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## **AWARENESS OF THE REGULATORY FRAMEWORK GOVERNING E-COMMERCE: AN EMPIRICAL STUDY**

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### **Abstract**

World is changing at a remarkable pace and so does the world of marketing. The limited options to communicate with the target audience have been widening. Even the technology has profoundly changed the way consumer process communication. In the last few years the internet has played a major role in many fields of economy as it is commonly defined as a global media. The internet has been largely used in commerce and management. Electronic commerce, commonly written as e-commerce or E-Commerce, is the trading or facilitation of trading in products or services using computer networks, such as the Internet. The rapid adoption of the Internet as a commercial medium has caused firms to experiment with the innovative ways of commerce thus changing the pattern of commerce strategies.

The primarily motive of the study was to investigate the awareness level of respondents regarding the regulatory framework of E-Commerce. The present study was exploratory research by the means of primary data analysis wherein an attempt was made to identify the awareness level of respondents regarding regulatory framework of e-commerce with the help of self structured questionnaire. The questionnaire was based on the five point Likert scale ranging from not at all aware to completely aware and the convenience sampling was used to collect the data from respondents (250) residence of Punjab and Union Territory of Chandigarh. Further, chi square technique was used to test the null hypothesis as whether there was significant relationship between regulatory framework, gender and monthly income

attributes. It was observed that female respondents were more aware as compared to male respondents regarding the regulatory framework of e-commerce. On the basis of monthly income attribute, 15000-30000 income group's respondents were not aware regarding the regulatory framework of e-commerce but in the next income group ranging from 50000-75000 were aware about the regulatory framework of the e-commerce.

**Keywords:** Regulatory framework, Awareness level, E-Commerce, Spamming, Privacy, Spyware etc.

### **Introduction**

One of the most profound changes currently transpiring in the international business environment is the introduction of Electronic commerce. Electronic commerce is carried out by digital communication. E-commerce is a technology mediated exchange between parties (individuals and organizations) as well as the electronically based intra or inter organizational activities that facilitates such exchanges. Electronic Commerce is associated with the buying and selling of information, products and services via computer networks. It is means of transacting business electronically, usually, over the internet. These electronic business transactions occur either through business to business, business to consumer, consumer to consumer or consumer to business. This method includes Internet, electronic mail, electronic data interchange, file transfer or a remote computer. The success of e-commerce can be guaranteed by offering low price services and world wide access online transactions. In today's era, the role of e-commerce is becoming very important in our life. The people are adopting the services of e-commerce because e-commerce provides "varieties of products, timely delivery, easily accessibility of products etc" at lower cost. It creates prosperity of shopping in the minds of customers because it is easy for them to shop from home using internet. E-commerce has made shopping easy. People feel flexible while they use e-commerce websites for shopping purposes, because most of the e-commerce sites are free from

errors (e.g. Snapdeal, Amazon etc.) which increases trust among customers when they give their personal information to the sites. Day by day e-commerce playing an important role in online marketing.

### **Review Of Literature**

Aldridge et.al (1997) stressed on the security issues while doing business on the internet. Security issues mean protection of commercial transactions over the internet. The results indicated that consumers hesitate to engage in e-commerce such as sharing personal information. Mohsen and Ilja (1999) emphasized on security of personal information and company data on the internet and they opined that mostly passwords cracking software contained common numeric combinations. Udo J. Godwin (2001) investigated the IT user's perceptions towards privacy and security concerns in e-commerce. The results of the study indicated that majority of online IT users had serious about their privacy and security concerns while purchasing on the internet. The organizations should have to take responsibilities for educating their users and providing those sources that can enhance user's privacy and security. Stead and Gilbert (2001) stressed on ethical issues (like spamming, cookies, spyware and internet frauds) in e-commerce and seems to support that clarity of privacy issues was very essential while working on the internet. But the term privacy was not to prevent the use of collecting personal information but rather the misuse of it.

Smith, Hiller et.al (2002) investigated the role of trust and security issues while doing online transactions and the importance of web site's reputation over privacy and security concerns. Massoud L Samia (2002) studied the ethical, legal issues, and factors impacting the legal and ethical issues on using the e-commerce. The effective legal framework was necessary for prevention of privacy and fraud on the internet. The patents, copyrights were providing protection against privacy and fraud. Alsmadi Sami (2002) opined the factors that influence consumer's attitude towards online shopping behavior in Jordan city. Therefore, sufficient computer knowledge and reasonable access to internet services maintained a positive impression on the

promotion of company's web sites on the internet. Thomas Sunnykutty (2004) the security issues that were involved in e-commerce namely, internet security, privacy, Cryptography and confidentiality of transactions was very essential.

Reddy Anuradha (2012) the consumer perceptions on security, privacy, trust on e-commerce and the privacy concerns could be reduced by following fair procedures of information collection, to educate the consumers about the protection of personal information. Chahar and Murthy (2013) emphasized the study of security issues which affect e-commerce. The objective of the study was to discuss the different security issues which were involved in e-commerce. It was found that dimensions of e-commerce security were the protection of e-commerce assets from unauthorized access, use, alteration or destruction.

### **Objective Of The Study**

- To examine the awareness level of respondents regarding Laws and Regulations of E-Commerce.

### **Research Methodology**

The present study is exploratory research by the means of primary data analysis in which an attempt has been made to identify the awareness level of respondents regarding regulatory framework of e-commerce with the help of self structured questionnaire. The questionnaire is based on the five point Likert scale ranging from not at all aware to completely aware and the respondents were selected from the state of India i.e. Punjab and the Union Territory of Chandigarh. Due to time constraints, convenience sampling was used to collect data from respondents and only 250 respondents were selected for the study, those who were frequently accessing the e-commerce websites for shopping purpose. The data was analyzed through chi square to extract whether the respondents were aware regarding online Laws and Regulations. The hypothesis was developed to know the relationship between awareness level of respondents regarding the regulatory framework and their gender as well as income attributes.

**Ho;** There is no significant relationship between awareness levels of respondents regarding regulatory framework of e-commerce and their gender as well as monthly income attributes.

### **Results And Discussions**

The rapid growth and evolution of the E-commerce has created a number of unethical practices along with ethical issues, especially in the area of privacy, spamming, frauds, cookies etc. As Neelkanta and Anand (1992) opined that consumers prefer to absorb and endure the wrong done to them rather than fight against injustice. It is all because of they do not know the ways and means of facing them confidently. It has been found that majority of the consumers are not even aware of consumerism as a movement closely connected with the protection of their interest. Many constitutional provisions have been made by government to protect the consumers from unethical practices of online marketers. Until and unless these provisions are availed of by the consumers, the protection of consumer is not possible. There is a great need to make them aware regarding various Acts/Laws concerned with different ethical issues in E-commerce. Consumer awareness of Acts/Laws ensures that consumers can act confidently in the online market.

In this study, the awareness level of the respondents regarding the different kinds Act/Regulation relating to E-commerce and concerned ethical issues were examined. Chi-square test and Symmetric Measures were applied in order to study whether the awareness level of the respondents depends upon their gender and age attributes. We do not use Phi because it is only appropriate for 2 X 2 tables. Cramer's V is the most popular of the chi-square-based measures of nominal association because it gives good norming from 0 to 1 regardless of table size.

**Table 1.1**

**Awareness of Consumer Credit Act, 1974: Gender Wise and Income wise**

	Awareness Level		Gender		Total	Income groups					
			Male	Female		Below 1500	1500-3000	3000-5000	5000-7500	Above 7500	Total
	Not at all Aware	Count	74	52	126	54	57	9	3	3	126
		Withing %	60.7%	40.6%	50.4%	48.2%	62.6%	37.5%	17.6%	50%	50.4%
Aware of Consumer Credit Act, 1974	Somewhat Aware	Count	15	43	58	33	8	9	8	0	58
		Withing %	12.3%	33.6%	23.2%	29.5%	8.8%	37.5%	47.1%	0%	23.2%
	Can't Say	Count	12	0	12	3	3	3	3	0	12
		Withing %	9.8%	0%	4.8%	2.7%	3.3%	12.5%	17.6%	0%	4.8%
	Aware	Count	15	20	35	15	17	0	3	0	35
		Withing %	12.3%	15.6%	14.0%	13.4%	18.7%	0%	17.6%	0%	14%
	Completely	Count	6	13	19	7	6	3	0	3	19

	Aware	Withi n % gen	4.9%	10.2%	7.6%	6.2%	6.6%	12.5 %	0%	50%	7.6%
Total		Coun t	122	128	250	112	91	24	17	6	250
		Withi n % gen	100.0 %	100.0 %	100.0 %	100%	100 %	100 %	100 %	100%	100 %

Chi-square in Gender variable= 32.526, in income variable =57.962, DF in gender= 4, DF in income= 16, Significant at 0.05 level of significance, Cramer's V value in gender and income variable = .361 and .241 respectively

Table 1.1 depicts that 12.3% of the male respondents and 15.6% of the female respondents who were aware of the *Consumer Credit Act*. On the other hand, 60.7% of male respondents and 40.6% of female respondents were not at all aware regarding the act. It implies that majority of the male respondents were not at all aware regarding the act In the income variable, majority of the respondents in 15000-30000 income category were not at all aware regarding the act but above 75000 incomes category's respondents were completely aware regarding the awareness of the act.

The chi-square test applied on the results of the table 1.1 shows that there is association between awareness level of respondents regarding *Consumer Credit Act* and their gender attributes as well as income attributes as the calculated value of chi-square (32.526) and (57.962) respectively is significant ( $P < 0.05$ ). Hence the null hypothesis  $H_0$  is rejected. The results of the above discussed chi-square results are validated as the value of Cramer's V in gender variable is .361 and in income variable is .241, which is very strong and as well as significant. This implies that there is an association between awareness level of respondents regarding *Consumer Credit Act* and their gender attributes as well as income attributes.

**Table 1.2**

**Awareness of Electronic Communication Privacy Act, 1986: Gender wise and  
 Income wise**

	Awareness Level		Gender		Total	Income groups					
			Male	Female		Below 15000	15000 - 30000	30000 - 50000	50000 - 75000	Above 75000	Total
	Not at all Aware	Count	59	51	110	42	52	10	3	3	110
		Within % gen	48.4%	39.8%	44.0%	37.5%	57.1%	41.7%	17.6%	50%	44%
Aware of Electronic Communication Privacy Act, 1986	Somewhat Aware	Count	27	38	65	39	13	8	5	0	65
		Within % gen	22.1%	29.7%	26.0%	34.8%	14.3%	33.3%	29.4%	0%	26%
	Can't Say	Count	12	16	28	14	8	3	3	0	28
		Within % gen	9.8%	12.5%	11.2%	12.5%	8.8%	12.5%	17.6%	0%	11.2%
	Aware	Count	21	15	36	15	12	0	6	3	36
		Within % gen	17.2%	11.7%	14.4%	13.4%	13.2%	0%	35.3%	50%	14.4%
	Completely Aware	Count	3	8	11	2	6	3	0	0	11
		Within % gen	2.5%	6.2%	4.4%	1.8%	6.6%	12.5%	0%	0%	4.4%
	Total	Count	122	128	250	112	91	24	17	6	250
		Within % gen	100.0%	100.0%	100.0%	100%	100%	100%	100%	100%	100%

Chi-square in Gender variable= 6.147, in income variable =41.065, DF in gender= 4, DF in income= 16, Significant at 0.05 level of significance, Cramer’s V value in gender and income variable = .157 and .203 respectively

The above table shows that 17.2% of the male respondents and 11.7% of the female respondents who were aware as well as 48.4% (male) and 39.8% (female) were not at all aware regarding the *Electronic Communication Privacy Act*. It implies that majority of the male respondents were not at all aware regarding the act as compared to female respondents. In income variable, income ranges between 15000-30000 respondents were not at all aware as well as above 75000 income segment’s respondents were aware regarding the awareness of the act.

The calculated value of chi-square in gender variable (6.147) is insignificant ( $P > 0.05$ ) which shows that there is no association between awareness level of respondents regarding the act as well as gender attributes. Hence, null hypothesis  $H_0$  is accepted. Therefore, in income variable the calculated value of chi square (41.065) is significant ( $P < 0.05$ ) which shows there is significant association between awareness level of respondents regarding the electronic communication privacy act as well as income attributes. Hence, null hypothesis  $H_0$  is rejected.

The results of the above discussed chi-square results are validated as the value of Cramer’s V in gender variable is .157, which is very weak and in income variable the value of Cramer’s V is .203, which is strong enough. This implies that there is an association between awareness level of respondents regarding *Electronic Communication Privacy Act* and their income attributes.

**Table 1.3**

**Awareness of Computer Fraud and Abuse Act, 1996: Gender wise and Income wise**

Awareness Level	Gender		Total	Income groups						
	Male	Femal		Belo	15000	30000	50000	Abo	Tota	
			1							

				e		w 1500 0	- 30000	- 50000	- 75000	ve 7500 0	l
	Not at all Aware	Count	71	47	118	44	56	7	8	3	118
		Within %	58.2%	36.7%	47.2 %	39.3 %	61.5 %	29.2 %	47.1 %	50%	47.2 %
Aware of Computer Fraud And Abuse Act, 1996	Somewh at Aware	Count	18	50	68	37	14	11	3	3	68
		Within %	14.8%	39.1%	27.2 %	33% %	15.4 %	45.8 %	17.6 %	50%	27.2 %
	Can't Say	Count	9	9	18	9	3	3	3	0	18
		Within %	7.4%	7.0%	7.2% %	8% %	3.3% %	12.5 %	17.6 %	0% %	7.2% %
	Aware	Count	15	15	30	14	13	0	3	0	30
		Within %	12.3%	11.7% %	12.0 %	12.5 %	14.3 %	0% %	17.6 %	0% %	12% %
	Comple tely Aware	Count	9	7	16	8	5	3	0	0	16
		Within %	7.4%	5.5% %	6.4% %	7.1% %	5.5% %	12.5 %	0% %	0% %	6.4% %
	Total	Count	122	128	250	112	91	24	17	6	250
		Within %	100.0 %	100.0 %	100 %	100 %	100% %	100% %	100% %	100% %	100 %

Chi-square in Gender variable= 20.058, in income variable = 31.498, DF in gender= 4, DF in income= 16, Significant at 0.05 level of significance, Cramer's V value in gender and income variable = .283 and .177 respectively

It is evident from the table 1.3 that in gender variable, 7.4% of male and 5.5% of female respondents were completely aware as well as 58.2% and 36.7% of male and female respondents respectively were not at all aware regarding Awareness of *Computer Fraud and Abuse Act, 1996*. In income variable, 50000-75000 income group

respondents were aware and majority of respondents i.e. 61.5% which lies in 15000-30000 income groups were not at all aware regarding the act.

The chi-square test applied on the results of the table 1.3 reveals that there is association between awareness level of respondents regarding *Computer Fraud and Abuse Act, 1996* and their gender attributes as well as income attributes as the calculated value of chi-square (20.058) and (31.498) respectively is significant ( $P < 0.05$ ). Hence the null hypothesis  $H_0$  is rejected. The results of the above discussed chi-square results are validated as the value of Cramer's V in gender variable is .283 and in income variable is .177, which is very strong and as well as significant. This implies that there is an association between awareness level of respondents regarding *Computer Fraud and Abuse Act, 1996* and their gender attributes as well as income attributes.

**Table 1.4**

**Awareness of Data Protection Act, 1998: Gender wise and Income wise**

	Awareness Level		Gender		Total	Income Groups					
			Male	Female		Below 15000	15000-30000	30000-50000	50000-75000	Above 75000	Total
Protection Act, 1998	Not at all Aware	Count	63	42	105	47	40	10	5	3	105
		Within %	51.6%	32.8%	42.0%	42%	44%	41.7%	29.4%	50%	42%
	Somewhat Aware	Count	17	36	53	29	19	5	0	0	53
		Within %	13.9%	28.1%	21.2%	25.9%	20.9%	20.8%	0%	0%	21.2%
Can't Say	Count	9	13	22	3	13	3	3	0	22	
	Within %	7.4%	10.2%	8.8%	2.7%	14.3%	12.5%	17.6%	0%	8.8%	

		%					%	%	%		
Aware	Count	21	29	50	18	14	6	9	3	50	
	Within %	17.2%	22.7%	20.0%	16.1%	15.4%	25%	52.9%	50%	20%	
Completely Aware	Count	12	8	20	15	5	0	0	0	20	
	Within %	9.8%	6.2%	8.0%	13.4%	5.5%	0%	0%	0%	8%	
Total	Count	122	128	250	112	91	24	17	6	250	
	Within %	100.0%	100.0%	100.0%	100%	100%	100%	100%	100%	100%	

Chi-square in Gender variable= 13.682, in income variable = 39.759, DF in gender= 4, DF in income= 16, Significant at 0.05 level of significance, Cramer's V value in gender and income variable = .234 and .199 respectively

In gender variable taking table 1.4 into account it can be inferred that 17.2% of male respondents and 22.7% of female respondents were aware on the other hand, 51.6% of male respondents and 32.8% of female respondents were not at all aware regarding the awareness of the act. In income variable, majority of the respondents i.e. 52.9% come under income group of 50000-75000 were aware and in the above 75000 income segment, 50% of the respondents were not aware regarding the awareness of the data protection act.

The null hypothesis is rejected as chi square test applied on the results of Table 1.4 reveals that there is an association between awareness levels of respondents regarding the *Data Protection Act, 1998* and their gender as well as income attributes, as the calculated value of chi square (13.682) and (39.759) respectively is significant ( $P < .05$ ). The value of Cramer's V in gender as well as in income variable is .234 and .199 respectively which is strong enough as well as significant and validates the results of the above discussed chi square results.

**Table 1.5**

**Awareness of Information Technology Act, 2000: Gender wise and Income wise**

	Awareness Level		Gender		Total	Income groups					
			Male	Female		Below 1500	1500-3000	3000-5000	5000-7500	Above 7500	Total
	Not at all Aware	Count	41	29	70	31	24	3	9	3	70
		Within %	33.6%	22.7%	28.0%	27.7%	26.4%	12.5%	52.9%	50%	28%
Aware of Information Technology Act, 2000	Somewhat Aware	Count	22	39	61	23	22	10	3	3	61
		Within %	18.0%	30.5%	24.4%	20.5%	24.2%	41.7%	17.6%	50%	24.4%
	Can't Say	Count	30	5	35	23	9	3	0	0	35
		Within %	24.6%	3.9%	14.0%	24.5%	9.9%	12.5%	0%	0%	14%
	Aware	Count	20	41	61	29	24	3	5	0	61
		Within %	16.4%	32.0%	24.4%	25.9%	26.4%	12.5%	29.4%	0%	24.4%
	Completely Aware	Count	9	14	23	6	12	5	0	0	23
		Within %	7.4%	10.9%	9.2%	5.4%	13.2%	20.8%	0%	0%	9.2%
	Total	Count	122	128	250	112	91	24	17	6	250
		Within %	100.0%	100.0%	100.0%	100%	100%	100%	100%	100%	100%

Chi-square in Gender variable= 32.843, in income variable = 32.852, DF in gender= 4, DF in income= 16, Significant at 0.05 level of significance, Cramer's V value in gender and income variable = .362 and .181 respectively

As shown in table 1.5, 16.4% of male and 32% of female respondents were aware as well as 33.6% (male) and 22.7% (female) respondents were not at all aware about the act. This implies that female respondents were more aware as compared to male respondents. In income variable, majority of the respondent's i.e.29.4% lies between 50000-75000 income category that were aware and very least percentage of respondents i.e. 12.5% were covered in 30000-50000 income group who were not aware regarding the awareness of the act.

The null hypothesis  $H_0$  is rejected as chi square test applied on the results of Table 1.5 shows that there is an association between awareness levels of respondents regarding the information technology act, 2000 and their gender as well as income attributes, as the calculated value of chi square (32.843) and (32.852) respectively is significant ( $P < .05$ ). The value of Cramer's V in gender as well as in income variable is .362 and .181 respectively which is strong enough as well as significant and validates the results of the above discussed chi square results.

**Table 1.6**

**Awareness of Federal Information Security Management Act, 2002: Gender wise and Income wise**

	Awareness Level		Gender		Total	Income groups					
			Male	Female		Below 15000	15000 - 30000	30000 - 50000	50000 - 75000	Above 75000	Total
	Not at all Aware	Count	62	44	106	44	43	7	6	6	106
		Within %	50.8%	34.4%	42.4%	39.3%	47.3%	29.2%	35.3%	100%	42.4%
Information Security	Somewhat Aware	Count	18	48	66	28	27	8	3	0	66
		Within %	14.8%	37.5%	26.4%	25%	29.7%	33.3%	17.6%	0%	26.4%

Can't Say	Count	6	25	31	14	99	6	2	0	31
	Within %	4.9%	19.5%	12.4%	12.5%	9.9%	25%	11.8%	0%	12.4%
Aware	Count	27	11	38	23	9	0	6	0	38
	Within %	22.1%	8.6%	15.2%	20.5%	9.9%	0%	35.3%	0%	15.2%
Completely Aware	Count	9	0	9	3	3	3	0	0	9
	Within %	7.4%	.0%	3.6%	2.7%	3.3%	12.5%	0%	0%	3.6%
Total	Count	122	128	250	112	91	24	17	6	250
	Within %	100.0%	100.0%	100.0%	100%	100%	100%	100%	100%	100%

Chi-square in Gender variable= 43.956, in income variable = 33.160, DF in gender= 4, DF in income= 16, Significant at 0.05 level of significance, Cramer's V value in gender and income variable = .419 and .182 respectively

It is cleared from the above table 1.6, 22.1% of male and 8.6% of female respondents were aware and 50.8% of male and 34.4% of female respondents were not aware regarding the *Federal information security management act*. This shows male respondents were not aware about the act. In income variable, 100% of the respondents in above 75000 income group were not at all aware and majority of the respondents i.e.35.3% were aware in 50000-75000 income group about the act.

The chi-square test applied on the results of the table 1.6 shows that there is association between awareness level of respondents regarding federal information security management act,2002 and their gender attributes as well as income attributes as the calculated value of chi-square (43.956) and (33.160) respectively is significant ( $P < 0.05$ ). Hence the null hypothesis  $H_0$  is rejected. The results of the above discussed chi-square results are validated as the value of Cramer's V in

gender variable is .419 and in income variable is .182, which is very strong and as well as significant.

**Table 1.7**

**Awareness of Personal Data Protection Bill, 2006: Gender wise and Income wise**

	Awareness Level		Gender		Total	Income groups					
			Male	Female		Below 1500	1500-3000	3000-5000	5000-7500	Above 7500	Total
	Not at all Aware	Count	74	37	111	46	54	5	3	3	111
		Within %	60.7%	28.9%	44.4%	41.1%	59.3%	20.8%	17.6%	50%	44.4%
Aware of Personal Data Protection Bill , 2006	Somewhat Aware	Count	16	40	56	32	10	8	6	0	56
		Within %	13.1%	31.2%	22.4%	28.6%	11%	33.3%	35.3%	0%	22.4%
	Can't Say	Count	12	27	39	17	16	6	0	0	39
		Within %	9.8%	21.1%	15.6%	15.2%	17.6%	25%	0%	0%	15.6%
	Aware	Count	11	18	29	9	9	0	8	3	29
		Within %	9.0%	14.1%	11.6%	8%	9.9%	0%	47.1%	50%	11.6%
	Completely Aware	Count	9	6	15	8	2	5	0	0	15
		Within %	7.4%	4.7%	6.0%	7.1%	2.2%	20.8%	0%	0%	6%
	Total	Count	122	128	250	112	91	24	17	6	250
		Within %	100.0%	100.0%	100.0%	100%	100%	100%	100%	100%	100%

Chi-square in Gender variable= 30.552, in income variable = 69.820, DF in gender= 4, DF in income= 16, Significant at 0.05 level of significance, Cramer’s V value in gender and income variable = .350 and .264 respectively

In gender variable, 9% of the male respondents and 14.1% of the female respondents were aware and 60.7% (male) and 28.9% (female) respondents were not aware regarding the *Personal Data Protection Act, 2006*. This implies females were more aware about the act. In income variable, majority of the respondents in 15000-30000 income group were not at all aware and 50% of respondents in above 75000 income group were aware about the act.

The null hypothesis Ho is rejected as chi square test applied on the results of Table 1.7 shows that there is an association between awareness levels of respondents regarding the personal data protection bill, 2006 and their gender as well as income attributes, as the calculated value of chi square (30.552) and (69.820) respectively is significant ( $P < .05$ ). The value of Cramer’s V in gender as well as in income variable is .350 and .264 respectively which is strong enough as well as significant and validates the results of the above discussed chi square results.

**Table 1.8**

**Awareness of E-Privacy Act, 2009: Gender wise and Income wise**

	Awareness Level		Gender		Total	Income groups					
			Male	Female		Below 15000	15000-30000	30000-50000	50000-75000	Above 75000	Total
	Not at all Aware	Count	67	43	110	39	49	10	6	6	110
		Within %	54.9%	33.6%	44.0%	34.8%	53.8%	41.7%	35.3%	100%	44%
Pr	Somewha	Count	28	51	79	48	17	9	5	0	79

	t Aware	Within %	23.0%	39.8%	31.6%	42.9%	18.7%	37.5%	29.4%	0%	31.6%	
	Can't Say	Count	15	18	33	12	16	5	0	0	0	33
		Within %	12.3%	14.1%	13.2%	10.7%	17.6%	20.8%	0%	0%	0%	13.2%
	Aware	Count	12	12	24	11	7	0	6	0	0	24
		Within %	9.8%	9.4%	9.6%	9.8%	7.7%	0%	35.3%	0%	0%	9.6%
	Completely Aware	Count	0	4	4	2	2	0	0	0	0	4
		Within %	0%	3.1%	1.6%	1.8%	2.2%	0%	0%	0%	0%	1.6%
	Total	Count	122	128	250	112	91	24	17	6	6	250
		Within %	100.0%	100.0%	100.0%	100%	100%	100%	100%	100%	100%	100%

Chi-square in Gender variable= 16.071, in income variable = 42.077, DF in gender= 4, DF in income= 16, Significant at 0.05 level of significance, Cramer's V value in gender and income variable = .254 and .205 respectively

In gender variable, 54.9% (male) and 33.6% (female) respondents were not at all aware and 9.8% and 9.4% of male and female respectively were aware about the act. This indicates that male respondents were not aware about the *E-Privacy act, 2009*. In income variable, 100% of the respondents were not aware in above 75000 income category. The next income group ranges 50000-75000, majority of the respondents were aware about the e-privacy act, 2009.

There is significant relationship between the awareness level of respondents regarding the E-privacy Act, 2009 and their gender as well as income attributes, as the calculated value of chi square (16.071) and (42.077) respectively is significant ( $P < .05$ ). Hence, the null hypothesis  $H_0$  is rejected. The value of Cramer's V value in gender as well as in income variable is .254 and .205, which is strong as well as

significant, which validates the results of above discussed chi square results. This implies that there is significant relationship between awareness level of respondents regarding the E-privacy Act, 2009 and their gender as well as income attributes.

**Table 1.9**

**Awareness of Children’s Online Privacy Protection Act: Gender wise and Income wise**

	Awareness Level		Gender			Income groups						
			Male	Female	Total	Below 1500	1500-3000	3000-5000	5000-7500	Above 7500	Total	
	Not at all Aware	Count	59	35	94	33	43	9	6	3	94	
		Within %	48.4%	27.3%	37.6%	29.5%	47.3%	37.5%	35.3%	50%	37.6%	
Aware of Children’s Online Privacy Protection Act	Somewhat Aware	Count	16	38	54	27	10	6	8	3	54	
		Within %	13.1%	29.7%	21.6%	24.1%	11%	25%	47.1%	50%	21.6%	
	Can’t Say	Count	26	15	41	20	11	7	3	0	41	
		Within %	21.3%	11.7%	16.4%	17.9%	12.1%	29.2%	17.6%	0%	16.4%	
	Aware	Count	21	31	52	30	22	0	0	0	52	
		Within %	17.2%	24.2%	20.8%	26.8%	24.2%	0%	0%	0%	20.8%	
	Completely Aware	Count	0	9	9	2	5	2	0	0	9	
		Within %	.0%	7.0%	3.6%	1.8%	5.5%	8.3%	0%	0%	3.6%	
	Total		Count	122	128	250	112	91	24	17	6	250

	Within %	100.0 %	100.0 %	100.0 %	100 %	100%	100%	100%	100%	100 %
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Chi-square in Gender variable= 28.838, in income variable = 38.054, DF in gender= 4, DF in income= 16, Significant at 0.05 level of significance, Cramer’s V value in gender and income variable = .340 and .195 respectively

Table 1.9 depicts that 17.2% (male) and 24.2% (female) were aware as well as 48.4% and 27.3% of male and female respondents respectively were not at all aware about the act. This indicates that male respondents were not aware about the act. In the income variable, majority of the respondents in above 75000 income group were not at all aware and below 15000 incomes group respondents were aware about the act.

The null hypothesis Ho is rejected as chi square test applied on the results of Table 1.9 reveals that there is significant difference between awareness levels of respondents regarding the Children’s Online Privacy Protection Act and their gender as well as income attributes, as the calculated value of chi square (28.838) and (38.054) is significant (P<.05).The value of Cramer’s V value in gender as well as in income variable is .340 and .195, which is strong as well as significant, which validates the results of above discussed chi square results.

**Table 1.10**

**Awareness of Federal Trade Commission Act: Gender wise and Income wise**

Awareness Level		Gender			Income groups					
		Male	Female	Total	Below 1500	1500-3000	3000-5000	5000-7500	Above 7500	Total
Not at all Aware	Count	64	44	108	43	52	4	3	6	108
	Within %	52.5%	34.4%	43.2%	38.4%	57.1%	16.7%	17.6%	100%	43.2%

Aware of Federal Trade Commission Act	Somewhat Aware	Count	10	37	47	23	9	12	3	0	47
		Within %	8.2%	28.9%	18.8%	20.5%	9.9%	50%	17.6%	0%	18.8%
	Can't Say	Count	15	24	39	18	13	5	3	0	39
		Within %	12.3%	18.8%	15.6%	16.1%	14.3%	20.8%	17.6%	0%	15.6%
	Aware	Count	24	18	42	19	15	0	8	0	42
		Within %	19.7%	14.1%	16.8%	17%	16.5%	0%	47.1%	0%	16.8%
	Completely Aware	Count	9	5	14	9	2	3	0	0	14
		Within %	7.4%	3.9%	5.6%	8%	2.2%	12.5%	0%	0%	5.6%
	Total	Count	122	128	250	112	91	24	17	6	250
		Within %	100.0%	100.0%	100.0%	100%	100%	100%	100%	100%	100%

Chi-square in Gender variable= 23.161, in income variable = 55.473, DF in gender= 4, DF in income= 16, Significant at 0.05 level of significance, Cramer's V value in gender and income variable = .304 and .236 respectively

In gender variable, 19.7% of the male respondents and 14.1% of the female respondents were aware as well as 52.5% male and 34.4% female respondents were not at all aware regarding the *Federal trade commission act*. The results revealed that female respondents were more aware about the act. In income variable, below 15000 incomes group's respondents were not aware but the next income group ranges between 50000-75000 respondents were aware regarding the awareness of the act.

The null hypothesis  $H_0$  is rejected as chi square test applied on the results of Table 1.10 reveals that there is significant difference between awareness levels of respondents regarding the federal trade commission act and their gender as well as income attributes, as the calculated value of chi square (23.161) and (55.473) is

significant ( $P < .05$ ). The value of Cramer's V value in gender as well as in income variable is .304 and .236, which is strong as well as significant, which validates the results of above discussed chi square results.

**Table 1.11****Awareness of Electronic Fund Transfer Act: Gender wise and Income wise**

	Awareness Level		Gender		Total	Income groups					
			Male	Female		Below 1500	1500-3000	3000-5000	5000-7500	Above 7500	Total
	Not at all Aware	Count	59	36	95	38	44	2	5	6	95
		Within %	48.4%	28.1%	38.0%	33.9%	48.4%	8.3%	29.4%	100%	38%
Aware of Electronic Fund Transfer Act	Somewhat Aware	Count	28	36	64	36	13	9	6	0	64
		Within %	23.0%	28.1%	25.6%	32.1%	14.3%	37.5%	35.3%	0%	25.6%
	Can't Say	Count	8	18	26	3	13	7	3	0	26
		Within %	6.6%	14.1%	10.4%	2.7%	14.3%	29.2%	17.6%	0%	10.4%
	Aware	Count	18	19	37	21	13	0	3	0	37
		Within %	14.8%	14.8%	14.8%	18.8%	14.3%	0%	17.6%	0%	14.8%
	Completely Aware	Count	9	19	28	14	8	6	0	0	28
		Within %	7.4%	14.8%	11.2%	12.5%	8.8%	25%	0%	0%	11.2%
	Total	Count	122	128	250	112	91	24	17	6	250
		Within %	100.0	100.0	100.0	100	100%	100%	100%	100%	100

	%	%	%	%	%					%
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Chi-square in Gender variable= 13.877, in income variable = 55.303, DF in gender= 4, DF in income= 16, Significant at 0.05 level of significance, Cramer’s V value in gender and income variable = .236 and .235 respectively

In gender variable 14.8% ( male) and 14.8% (female) respondents were those who were aware as well as 48.4% and 28.1% male and female respondents were those who not at all aware regarding the *Electronic fund transfer act*. This shows that most of the male respondents were not aware regarding the Act. In income variable, majority of the respondents in 30000-50000 income group were aware and 100% of the respondents were not at all aware under above 75000 income group.

The null hypothesis Ho is rejected as chi square test applied on the results of table 1.11 reveals that there is significant relationship between awareness level of respondents regarding the Electronic Fund Transfer Act and their gender and income attributes, as the calculated value of chi square (13.877) and (55.303) is significant (P<.05).The value of Cramer’s V value in gender as well as in income variable is .304 and .236, which is strong as well as significant, which validates the results of above discussed chi square results.

**Table 1.12**

**Awareness of Fair and Accurate Credit Transaction Act: Gender wise and Income wise**

	Awareness Level		Gender		Total	Income groups					
			Male	Female		Below 1500	1500-3000	3000-5000	5000-7500	Above 7500	Total
	Not at all	Count	62	43	105	43	47	4	5	6	105
	Aware	Within	50.8%	33.6%	42.0	38.4	51.6	16.7	29.4	100%	42

		%			%	%	%	%	%		%
Aware of Fair And Accurate Credit Transaction Act	Somewhat Aware	Count	12	31	43	21	7	12	3	0	43
		Within %	9.8%	24.2%	17.2%	18.8%	7.7%	50%	17.6%	0%	17.2%
	Can't Say	Count	21	20	41	22	11	5	3	0	41
		Within %	17.2%	15.6%	16.4%	19.6%	12.1%	20.8%	17.6%	0%	16.4%
	Aware	Count	12	23	35	17	12	0	6	0	35
		Within %	9.8%	18.0%	14.0%	15.2%	13.2%	0%	35.3%	0%	14%
	Completely Aware	Count	15	11	26	9	14	3	0	0	26
		Within %	12.3%	8.6%	10.4%	8%	15.4%	1.2%	0%	0%	10.4%
	Total	Count	122	128	250	112	91	24	17	6	250
		Within %	100.0%	100.0%	100.0%	100%	100%	100%	100%	100%	100%

Chi-square in Gender variable= 15.795, in income variable = 50.631, DF in gender= 4, DF in income= 16, Significant at 0.05 level of significance, Cramer's V value in gender and income variable = .251 and .225 respectively

In gender variable, 9.8% of the male respondents and 18% of the female respondents were aware and 50.8% male and 33.6% female respondents were not at all aware regarding the *Fair and accurate credit transaction act*. This shows that male respondents were not aware about the act. In income variable, above 75000 income group's respondents were not aware and the next income group ranges 50000-75000 respondents were aware regarding the act.

The null hypothesis  $H_0$  is rejected as chi square test applied on the results of table 1.12 reveals that there is significant relationship between awareness level of respondents regarding the Fair and Accurate Credit Transaction Act and their

gender and income attributes, as the calculated value of chi square (15.795) and (50.631) is significant ( $P < .05$ ). The value of Cramer's V value in gender as well as in income variable is .251 and .225, which is strong as well as significant, which validates the results of above discussed chi square results.

### **Findings**

The findings of the study highlighted that female respondents are more aware about regulatory framework used for e-commerce business as compared to male respondents. However, customers of e-commerce having income level less than Rs.75000 are highly aware as compared to those customers who earns less than Rs. 30,000 per month. Further, it was revealed through results that awareness level increased among e-commerce customers about regulatory framework if customers possessed professional as well as master level qualification and they also showed majority in government level occupation, followed by the self runner business.

### **Conclusion**

Electronic Commerce is associated with the buying and selling of information, products and services via computer networks. It is carried out by digital communication and transacts business transactions over the internet. This study examined the awareness level of respondents regarding the regulatory framework of e-commerce and there are many acts which considered as most reliable legitimacy while dealing at e-commerce sites. The result of the study indicated that male respondents are not aware regarding the regulatory framework of e-commerce as compared to female because they don't pay much attention towards e-privacy in e-commerce. Therefore, in order to increase the awareness level of male respondent's marketer should have to use effective awareness campaigns of e-privacy so that they can augment awareness among male respondents. Moreover, they also must have to emphasize on the low income level groups who also not much familiar with e-commerce business and let them free to know about regulatory framework used in

e-commerce which will connect the more numbers of customers with e-commerce business.

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