-commerce for purchase of wooden handicraft items.
H4	Consumers' attitude to use will positively affect intention towards use of e-commerce for purchase of wooden handicraft items.
H5	Trust will positively impact consumers' attitude to use e-commerce for purchase of wooden handicraft items.
H6	Website Quality will positively impact Trust towards adoption of e-commerce for purchase of wooden handicraft items.
H7	Website Quality will positively impact Perceived Ease of Use towards adoption of e commerce for purchase of wooden handicraft items.
H8	Product perception will positively impact Perceived Usefulness towards adoption of e commerce for purchase of wooden handicraft items.
H9	Product perception will positively impact Trust towards adoption of e-commerce for purchase of wooden handicraft items.
H10	Service perception will positively impact Perceived Usefulness towards adoption of e commerce for purchase of wooden handicraft items.
H11	Service perception will positively impact Perceived Ease of Use towards adoption of e commerce for purchase of wooden handicraft items.
H12	Service perception will positively impact Trust towards adoption of e-commerce for purchase of wooden handicraft items.

to the worries of shoppers (Parasuraman, 1985; Kim & Lee, 2002).

The hypotheses for various constructs of extended TAM are proposed for the study and will be evaluated for significance.

Methodology

Questionnaire based study was conducted. Survey was designed in a structured and non-disguised manner where respondents were clearly told purpose of the survey and respondent's information will not be shared with anyone until they agree upon. Different e-commerce websites and websites of sellers were found out to gain understanding on the items included in the questionnaire. 8 variables (website quality, service perception, product perception, trust, PEOU, PU, attitude and intention to use) with 26 items were included in survey apart than general demographic questions. Variables were measured on a 5-point Likert scale, except demography related questions. Each measure was drawn from earlier studies and was adapted for current research. For questionnaire please refer to appendix.

Sample description

1000 people were sent e-mails of the questionnaire and 236 replied back out of these 234 were considered as usable, which comprises of 74 females and 160 males. Demography of respondents is mentioned in table 2.

Table 2: Respondents Demography

Measure	Item	Frequency	Percentage (%)
Total		234	100
Gender	Male	160	68.4
	Female	74	31.6
Age	Below 20	42	17.9
	20-30	132	56.4
	31-40	48	20.5
	Over 40	12	5.1
Occupation	Student	158	67.5
	Part Time Employee	7	3.0
	Business Owner	23	9.8
	Services	41	17.5
	Retired	5	2.1
Purchased wooden handicraft online	Never shopped	173	73.9
	Have shopped	61	26.1
Length of Internet experience	Under 1 year	2	0.9
	1-2 years	7	3.0
	2-3 years	19	8.1
	3-5 years	43	18.4
	5 years or more	163	69.7
Frequency of Internet Experience	1-3 hours/week	13	5.6
	3-10 hours/week	37	15.8
	10-20 hours/week	62	26.5
	More than 20 hours/week	122	52.1

Results and Analysis

Preliminary test

Table 3 depicts the results of exploratory factor analysis. Items with poor loadings (loadings < 0.50) were removed from analysis. Remaining items were assessed using principal component analysis (PCA) with promax rotation. PCA resulted in 8 factors (eigen values >1) which accounted for 71% variance. Reliability scores of all factors were found between 0.77 -0 .88 and are acceptable.

Complete latent model was created using results of exploratory factor analysis and tested with the help of AMOS to know relational as well as measurement properties of the model. Acceptable relative, comparative and absolute model fit indices were ensured using Bentler (1992) and Taylor and Todd (1995). 8 factor structures was confirmed by first order confirmatory factor analysis (CFA). Indices resulted in good model fit to data. Convergent validity was confirmed by average variance extracted (AVE $\geq$.50) for all the factors individually. AVE varies from 0.51 to 0.77, confirms convergent validity. Further confirmation of convergent validity was given by path analysis through structural equation modelling (SEM), and all path coefficients were found statistically significant. Discriminant validity is confirmed if AVE is greater than the squared correlation coefficient between factors, which was true for all the factor pairs (Fornell & Larckers 1981).

Structural Model Test

SEM was used to test causal relations amongst variables for the proposed model for complete data (N=234). Fit indices of the model were a good fit (χ^2/df=2.14; CFI=.97; RMSR=.04). Figure 2 depicts the path analysis model. These results gave strong support to the proposed model (Hair et al., 1998). Table 4 summarizes path analysis results with t-values. Relationships amongst all the causal paths were tested and confirmed resulting in acceptance of all hypotheses except PU$\leftarrow$SP. Other relationships proved significant like PEOU is positively influenced by website quality (WQ) (β = .532, p< .00) and it is the strongest of all relations. SP positively and significantly influences PEOU (β = .151, p<.005). Perceived Usefulness is positively influenced by product perception (β = .192, p< .003) and PU is significantly influenced by PEOU (β = .199, p< .002). Trust is significantly and positively influenced by PP (β = .208, p< .001). Results shows strong relation between TRU and SP (β = .152, p< .002); relation between TRU and WQ is one of the strongest (β = .523, p< .001). TRU on other hand acts as mediator and positively and significantly affects consumers attitude to use (β = .322, p< .001). ATT is strongly and positively influenced by PEOU (β = .489, p < .001) and PU (β = .151, p< .001) (Davis 1989). Lastly, relationship between Intention and ATT was found significant and positive (β = .252, p < .001).

Further analysis requires usage of advanced multivariate analysis method (Hayes, 2009) in SEM to perform model invariance test amongst female and male respondents data. Before invariance test is applied it is necessary to set up different models for both groups. Byrne (1994) recommended use of structural and measurement constraints to assess model equality. Two models are assessed, females (N=74) and males (N=160). Goodness-of-fit indices for both the models were found significant i.e. male (χ^2/df=1.7; CFI=.99) and female models (χ^2/df=1.9; CFI=.94). All causal paths were found significant in structural path analysis.

Table 3: Results of reliability and convergent validity

Constructs	Factor Analysis (PCA)	Cronbach's Alpha	Standardized Factor Loadings(λ)	Composite Reliability	Average Variance Extracted(AVE)
Product Perception 1	.686	0.773	0.762	0.799	0.571
2	.797		0.806		
3	.764		0.753		
Service Perception 1	.614	0.878	0.605	0.724	0.508
2	.754		0.738		
3	.815		0.756		
4	.737		0.499		
Website quality 1	.743	0.862	0.671	0.711	0.582
2	.733		0.628		
3	.710		0.573		
4	.725		0.596		
Trust 1	.707	0.838	0.590	0.859	0.611
2	.816		0.927		
3	.818		0.874		
4	.524		0.695		
Perceived Ease of Use 1	.867	0.872	0.816	0.874	0.698
2	.853		0.889		
3	.756		0.798		
Perceived Usefulness 1	.725	0.873	0.686	0.772	0.531
2	.846		0.811		
3	.757		0.686		
Attitude to use 1	.852	0.843	0.826	0.799	0.571
2	.851		0.739		
3	.811		0.699		
Intention to Use 1	.871	0.861	0.941	0.874	0.777
2	.880		0.819		

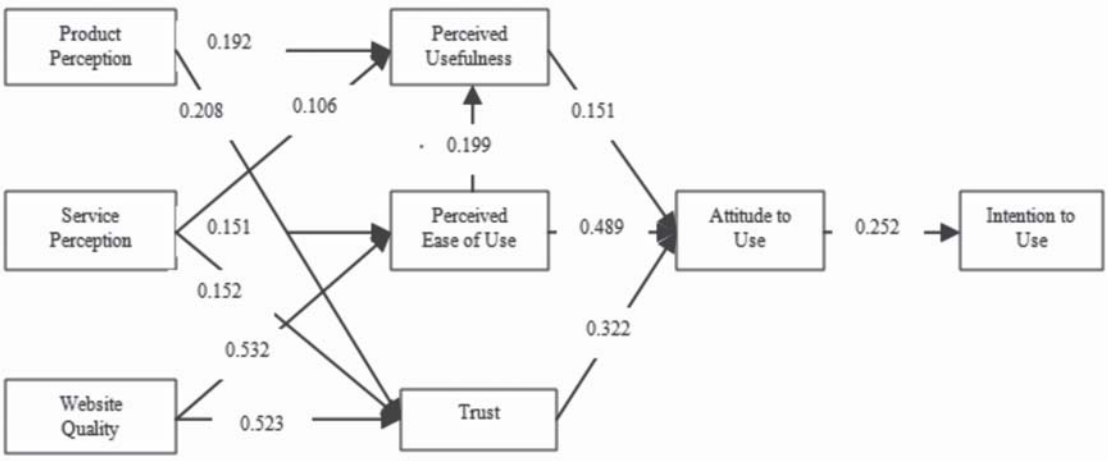

Figure 2: Path analysis

Invariance Test

One of the requirements of model test is difference in strength and nature of relationships amongst male and female groups. In consistency with expectations, six asymmetric paths originated from the baseline models (significant for females but not for males and vice-versa). PU⟵SP, PU⟵PEOU, ATT⟵PU and TRU⟵SP were found significant for males but not for females. PU⟵PP was significant for females but non-significant for males, rest all were significant for males and females both. These results will prove inconclusive if both genders do not perceive the results in same way. Inefficiency in establishment of invariance leads to rejection of scale as it is erroneous (Steenkamp and Baumgartner, 1998). Consecutively, model invariance tests are adopted prior to assessment of structural paths invariance. Model invariance tests includes all under mentioned models from Model 1 to 4 (Byrne, 1994).

Model 1: Configural invariance⟶ Factor loadings **(Z),** factor covariance (**¥**), and error variance matrix **(€)** all belong to same order, and are freely estimated without any restrictions in groups.

Model 2: Metric invariance⟶ **Z**(males)= **Z**(females), but **¥** and € are freely estimated.

Model 3: Factor covariance invariance ⟶ **¥** (males) = **¥** (females), but **Z** and € are freely estimated.

Model 4: Error variance invariance ⟶ € (males) = € (females), but **Z** and **¥** are freely estimated.

Model 5: Model 2 and 3 ⟶ **Z**(males)= **Z**(females), and $(males) = **¥** (females), but € is freely estimated.

Model 6: Model 2 and 4 ⟶ **Z**(males)= **Z**(females) and € (males) = € (females) but **¥** is freely estimated.

Model 7: Model 2, 3 and 4 ⟶ **Z**(males)= **Z**(females), **¥** (males) = **¥** (females) and € (males) = € (females).

Model 1 i.e. unconstrained or baseline model (least restricted) is nested with Model 2 to Model 7 as they are constrained at different levels, results are shown in table 5. Results were interpreted using Chi-square test which further helped in identification of best model with common dimensional properties. Model 2 ($\chi^2(18) = 32.79$, $p = .018$), Model 3 ($\chi^2(28) = 45.08$, $p = .022$) and 5 ($\chi^2(38)$

Table 4: Hypotheses Test

Hypothesis				Path Coefficient (β)	Error	t-value	p-value	Supported (Yes/No)
H 7	Perceived Ease of Use	←	Website quality	.532	.052	9.822	***	Yes
H 11	Perceived Ease of Use	←	Service Perception	.151	.059	2.786	.005	Yes
H 8	Perceived Usefulness	←	Product Perception	.192	.064	2.999	.003	Yes
H 1	Perceived Usefulness	←	Perceived Ease of Use	.199	.063	3.160	.002	Yes
H 10	Perceived Usefulness	←	Service Perception	.106	.067	1.715	.086	**No**
H 9	Trust	←	Product Perception	.208	.057	3.699	***	Yes
H 12	Trust	←	Service Perception	.152	.054	3.112	.002	Yes
H 6	Trust	←	Website quality	.523	.053	9.556	***	Yes
H 3	Attitude to use	←	Perceived Usefulness	.151	.039	3.469	***	Yes
H 2	Attitude to use	←	Perceived Ease of Use	.489	.045	9.788	***	Yes
H 5	Attitude to use	←	Trust	.322	.044	6.521	***	Yes
H 4	Intention	←	Attitude to use	.252	.081	4.080	***	Yes

*** means p-value = 0.000

= 37.83, p = .011) gave similar results to baseline model i.e. Model 1. Amongst these Model 5 was nested with Model 2 and Model 3. Comparison of these models show that Model 5 represents best common dimensional properties for both groups giving suggestion that factors have same patterns on factors, structure and covariance across groups. As shown in table 6, it was only during additional comparisons amongst models resulted in non-significant differences amongst them. Model 1 on metric and factor levels represented best properties for both groups, which suggests that both groups have nearly same factors patterns and structure covariance's for samples of groups. Invariance models were a good fit to the data, at χ^2/df = 1.17, CFI = .97.

Table 5: Test of measurement invariance between males and females (Multi-sample CFA)- Goodness-of-fit-indices

	Model	χ^2	df	p-value	CFI
Model 1: M1	Unconstrained	510.711	428	0	0.97
Model 2: M2	Factor Loadings Invariance	543.506	446	0	0.96
Model 3: M3	Factor Covariance Invariance	555.793	456	0	0.96
Model 4: M4	Error Variance Invariance	534.140	436	0	0.97
Model 5: M5	M2 and M3	548.550	466	0	0.97
Model 6: M6	M2 and M4	593.865	454	0	0.95
Model 7: M7	M2, M3 and M4	646.316	482	0	0.95

Table 6: Model Comparisons results

Model	Difference		
	Δ df	Δ χ^2	Δp
M1 vs. M2	18	32.795	0.018
M1 vs. M3	28	45.082	0.022
M1 vs. M4	8	23.429	0.003
M1 vs. M5	38	37.839	0.011
M1 vs. M6	26	83.154	0
M1 vs. M7	54	135.605	0
M2 vs. M3	10	12.287	0.026
M2 vs. M5	20	5.044	0.043
M3 vs. M5	10	7.243	0.030

To test equality of causal paths, invariance test requires stringent hypothesis testing with multi-group analysis of causal paths using structural model as shown in table 7 and figure 3. Equality constraints are imposed on the coefficients of both models (Byrne, 1994). PU←PEOU, where causal path is significant for males (β = .267, p <.001) but non-significant for females (β= -.027, p <.09) with negative relation and chi-square difference is also high. PU←SP, where causal path is significant for males (β = .191, p <.012) but non-significant for females (β = -.28, p <.344) with negative relation and chi-square difference is also high. PEOU←SP, where causal path is significant for males (β = .1, p <.013) but non-significant for females (β = .159, p <.16). PU←PP, where causal path is significant for females (β = .141, p <.53) but non-significant for males (β = .345, p <.003). As shown in table 6 these models were found different on different

constraints. In table 7 one tailed t-test shows relation PEOU⟵WQ asymmetric path significantly differs for both groups ($\Delta \chi^2$= 8.061, p <.05) i.e. groups considers relationship differently. Similarly One tailed t-test shows TRU⟵SP shows asymmetric properties ($\Delta \chi^2$= 4.833, p <.028), shows both groups considers relation differently. One tailed t-test revealed that groups considers TRU⟵WQ relation differently with chi-square difference ($\Delta \chi^2$= 13.398, p <.01).

Table 7: Invariance test across gender

H:Causal Paths	Standardized beta values (β) **		Path differences: Chi-square (p-value)
	Males	Females	
PEOU ←WQ	0.578(0)	0.418(0)	8.061(0.05)*
PEOU ←SP	0.100(0.013)	0.159(0.166)	0.04(0.95)
PU ←PP	0.141(0.53)	0.345(0.002)	0.116(0.733)
PU ←PEOU	0.267(0)	-0.027(0.819)	1.975(0.160)
PU ←SP	0.191(0.012)	-0.280(0.344)	2.192(0.139)
Trust ←WQ	0.581(0)	0.255(0.033)	13.398(0.0)*
Trust ←SP	0.171(0.003)	-0.050(0.634)	4.833(0.028)*
Trust ←PP	0.158(0.013)	0.388(0)	2.192(0.139)
Attitude ←PU	0.206(0)	0.231(0.006)	0.546(0.460)
Attitude ←PEOU	0.427(0)	0.489(0)	1.794(0.180)
Attitude ←Trust	0.360(0)	0.209(0.016)	0.829(0.363)
Intention←Attitude	0.480(0)	0.599(0)	0(1.000)
	χ^2/df = 1.17, p<.05; CFI = .97	χ^2/df = 1.18, p<.05; CFI = .96	χ^2/df = 1.17, p<.05; CFI = .97

** Asymmetric paths are shaded (which are no n-significant in one but significant in the other category).

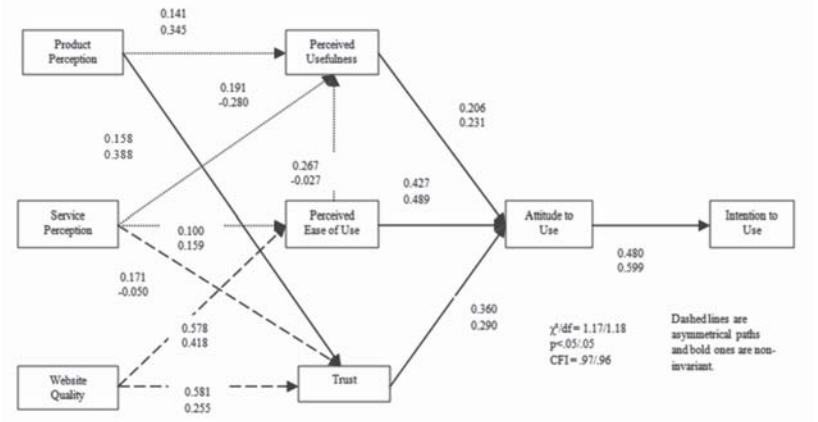

Figure 3: Invariance test across gender

Results and Findings

Website quality, product perception and service perception had a positive influence on intention as predicted in hypothesis. Relation between PU and PEOU was found significant and positive. Trust acted as a mediator in the model and was affected positively and significantly by website quality, product perception and service perception in return trust significantly affects attitude. Table 8 discusses results of invariance test between gender groups towards purchase of wooden handicraft items through online shopping.

Table 8: Description of relations

Description of relations		
Relations	Male	Female
PEOU←WQ	Website quality has positive and significant effect on PEOU for both the groups. Effects of useful description of items, good interface of website, easy navigation and better search mechanism adds to higher sense of ease in search, compare items and make final purchase decision.	
PEOU←SP	Customer's perception towards services rendered by e-commerce websites was found to be significant in path analysis. Both male and female group perceive better services by website and vendors leads to reduced effort in purchase of product on website. Better return, refund, customer-company communication and on-time delivery services leads to decrease in ease in search, compare items and make final purchase decision.	
PU←PP	Effect of detailed product information like product quality, availability and price of items leads to increased efficiency and productivity in online shopping of wooden handicraft items.	As per results females considered product features, quality, price and availability an important attribute while considering usefulness of e-commerce to purchase wooden handicraft items.
PU←PEOU	As per Davis (1989) ease in usage of a technology leads to increased usefulness. In case of male customers ease in usage of e-commerce towards online purchase significantly and positively affects sense of system usefulness. For male customers, better navigation, search and ease in transaction leads to reduced effort and time.	On the same lines, female group members perceives that ease of use of e-commerce system towards wooden handicraft items does not lead to increased usefulness perception of system.
Trust← WQ	Website features has different effects on both genders and presumed differently. Effect of website quality on increase in trust amongst females is lower than that of males i.e. effects of good interface of website, easy navigation and search mechanism adds to higher sense of privacy, security and purchase decision for males as compared to females. This result is in consistency with previously published results of Putrevu (2001, 2004).	
Trust← SP	Similarly relation between TRU←SP causal path was found asymmetric as chi-square difference was too high. Thus male group trusts a website and vendors/sellers more when better services are provided to them. Better return, refund, customer-company communication and on-time delivery services for males leads to higher sense of privacy, security and purchase decision.	In this relation, female group consider that better services does not leads to increase in trust on website usage and adoption. Instead females consider higher sense of privacy, security and purchase decision is not reliant upon better return, refund, customer-company communication and on-time delivery services.

Trust← PP	Both groups perceived better product features and product variety leads to increase in trust on vendors/sellers and website, therefore increase in shelf space towards wooden handicraft items with specifications leads to higher trust gained amongst users.
Attitude← PU	Similarly higher levels of PU and PEOU is assumed to bring positive change in attitude of usage of a technology and results have proved the same where both male and female groups considers that higher usefulness leads to increase in usage attitude of e-commerce towards purchase of wooden handicraft items.
Attitude← PEOU	
Attitude← Trust	Both male and female groups considers that increase or decrease in trust leads to similar change in attitude towards usage of e-commerce website for purchase of wooden handicraft items which leads to increased intention towards future purchase and recommendation of website usage to friends.
Intention← Attitude	

Hypotheses related to impact of website quality and psychological attributes towards consumers' online behavior for further recommendation and future purchase intentions towards wooden handicraft items were well supported by survey data. According to expectations independent variables drove website attitude and intention towards purchase decision of wooden handicraft items through online platform. Gender has proven to be a moderator to the model across all the variables and paths, as hypothesized.

Conclusions and implications

Product perception, service perception, website quality and trust are the constructs that most determined the intention of customer to purchase wooden handicraft items online. Further intention to use was driven by attitude that was driven by trust, PEOU and PU. Therefore most effectual websites are those which are trustworthy, have good product information, and are simple and easy to use for customers.

As wooden handicrafts are more of hedonic art and craft products, it was crucial to consider customer behavior towards product quality, availability and price for the study. As per results females considered product features and availability an important attribute while considering usefulness of e-commerce to purchase wooden handicraft items. These outcomes were reliable with past research recommending that females attempted more definite elaboration of product while shopping (Meyers-Levy and Maheswaran, 1991; Putrevu, 2001, 2004). Once they are satisfied with the wooden handicraft product information, trust, perception of usefulness of e-commerce website and its services which ultimately leads to recommendation and future purchase intention. Male group also found platform useful but less than female group when wooden handicraft items are available in abundance over e-commerce platform. Other studies acclaim the same, male customers take quick decisions, whereas female require detailed information when shopping online Wolin and Korgaonkar (2003).

As inferred from the results, it is crucial for males to trust website, services and product before making their final purchase. Trust plays a crucial as it escalates with increase in ease in navigation, better web content, better search, layout of webpage, delivery time given by vendor, ease in return and refund, vendor and website response, order timeliness. Higher trust means more purchase of wooden handicraft items by male group members. Also analyzed higher perception of services like delivery time given by vendor, ease in return and refund, vendor and website response, order timeliness leads to higher ease in usage of website and services

which affects usefulness of website and also attitude of customer towards final purchase and recommendation of wooden handicraft items.

As shown by results, males and females differed in their perception of website quality. Males only absorb information which is relevant to issue or need of the hour whereas females require detailed information before making their final say. Trust gained by website definitely means customers will purchase wooden handicraft items from websites. Males once trust a website with easy navigation and simple features they will definitely make their purchase. In case of females websites must be crafted to support exploratory behavior and allow access to detailed content information with attributes that stimulates attitude of the females as once attitude of female customer is made that leads to future purchase and recommendation intentions. As per the study, it can be concluded that a website for wooden handicraft items must be customized on the basis of gender. This is important as it affects both attitude and future purchase recommendations from both males and females.

Limitations of the study

The sampling procedure was a snowball test which restricted generalizability and external validity. Just like other Internet based studies, this study was skewed towards younger, more educated respondents. Reason being, such customers are primary crowd for online purchase. Although results were consistent with hypotheses, a bigger sample size may have lead to better results.

Future research

Future research must conduct more brand differentiation studies for handicraft and other products. This study can be utilized further to assess different culture, moods and cognition. As internet has become key channel for both information emission and sales of products, marketers will gain by understanding consumers' responses to content available on websites and effectiveness of channel.

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Appendix

Constructs	Items
Product Perception	PP1: Wooden handicraft items are available at competent prices. PP2: It is difficult to judge the quality of wooden handicraft items online. PP3: Large varieties of wooden handicraft items are available online.
Service Perception	SP1: It is easy to return wooden handicraft item purchased online. SP2: It is easy to get refund of wooden handicraft items purchased online, if an item is returned. SP3: A product is delivered on time. SP4: I get a quick response in case of a query.
Website quality	WQ1: User Interface of the wooden handicraft items page is well organized in appearance. WQ2: It is easy to navigate the website. WQ3: It is easy to find wooden handicrafts items on a website. WQ4: Useful description about wooden handicraft items is provided on a website.
Trust	TRU1: Privacy affects my decision to purchase wooden handicraft items online. TRU2: Payment security mechanism of a websi te affects the decision to shop wooden handicraft items online. TRU3: Reviews available online affect my decision to purchase a wooden handicraft item online. TRU4: Ease in payment of a website affects decision to shop wooden handicraft items online.
Perceived Ease of Use (PEOU)	PEOU1: It is easy to search for the wooden handicraft items online. PEOU 2: It is easy to compare wooden handicraft items online. PEOU3: It is easy to buy wooden handicrafts items online anytime.
Perceived Usefulness (PU)	PU1: The cost to buy wooden handicraft items reduces online. PU2: It saves time to buy wooden handicraft items online. PU3: It requires less effort to purchase wooden handicraft items online.
Attitude to Use	ATU1: It is a good idea to purchase wooden handicraft items online. ATU2: It is a wise idea to use e - commerce to purchase wooden handicraft items online. ATU3: It is interesting to purchase wooden handicraft items online.
Intention to Use	ITU1: I will make online purchase of wooden handicrafts items in next two months. ITU2: I will recommend online purchase of wooden handicraft items to others.