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## A Study of Influence of Product Reviews and User Assigned Ratings On the Consumer's Trust in a Virtual Marketplace

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### ABSTRACT:

Recognizing, predicting, and occasionally attempting to influence the consumers behaviour are the three essential elements of perpetuity in every business. A business in any format be it brick and mortar or virtual form flourishes only if it has a strong support of its consumer's trust. Trust is the most enduring characteristic of human interaction (Serva, Benamati, & Fuller, 2005). Trust has a negative relationship with all type of risk. As the quantity of risk element reduces trust gets its existence in all setups, such as commercial and behavioural, conventional and virtual both the business format equally.

Trust is one variable which has received considerable attention since its presence and reliance has always influenced the consumer in preferring for buying from the site which has those qualities on which they trust; indeed, lack of trust is often cited as a significant barrier to ecommerce adoption (Egger, 2002).

This research paper attempts to focus on the contributing elements of a typical virtual marketplace in the potential consumer's trust, which may propel the potential consumers in their buying process. The focus of this paper is on the two individual variables commonly present in any buying transaction, such as the characteristics of the consumer, and the characteristics of the virtual community.

**Key Words:** Virtual community, Product reviews, Impersonal influence, Consumer trust, Online trust

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**Introduction:**

Trust is crucial foundation for both social and business relationships. Trust is a function of belief and confirmation of a person about another person or party in transaction about their ability in completion of the proposed transaction. Ability is a function of skills and competence. Trust is also the composite of expectation of integrity or honesty. It may be present in terms of financial as well as function dimensions. Integrity is the expectation of behaving as per the pre-defined and generally accepted rules. Integrity of a business organisation is reflected through its honesty expressed and practiced in keeping the promises made, and trust is an indicator of willingness of the organization to do good to its consumers. This trust is the major reason of goodwill of a business.

Trust in any commercial transaction becomes an essential as well as an important factor since it works as a catalyzer to overcome in the conditions of uncertainty and acts as a risk reducing mechanism. Consumer's belief that an e-market place can be trusted, plays a significant role in both attracting and motivating the new buyers for conducting an online transaction and retaining the existing buyers. Consumer trust is largely contributed by their perceptions about safety of the typical web environment created by the e-marketplace. The trust leads the consumers to visit the market place for conducting the transaction. Almost all companies are allowing their potential consumers and all its website visitors to drop their feedback and reviews about product usage on the web site. The intention behind it is to build a virtual community and expect it (the informal communication) to act as a means of conveying the product knowledge and act for dissemination of information distribution tool. The purpose of implanting these reviews is to create awareness in the initial stage of the potential buyers' decision-making process. Merely by providing timely services and accurate information about the product and services are not sufficient since these things will contribute in measuring satisfaction arising as evaluation process of expectations and actual delivery in the post purchase stage. Trust plays a more specific and vital role in much earlier stage of evaluation and helps in overcoming the initial inertia.

The reviews displayed on a web site are impersonal piece of communication for a reader, this quality of being it in the state of impersonal demands a need of carefully designed the environment in which customers and common people are allowed to share and interact the information and their experiences about the product and the company in case of services so as to build trust of others.

It has been statistically established and evident that the use of chat or product review in the forms of their experience conveyed in the numerical ratings can influence the consumer's trust about the web site and their intension to avail the services and lead them in-to actual buying of a product.

Usually the mechanism of impersonal communication is captured in the form of product feedback which contains opinion about product, where a person can check, details such as who has used the product before and what was the experience? This typical situation has opened a new avenue within the online marketplaces as to how to motivate the new users with the help of reviews and feed backs of the existing consumers and increase the conversion of the traffic in-to actual buying activity by pulling from the skeptical zone into convinced one about the products displayed on a web site. For this to work fruitfully, the organizations need to understand about, what makes people trust on the feedbacks and reviews?

**Literature Review:**

The available literature in the area of influence of product reviews on consumer's trust in a product is less in numbers and almost all those studies were without specific and empirically validated frame work for understanding why consumers trust on others feedback and reviews before actually buying?

The earlier conducted studies about trust proposes impact of trust on group behavioural aspects such as inter group communication, information sharing, performance measurement and those were mainly an off shoot of the communication lead trust. These theories were not extended to the concept of virtual community in the context of its characteristics to help in the building of consumer's trust in a marketplace website or its products.

Trust in a virtual community designed around a typical product class or services providing website, depends on the community characteristics and the characteristics of the reviewing consumer.

The term trust has four orientations as suggested by McKnight et al. (1998) documented the way in which two strangers begin to trust one other. Initial trust is classified into four types.

(1) Calculation-based trust: individual's trust strategies are based on the rational considerations of cost and benefit.

(2) Personal-based trust: individuals have personal trust because, as infants, they tend to seek and accept the help of adults, making them tend to trust others.

(3) Cognition-based trust: individuals build trust based on their instant cognition (such as social backgrounds, sense of values, word of mouth) or first impressions about others.

(4) Institution-based trust: the protection that individuals receive from the guarantees and safety nets provided by institutions.

Trust building is a prerequisite in marketplaces where internet adopted communication medium works for conducting exchange for transaction completion purpose, and it plays an increasingly important role as consumers face greater uncertainty (Gronroos 1994). Trust building is the basic solution for increasing online sales and enhancing online information sharing (McKnight et al. 2002a).

This study attempted to investigate and examine the contributions of the interpersonal cues provided in the form of social cues that can be manipulated by various formats of feedback and reviews and act as control variables, which used to motivate people in their interpersonal activities as cues when forming the initial trust toward the online vendors.

Previous online trust researches had been criticized for relying on measuring the trust without inducing any form of risk (Riegelsberger, Sasse, & McCarthy, 2003), while it represents an important key related to trust. To overcome these criticisms, this study induces financial risk specifically.

#### **Sample Details:**

All data analysis was conducted using SPSS windows software package version 20. A total of 72 subjects were participated in this study; 34 of them were males and 38 were females. Their age ages between 18-25 and 26-35 respectively, most of them (79.2%) at bachelor's degree level. 39% of the respondents spending between 6-10 hours online per week; at an average of minimum one hour every day. Among them the majority of them had made at least one online purchase every week. While (28%) of the respondents spent average Rs. 2000 and more per online purchase. As mentioned above the vendor trustworthiness questionnaire was built to cover all the common dimensions or factors of trust belief that the researchers in this field

mostly agree with, namely integrity, ability, and benevolence. Also, it tested the subjects' trust intention regarding online vendors that they saw. Bivariate correlation (Kendall's tau-b) results showed that the correlation between the most common constructions of trust belief for each website was significant at the 0.05 level.

### Research Methodology:

Each subject was then asked to look at the four marketplace websites and perform a general search in those given websites. This involved their looking at the website and then evaluating that e-commerce seller using the online seller's trust focused questionnaire. This process was repeated for all of the selected four websites. To control the order effects, the order of presentation of the four experimental websites was completely counterbalanced. Subjects were browsing and seeing all the four websites and filling in their questionnaires. In this task participants were asked to assess the websites that they had seen, and to rank them according to their preferences.

Each web site visitor was asked to respond about below mentioned ten characteristics of the web seller all the four leading e-commerce web sites mainly operated in India.

### Measures of trust:

1. I believe that the company has the **competency** to provide goods and/or services that I need
2. I believe that the goods and/or services that the company provides must be of **high quality**
3. I believe that the company has the **expertise** to provide mechanisms for **safe and reliable transactions**
4. I believe that the company has the **capacity and resources** to provide high quality goods and/or services
5. I believe that the company is always **ready to help customers**
6. I believe that the company is ready to provide **mechanisms for safe and reliable transactions**
7. I believe that the company is **honest** with customers all the time
8. I believe that the company does its best to **protect customers' interests like privacy**
9. I believe that the company is truly **sincere in keeping promises** made to customers
10. The company is **trustworthy**

### Data Analysis:

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	0.01	395.832 <sup>b</sup>	11.00	30.00	0.00	0.99
<b>age</b>	0.03	2.94	55.00	142.45	<b>0.00</b>	0.50
gender	0.82	0.617 <sup>b</sup>	11.00	30.00	0.80	0.18
age * gender	0.30	0.98	44.00	116.73	0.52	0.26

(Source: Primary data)

Table No.1 indicates results of multivariate test conducted for estimating the MANOVA using the Wilk's Lambda test. Using an alpha level of 0.05, Wilks' lambda test results for consumer's

gender with measures of trust has found significant. The test results were, Wilk's lambda = 0.820,  $F(11, 30) = 0.617$ ,  $p > 0.05$ , multivariate  $\eta^2 = 0.180$ . This significant F indicates that there are significant differences among the males and females about trust parameters and approximately 19% of multivariate variance of the dependent variables is associated with the group characteristics.

Wilks' lambda test results for consumer's age compounding with their sex with measures of trust has found significant. The test results were, Wilk's lambda = 0.30,  $F(44, 116.73) = 0.980$ ,  $p > .005$ , multivariate  $\eta^2 = 0.260$ . This significant F indicates that there are significant differences among the age groups about trust parameters and approximately 26% of multivariate variance of the dependent variables is associated with the group characteristics.

Wilks' lambda test results for consumer's age with measures of trust has found significant. The test results were, Wilk's lambda = 0.030,  $F(55, 142) = 2.94$ ,  $p < .005$ , multivariate  $\eta^2 = 0.50$ . This significant F indicates that there are no significant differences among the various age groups about trust parameters and approximately 50% of multivariate variance of the dependent variables is associated with the group characteristics.

Age wise consumer's trust parameters were found more homogeneous, than their gender along and when age is combined with their gender.

Table No.2 shows the test results of the estimated model for testing the parameters of trust about the contents of the web site engaging the consumers for buying purpose.

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Product	26.906 <sup>a</sup>	10	2.691	1.513	0.171	0.274
	Competency	28.237 <sup>b</sup>	10	2.824	1.558	0.155	0.280
	High Quality	26.864 <sup>c</sup>	10	2.686	1.712	0.112	0.300
	<b>Safe Reliable</b>	62.197 <sup>d</sup>	10	6.220	3.582	<b>0.002</b>	<b>0.472</b>
	Capacity Res	26.847 <sup>e</sup>	10	2.685	1.003	0.458	0.200
	<b>Ready Helping</b>	51.198 <sup>f</sup>	10	5.120	2.811	<b>0.010</b>	<b>0.413</b>
	Mechanism	25.170 <sup>g</sup>	10	2.517	1.205	0.317	0.231
	<b>Honest</b>	42.157 <sup>h</sup>	10	4.216	4.438	<b>0.000</b>	<b>0.526</b>
	Protection	45.447 <sup>i</sup>	10	4.545	1.864	0.080	0.318

	Keep Promises	25.68 0 <sup>j</sup>	1 0	2.568	1.92 7	0.07 0	0.325
	Trustworthy	15.09 4 <sup>k</sup>	1 0	1.509	.741	0.68 3	0.156
age	Product	18.51 5	5	3.703	2.08 2	0.08 8	0.207
	Competency	12.57 4	5	2.515	1.38 7	0.25 0	0.148
	High Quality	14.43 6	5	2.887	1.83 9	0.12 7	0.187
	<b>Safe Reliable</b>	58.86 3	5	11.77 3	6.78 0	<b>0.00</b> <b>0</b>	<b>0.459</b>
	Capacity Res	19.85 6	5	3.971	1.48 4	0.21 7	0.156
	<b>Ready Helping</b>	36.29 1	5	7.258	3.98 6	<b>0.00</b> <b>5</b>	<b>0.333</b>
	Mechanism	11.47 1	5	2.294	1.09 8	0.37 7	0.121
	<b>Honest</b>	36.23 5	5	7.247	7.62 8	<b>0.00</b> <b>0</b>	<b>0.488</b>
	Protection	21.95 6	5	4.391	1.80 1	0.13 5	0.184
	<b>Keep Promises</b>	17.97 7	5	3.595	2.69 8	<b>0.03</b> <b>4</b>	<b>0.252</b>
	Trustworthy	10.98 5	5	2.197	1.07 8	0.38 7	0.119
gender	Product	.435	1	.435	.245	0.62 3	0.006
	Competency	.231	1	.231	.127	0.72 3	0.003
	High Quality	.003	1	.003	.002	0.96 3	0.000
	Safe Reliable	2.753	1	2.753	1.58 6	0.21 5	0.038
	Capacity Res	1.171	1	1.171	.437	0.51 2	0.011
	Ready Helping	1.859	1	1.859	1.02 1	0.31 8	0.025
	Mechanism	.509	1	.509	.243	0.62 4	0.006
	Honest	.235	1	.235	.248	0.62 1	0.006
	Protection	.122	1	.122	.050	0.82 4	0.001

	Keep Promises	.904	1	.904	.679	0.415	0.017
	Trustworthy	.079	1	.079	.039	0.845	0.001
age * gender	Product	8.241	4	2.060	1.159	0.343	0.104
	Competency	9.997	4	2.499	1.379	0.259	0.121
	High Quality	9.361	4	2.340	1.491	0.223	0.130
	Safe Reliable	1.766	4	.441	.254	0.905	0.025
	Capacity Res	8.035	4	2.009	.750	0.564	0.070
	Ready Helping	11.792	4	2.948	1.619	0.188	0.139
	Mechanism	9.366	4	2.341	1.121	0.360	0.101
	Honest	6.829	4	1.707	1.797	0.148	0.152
	Protection	10.731	4	2.683	1.100	0.370	0.099
	Keep Promises	3.029	4	.757	.568	0.687	0.054
	Trustworthy	2.543	4	.636	.312	0.868	0.030

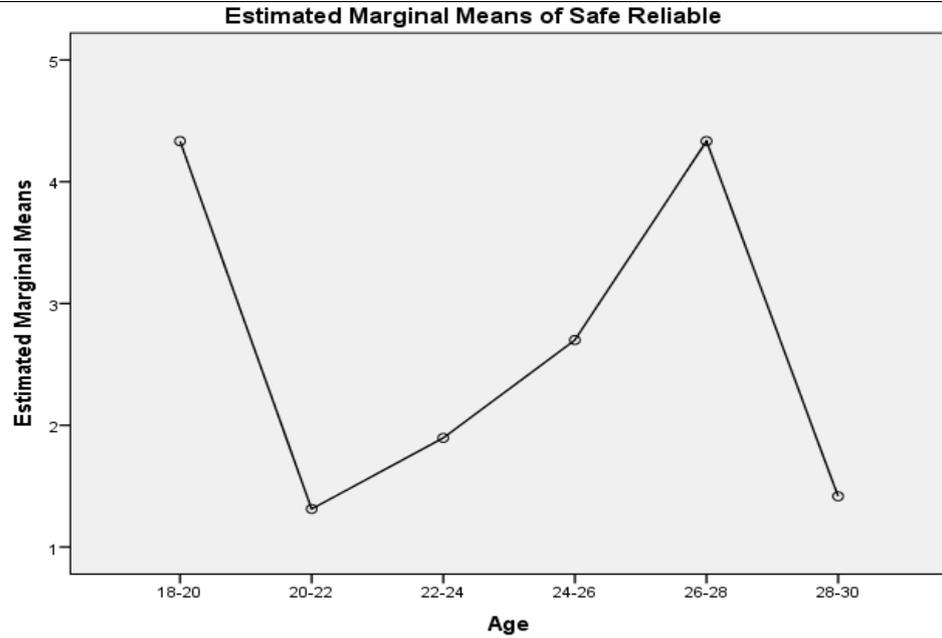
(Source: Primary data)

A comprehensive model with all eleven parameters of trust related to a marketplace site were tested and it had been revealed that indicators about a company's expertise to provide mechanisms for conduct of safe and reliable transactions, ready for helping and honesty are the three measures of trust has significant influence on considering it as trust worthy, and their corresponding effect sizes were 47.20%, 41.30% and 52.6% respectively.

If we estimate a predictive model only on the basis of different age groups under consideration, with all eleven parameters of trust were tested and the test had revealed that the indicators about a marketplace's being safe and reliable, ready for helping, honesty and keep promises are the three measures of trust were found significant, influencing the buyer's consideration as trust worthy, and their corresponding effect sizes were 45.9%, 33.3%, 48.80% and 25.20% respectively.

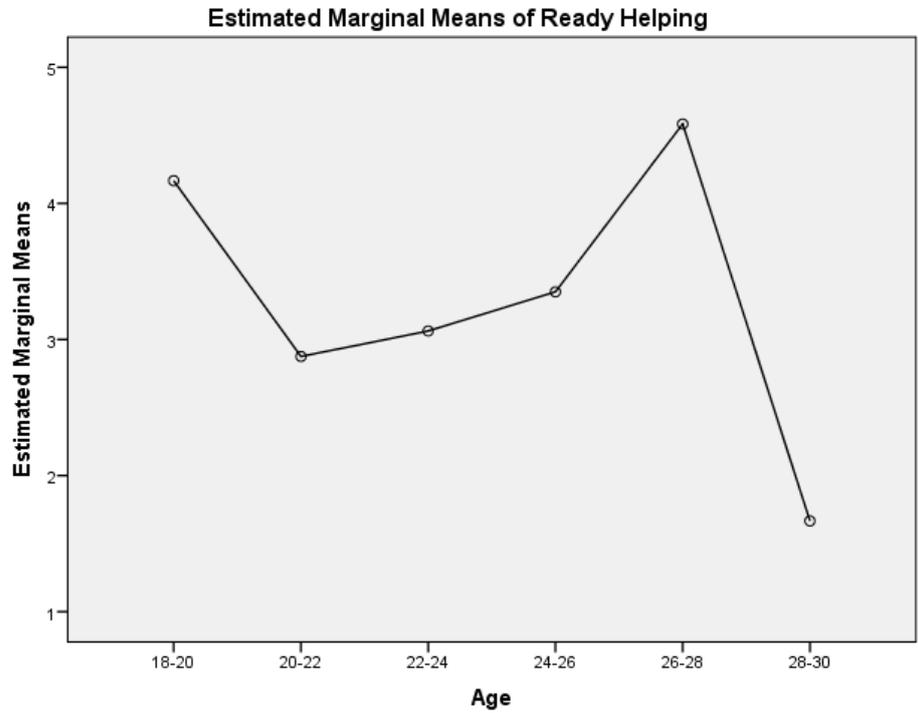
Both the gender of consumers' under study had indicated no specific influence for any of the trust parameters considered in the model. Honesty had its role in both the characteristics of consumers e.g. age and gender.

The graphical plotting of the estimates of marginal means for the trust parameters related to safe and reliable for all the age groups under study; indicated that measures had been found the highest impact for the consumers in the 18-20 and 26-28 both age groups.



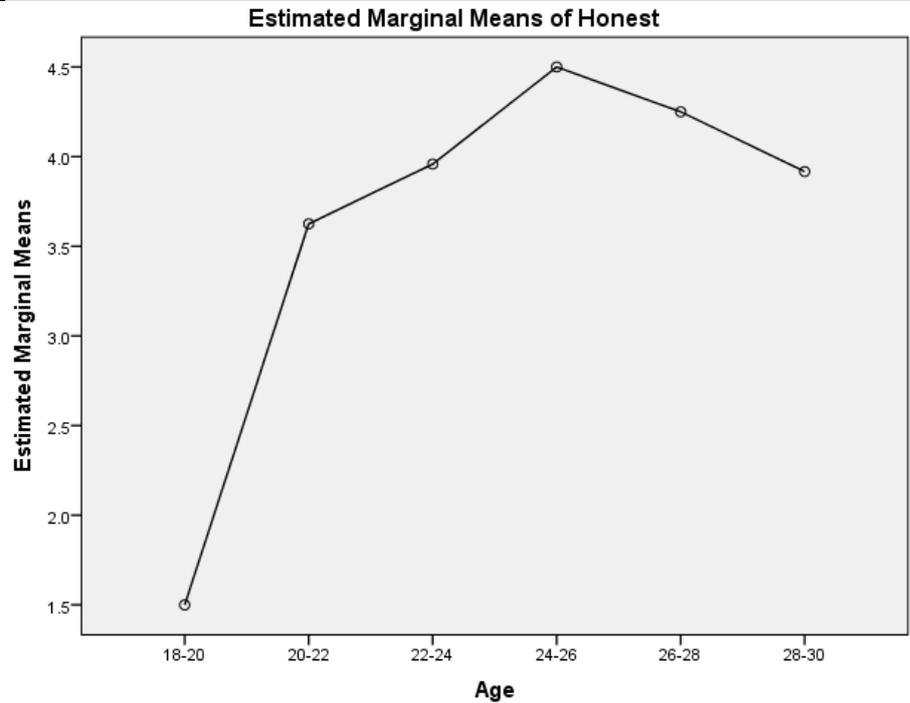
Graph No.1  
(Source: Primary data)

The graphical plotting of the estimates of marginal means for the trust parameters related to ready for helping for all the age groups under study; indicated that measures had been found the lowest impact for the consumers in the 28-30 age group.



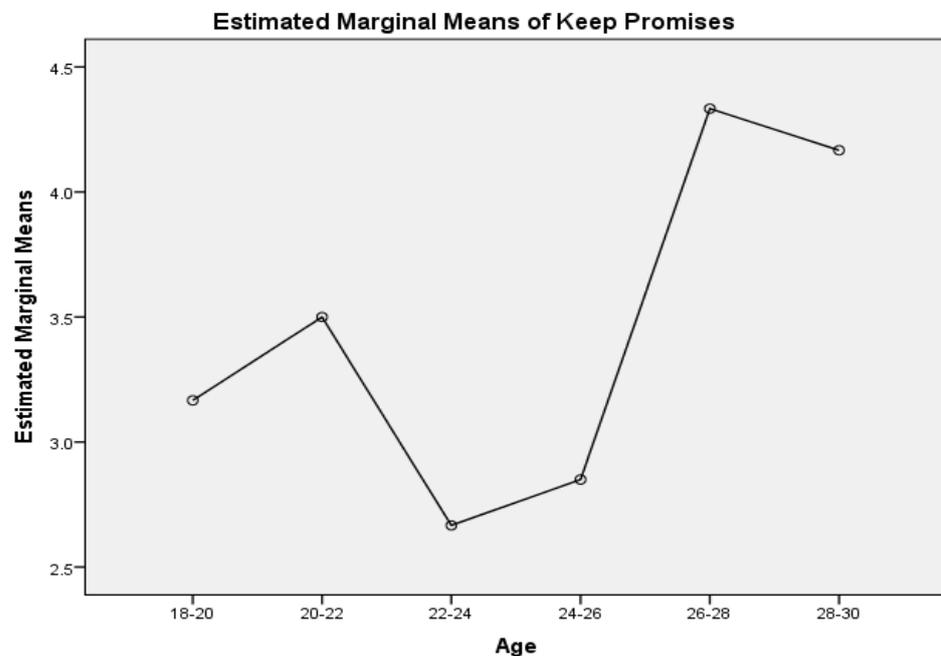
Graph No.2  
(Source: Primary data)

The graphical plotting of the estimates of marginal means for the trust parameters related to honesty for all the age groups under study; indicated that measures had been found the lowest impact for the consumers in the 18-20 age group.



Graph No.3  
(Source: Primary data)

The graphical plotting of the estimates of marginal means for the trust parameters related to keeping parameters for all the age groups under study; indicated that measures had been found the highest impact for the consumers in the 26-28 and 28-30 both age groups.



Graph No.4  
(Source: Primary data)

### Findings:

In a web site driven sales environment, the virtual community need to be developed keeping its present and potential consumers age, because this study has established the association of different consumer's age and their response to different trust measures.

### Conclusions:

This is very specific study in which the consumer's total age span of 12 years e.g. from 18 years to 30 years, had been spreader in 6 age groups with equal interval of 2 years each. It had explored that the demographic character age is very sensitive. There is a need of designing the virtual brand community keeping the age of its consumers in consideration.

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