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IMPACT OF ENVIRONMENTAL AND INDIVIDUAL CONTEXT VARIABLES ON E-COMMERCE IMPLEMENTATION IN MEDIUM SIZED AUTOMOBILE ENTERPRISES OF MAHARASHTRA

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Abstract

This study fills the research gap in E-commerce implementation, in B2B context, in Automobile Sector-medium enterprises. Collected data were analyzed, by using advanced multivariate statistical software of Structural Equation Modelling (Smart PLS). The analysis involved three iteration processes where several of the factors were deleted in order to make the model acceptable. The result of the analysis found that R^2 value of the model was 0.461, which indicated that the developed model had substantial impact on E-commerce implementation prediction, under environmental and individual context variables. This study found environmental context (Trading partner pressure and Competitive pressure) and individual context (Manager/Owner's IS Knowledge and Innovativeness) variables, to have a strong effect on E-commerce adoption and implementation in automobile medium enterprises.

Keywords: *E-commerce, Micro, Small and Medium Enterprises (MSME), Partial Least Square-Structural Equation Modeling (PLS-SEM) and Information and Communication Technology (ICT)*

JEL Code: *L61, L81, M15*

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1. Introduction

The Indian Auto-Components Industry has experienced healthy growth over the last few years. The Auto-Components Industry accounts for almost seven per cent of India's

Gross Domestic Product (GDP) and employs as many as 19 million people, both directly and indirectly. A stable government framework, increased purchasing power, large domestic market and an ever increasing development in

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infrastructure, have made India a favourable destination for manufacturing. Over the last decade, the automotive components industry has scaled three times to US\$ 40 billion in 2015 while exports have grown even faster to US\$ 11 billion (**GOI & SIAM, Automobile Mission Plan, 2016-26**). This has been driven by strong growth in the domestic market and increasing globalisation (including exports) of several Indian suppliers. According to the Automotive Component Manufacturers Association of India (ACMA), the Indian Auto-Components Industry is expected to register a turnover of US\$ 100 billion by 2020, backed by strong exports, ranging between US\$ 80- US\$ 100 billion by 2026, from the current US\$ 11.2 billion (**ACMA annual report, 2014-15**). MSMEs are increasingly seeing the benefits arising from E-commerce, as expanded geographical coverage, giving them a larger potential market into which they can sell their products and services. E-commerce improves the MSME's ability to compete with larger organizations and operate on a global scale. They additionally see E-commerce as a tool for providing value effective ways, in which MSME's could plug their business, launch new product, improve communications, gathering data and establishing potential business partners. The web permits small businesses to enter the domain of larger business and compete with them. Moreover, the utilization of e-commerce permits small businesses to attain equivalent efficiencies as large businesses.

2. Review of Literature

By reviewing pertinent studies in this area, Researchers found that very few studies were done on B2B, Indian and MSME sub-sector specific context. This study tries to fill this gap of research. Electronic Commerce has technical components, similar to other IT innovations. By keeping the objectives of this study, Researchers have identified following research variables from pertinent studies.

The environment is the arena in which an organization conducts its business and in the specific context of e-commerce adoption in SMEs. It includes competitive pressures and pressure from trading partners; information intensity and government support. Competitors, suppliers and customers may force small businesses to engage in e-commerce activities (**Scupola, 2009**). External pressure from competitors, government and industry are of great importance in the adoption decision (**Grandon and Pearson, 2004**). Related to this point is the use of IT and Electronic Commerce, being often imposed on SMEs by major customers or suppliers. Such pressure from trading partners plays a critical role in previous studies of IT and Electronic Commerce adoption by small firms (**Kuan, and Chau, 2001; Kutlu, and Ozturan, 2008, Liu, 2008**). Existence of intense competition is a motivating factor for companies to differentiate and stay at least one step ahead of their competitors. As the number of competitors adopting innovation increases, small firms have more tendencies, to adopt the innovation, for sustaining their competitive position (**Li, 2008**). A positive association between the competition intensity and e-commerce adoption decisions (**Al-Qirim, 2007; Mahesha Kapurubandara and Robyn Lawson., 2006**http://scialert.net/fulltext/?doi=itj.2012.1664.1676&org=11-39466_con) has been identified in the literature. Information intensity refers to dependency of firm on reliable, relevant and accurate information (**Thong 1999**). Information intensity had positive association with E-Commerce implementation (**Teo et al., 2006; Liu, 2008; Chong et al., 2008; Morteza et al., 2012**). The impact of government policies and initiatives has been shown to have direct and indirect stimulation to the supply of information which produces faster technology diffusion (**Chong et al., 2008**). Government support had positive association with e-commerce implementation (**Lin and Lin,**

2008; Soares-Aguiar and Palma-Dos-Reis, 2008; Li, 2008). Lack of internal expertise can be a factor, delaying the innovation (Thong, 1999). In the literature, previous IT experience has been observed to be an important factor, contributing to the success of the IT adoption. Findings from Palvia and Palvia (1999) and Chong -Pervan (2001), indicate experience of owner to be a very important factor, in the success of IT adoption. When a company owner, who actually has great influential power on top management, explains the role of IT in achieving his/her vision, attitudes of managers will be affected and the level of priority of IT related issues, in all decisions, will increase. Owner/Manager's innovativeness refers to openness to the new system for experiment, particularly e-commerce, as he is ready to try new things or to try new ways of doing things and therefore, they are more prone to implement e-commerce in their organisation (Thong, 1999; Sandy Chong, 2005; Zhu et.al, 2006a; Li, 2008; Ada Scupola, 2009; Pallavi Upadhyaya, Mohanan, 2009; Le Van Huy, 2012; Rita Rahayua and John Daya, 2015).

3. Statement of the Problem

Majority of automobile medium enterprises are struggling to adopt and implement e-commerce, in their day-to-day activities, despite their positive intention and efforts. There is a need to identify significant variables of environmental and individual context, which has profound effect on e-commerce adoption and implementation among enterprises.

4. Need of the Study

Large organizations have enough resources but MSMEs have limited financial and human resources to implement e-commerce. MSMEs could be seen as being no different from their larger corporate cousins in one key aspect, namely, to survive and prosper in competitive business areas. Organizations these days are

faced with globalization, digitalization, demanding customers with rapidly changing needs, shrinking response time, shrinking product lifecycles and demanding staff. To keep their competitive advantage in this highly competitive environment, medium enterprises need to implement E-commerce, otherwise their existence becomes a big question mark.

5. Objective of the Study

Following were the major objectives of this study.

- a. To find significant variables of environmental context, for e-commerce adoption and implementation among enterprises.
- b. To find significant variables of individual context, for e-commerce adoption and implementation among enterprises.

6. Hypotheses of the Study

The following hypotheses were developed for the study.

H-1: There is significant relationship between Trading partner pressure and degree of e-commerce adoption and implementation.

H-2: There is significant relationship between Competitive pressure and degree of e-commerce adoption and implementation.

H-3: There is significant relationship between, Information intensity and degree of e-commerce adoption and implementation.

H-4: There is significant relationship between Government support and degree of e-commerce adoption and implementation.

H-5: There is significant relationship between Manager's IS Knowledge and degree of e-commerce adoption and implementation.

H-6: There is significant relationship between Manager's Innovativeness and degree of e-commerce adoption and implementation.

7. Methodology of the Study

7.1 Sample Selection

This study adopted simple random sampling technique. This method was considered appropriate, to collect sufficient information from respondents, for arriving at statistically significant inference. Out of 104 of compiled automobile sector-medium enterprises, 82 were randomly selected and contacted over telephone to participate in the survey. Out of 82 enterprises contacted, 56 enterprises agreed to participate in the survey. This resulted in the response rate of 68 per cent. Based on their consent to participate in the study, a personal visit was made to these firms and interview with the owner/manager was conducted. In six cases, the questionnaire was mailed through email and telephonic interview with owner/manager was conducted.

7.2 Source of Data

The target population for the study was Maharashtra State's automobile sector-medium enterprises. List was compiled from government and non-governments agencies. Respondents were owners/managers of automobile sector-medium enterprises.

7.3 Period of the Study

The study period was from September 2014 to April 2015.

7.4 Tools used

Data were collected by visiting personally and via e-mails, by using structured questionnaire and personal interviews. Collected data were analyzed by software SPSS 19 and SmartPLS3 version.

8. Data Analysis and Discussion

A SEM approach was used as the data analysis approach. In particular, the Smart PLS software (Ringle et al., 2005) was used to assess the measurement and structural models. According to Chin and Newsted (1999), a

measurement model is a linkage between the latent variables and their manifest variables while the structural model captures the hypothesized causal relationships among the research constructs. Smart PLS can handle complex predictive models in small-to-medium sample sizes. As a result of this quality, Smart PLS was found appropriate in the case of the current study sample, which was relatively small (56). Manifest variables, with outer loading 0.7, were considered highly satisfactory (Henseler et. al., 2009 and O. Gotz et. al., 2010). While the loading value of 0.5 is regarded as acceptable, the manifest variables, with a loading value of less than 0.5, should be dropped (Chin, 1998 and Hair et al., 2010). In this study, the cut-off value, taken for outer loading, was 0.5. Second parameter for consistency evaluations is constructed reliability where it is evaluated by two measures, that is, Cronbach's alpha and Composite Reliability (CR). Hair et al., (2011) suggested that value of Cronbach alpha to be higher than 0.7 and for composite reliability, the value of 0.7 is considered acceptable.

For the validity of the variable, the variables were tested on convergent and discriminant validities. Convergent validity was carried out by Average Variance Extracted (AVE) test on variables (Fornell and Larcler, 1981). It determines the amount of variance, captured by latent variable, from its relative manifest variables, due to measurement errors. Hair et al., (2011) argued that a minimum of 50% of the variance, from manifest variable, should be captured by latent variables. This implies that AVE value of the construct should be greater than 0.5. Discriminant validity was carried out to confirm that the manifest variable in any construct was relevant to the designated latent variable, where its cross-loading value in LV was higher than that in any other construct (Chin, 1998). Based on the above criterion, measurement model was evaluated by iterative process, to discard the weak manifest variables, from the developed model. Hence a total of three

iterations were involved in this study, where each of the iterations was assessed, based on the criteria and resulted in discarding four manifest variables. **Table-1** provides the reliability and validity indicators of the measurement model of final iterations only.

Once the iteration process was completed, the final model was checked for Discriminant validity, based on cross loading values, generated from the final iteration. Cross loading of all the manifest variables recorded higher values, on their relative latent variable, as compared with other constructs, shown in the **Table-2**. In other words, the manifest variables, in each construct, represented the assigned latent variable, testifying the discriminate validity of the model. Discriminate validity was assessed for inter-construct correlation matrix, which was expected to have cross-loading values which were less than 0.85 (**Chin, 1998**). The composite reliability should be greater than 0.7 (convergent validity) while the inter-construct correlations should be less than the square-root of the AVE (discriminate validity). According to **Table-1**, all the research variables exceeded these criteria, with CR being 0.7. Thus it was confirmed that the research instruments were reliable. In addition to that, the square-root of the lowest AVE was 0.717 and it was greater than the highest inter-construct correlation value of 0.621. This also confirms the existence of discriminate validity. For a good model, the value of R^2 of endogenous latent variable should be more than 0.26. Since R^2 value, for the developed model, was 0.461 which was higher than the suggested value, the model was considered to have substantial degree of explained variance between E-commerce adoption and Implementation by identified research variables. Bootstrapping technique computes t -value, by creating pre specified number of samples. The acceptable t -values, for a two-tailed test, are 1.65 (significance level = 10%), 1.96 (significance level = 5%), and 2.58 (significance level = 1%).

In this study, bootstrapping generated 5000 samples and these samples were used to compute t -values as presented in **Table-3**, which demonstrated that all the paths attained t -values, which were higher than the cut-off point, for a significance level of 1 %, that is, 2.58. This implies that the paths (H-1, H-2, H-5 & H-6) in the model exercised a strong effect on E-commerce adoption and implementation. The highest β -value was 0.520 for Manager/ Owner's IS Knowledge. This was the most significant construct, which influenced critically the E-commerce adoption & implementation in Automobile medium enterprises. **Table-3** provides support for the posited four hypotheses, that is, H-1, H-2, H-5 and H-6. The path coefficient for H-1, H-2, H-5 and H-6 were 0.302, 0.159, 0.520 & 0.355 respectively. Overall, R^2 for model was 0.461 and it indicated that the research model could explain 46.1% of the difference in the dependent constructs. **Tenenhous, Vinzi, Chatelin and Lauro (2005)** provided a statistical formula, to assess the global Goodness-of-Fit (GoF) of a research model as provided: $GoF = \sqrt{AVE * R^2}$. The calculated global Goodness of Fit (GoF) was 0.48. Since this calculated value exceeded the threshold of $GoF > 0.36$, as suggested by **Wetzels, Odekerken-Schröder and Van Oppen (2009)**, the study confirmed the existence of the data's goodness of fit to the research model.

9. Findings of the Study

The results, in **Table-3**, supported four hypotheses, H-1, H-2, H-5 and H-6. H-1 and indicated that there was positive and significant relationship between trading partner pressure and E-commerce adoption and implementation (0.302). This finding is consistent with previous studies (**Kuan and Chau, 2001; Kutlu, and Ozturan, 2008; Liu, 2008**). Higher trading partner pressure leads to E-commerce adoption and implementation in enterprises. H-2 shows that there was positive and significant

relationship between Competitive pressure and E-commerce adoption and implementation (0.159). This finding is consistent with previous studies (**Mahesha Kapurubandara and Robyn Lawson., 2006a, Zhu et al., 2006b; Al-Qirim, 2007**). Higher Competitive pressure leads to E-commerce adoption and implementation in enterprises. From the environmental context, Trading partner pressure and Competitive pressure were the influencing factors on E-commerce adoption and implementation in automobile medium enterprises. Hypothesis-5 shows that there was positive and significant relationship between Manager/Owner IS Knowledge and E-commerce adoption and Implementation (0.520). This finding is consistent with previous studies (**Thong, J.YL. 1999, Sandy Chong, 2005, Zhu et.al, 2006a, Li, 2008, Ada Scupola, 2009, Pallavi Upadhyaya, P Mohanan, 2009, Le Van Huy, 2012, Rita Rahayua and John Daya, 2015**). Higher Manager/Owner's IS Knowledge leads to E-commerce adoption and Implementation in enterprises. Hypothesis-6 shows that there was positive and significant relationship between Manager/Owner's Innovativeness and E-commerce adoption and Implementation (0.355). This finding is consistent with previous studies. (**Sandy Chong, 2005, Zhu et al., 2006a, Li, 2008, Ada Scupola, 2009, Le Van Huy, 2012, Rita Rahayua and John Daya, 2015**). Higher Manager/Owner's Innovativeness leads to E-commerce adoption and Implementation in enterprises. Under individual context, both variables recorded found positive and significant relationship. Hypothesis-3 (Information intensity) and Hypothesis-4 (Government support) indicate that there was no significant relationship. It means that for their E-commerce adoption and implementation in automobile medium enterprises, information intensity and Government support played a very minimal role.

10. Conclusion

This study highlighted important factors of environmental context and individual context's variables, which exercised profound impact on E-commerce adoption and implementation in automobile medium enterprises. These factors were grouped and modelled in SmartPLS software where it was analysed for assessing the effect on E-commerce adoption and Implementation. Major conclusions, drawn from this study, are as follows.

- (i) Trading partner pressure, Competitive pressure, Manager/Owner's IS Knowledge and Manager/Owner's Innovativeness factors did have a strong effect on E-commerce adoption and implementation in automobile medium enterprises.
- (ii) R^2 value of the model was more than 0.46 and cleared it as a good model which could explain substantial variance of E-commerce adoption and implementation.
- (iii) The most significant category of influencing variable, affecting E-commerce adoption and Implementation in automobile medium enterprises, was Manager/Owner's IS Knowledge.
- (iv) Automobile medium enterprises did not receive any government support for E-commerce adoption and implementation.

11. Limitations of the Study

First, the population from which the sample was drawn, was limited to the medium enterprises, located in Maharashtra and this may affect the generalization of the findings. Second, this research model was applied to manufacturing sector, particularly the sub-sector (Automobile) of medium enterprises only. Third, the sample size of this research, with 56 respondents, could be a limitation.

12. Scope for Future Research

A larger sample size may provide more diverse or convincing results. Conducting sampling, with more managers, in different parts of India, is suggested to gather more representative information about E-commerce adoption in SMEs. Since this study focused only on medium enterprises, which are active in Automobile, future research on other industries is suggested. Also a replication of this research, on different industries as well as in micro, small and large enterprises, would provide data for comparison. Though this study included important variables, other studies could focus on organizational context variables for E-commerce adoption.

13. References

- Ada Scupola (2009).** SMEs e-commerce adoption: perspective from Denmark & Australia *Journal of Enterprise Information Management*, 22 (1-2), 1- 16.
- Al-Qirim, N. (2007).** The adoption of e-commerce communications and applications technologies in small businesses in New Zealand. *Electronic Commerce Research and Applications*. 6 (4), 462- 473.
- Automotive Component Manufacturers Association of India (2015),** Annual Report, 2014-15. Retrieved from <http://www.acma.in/annual-reports.php>
- Chin (1998).** *The partial least squares approach to structural equation modelling in Modern Methods for Business Research*. Ed., 295–336, Erlbaum, Mahwah, NJ,USA.
- Chin, W. W. & Newsted, P. R. (1999).** Structural equation modelling analysis with small samples using partial least squares. In Rick Hoyle (Ed). *Statistical Strategies for Small Sample Research*. Thousand Oaks, CA: Sage. 307-341.
- Chong, A.Y.L. and Ooi, K.B.,(2008).** Success in electronic commerce implementation: A cross-country study of small and medium-sized enterprises. *Journal of Entrepreneurship Information Management*, 21: 468-492.
- Fornell and Larcker (1981).** Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Gotz, K. Liehr-Gobbers, and M Krafft (2010).** *Evaluation of structural equation models using the Partial Least Squares (PLS) approach*. in Handbook of Partial Least Squares, Springer Handbooks of Computational Statistics, 47–82.
- Government of India and Society of Indian Automobile Manufacturers (2015),** Automobile Mission Plan (AMP) for the period 2016–2026, Retrieved from <http://www.siamindia.com/uploads/filemanager/47AUTOMOTIVEMISSIONPLAN>
- Grandon, J.M. Pearson (2004).** E-commerce adoption: perceptions of managers/owners of small and medium sized firms in Chile, *Communications of the Association for Information Systems*, 13, 81–102.
- Hair, C.B. William, J. B. Barry, and R. E. Anderson(2010),** *Multivariate Data Analysis*, Prentice Hall, Englewood Cliffs, NJ,USA, 2010.
- Hair, C.M. Ringle and Sarstedt (2011).** PLS-SEM: indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139–151.
- Henseler, Ringle, and Sinkovics (2009).** The use of partial least squares path modelling in international marketing. *Advances in International Marketing*, 20, 277–319.
- Kuan, and Chau(2001).** A perception-based model for EDI adoption in small businesses using a Technology-organization-environment framework. *Information & Innovation and Entrepreneurship; Procedia-Social and Behavioral Sciences*, 142-150.
- Kutlu, B. and M. Ozturan, (2008).** The usage and adoption of IT among SMEs in Turkey:

- An exploratory and longitudinal study. *Journal of Information Technology Management*.19: 12-24.
- Le Van Huy, Frantz Rowe, Duane Truex and Minh Q. Huynh (2012).** An Empirical Study of Determinants of E-Commerce Adoption in SMEs in Vietnam: An Economy in Transition, *Journal of Global Information Management*, 20 (3), 23-54.
- Li, Y.H., (2008).** An empirical investigation on the determinants of e-Procurement adoption in Chinese manufacturing enterprises”, *International Conference on Management Science & Engineering (15th)*, California, USA, Vol. I and II, 32-37.
- Lin, H.F. and Lin, S.M. (2008).** Determinants of e-business diffusion: A test of the technology diffusion perspective. *Technovation*, 28(3), 135-145.
- Liu, M., (2008).** Determinants of e-commerce development: An empirical study by firms in Shaanxi, China. *The IUP Journal of management research* Vol.8, no.6.
- Mahesha Kapurubandara & Robyn Lawson (2006).** *Barriers to Adopting ICT and Management*, 38 (8), 507-521.
- Morteza Ghobakhloo, Daniel Arias-Aranda and Jose Benitez-Amado (2011).** Adoption of e-commerce applications in SMEs. *Industrial Management & Data Systems*, 111(8), 1238-1269.
- Pallavi Upadhyaya, P Mohanan (2009).** Electronic marketplace adoption a case study.
- Palvia, P.C. and S.C. Palvia, (1999).** An examination of the IT satisfaction of small business Users. *Information Management*, 35, 127-137.
- Ringle, C., Wende, S., and Will, A., (2005).** *SmartPLS 2.0 (Beta)*. Hamburg, (www.smartpls.de).
- Rita Rahayua and John Daya (2015).** Determinant Factors of E-commerce Adoption by SMEs in Developing Country: Evidence from Indonesia, *World Conference on Technology*.
- Sandy Chong (2005).** Determination of satisfaction of electronic commerce implementation: Some evidence from small one medium sized entrepreneur, *ECIS 2005 proceedings paper 16*.
- Sandy Chong and Graham Grchmam Pervan (2001).** Implementation success of internet based electronic commerce for small & medium sized enterpriser in Australia in the proceeding of 14th international Bled electronic commerce conference Bled, Slovenia.
- Soares-Aguiar, A. and Palma-Dos-Reis, A., (2008).** Why do firms adopt e-procurement systems? Using logistic regression to empirically test a conceptual model. *IEEE Transactions*
- Tenenhaus, M., Vinzi, V.E., Chatelin, Y.M. & Lauro, C. (2005).** PLS Path Modeling. *Computational Statistics & Data Analysis*, 48(1), 159–205.
- Teo, T.S.H., Ranganathan, C. and Dhaliwal, J. (2006).** Key dimensions of inhibitors for the deployment of web-based business-to-business electronic commerce. *IEEE Transactions on Engineering Management*, 53 (3), 395-411.
- Thong, J.Y.L.(1999).** An integrated model of information systems adoption in small business. *Journal of Management Information Systems*, 15, (4,) 187-214.
- Wetzels, M., Odekerken-Schröder, G. & Van Oppen, C. (2009).** Using PLS path modelling for assessing hierarchical construct models: guidelines and empirical illustration. *Management Information Systems Quarterly*, 33(1), 177-195.
- Zhu, K., Dong, S.T., Xu, S.X. and Kraemer, K.L., (2006a).** *Innovation diffusion in global contexts: Determinants of post-adoption digital transformation of European companies*.

Table-1: Results of Measurements Model Evaluation

Construct Indicators	Final Iteration			
	Loading	AVE	CR	Alpha
ECAI1	0.635	0.537	0.872	0.816
ECAI2	0.844			
ECAI3	0.826			
ECAI4	0.651			
ECAI5	0.769			
TPP1	0.637	0.640	0.873	0.825
TPP2	0.806			
TPP3	0.553			
TPP4	0.921			
CP1	0.870	0.533	0.816	0.745
CP2	0.571			
CP3	0.633			
II1	0.807	0.786	0.917	0.818
II2	0.812			
II3	0.687			
GS1	0.867	0.577	0.871	0.821
GS2	0.912			
MISK1	0.778	0.625	0.866	0.787
MISK2	0.793			
MI1	0.909	0.515	0.755	0.725
MI2	0.575			
MI3	0.840			
MI4	0.692			

Source: Primary Data (Smart PLS analysis results)

Note: ECAI= E-commerce adoption & Implementation; TPP= Trading partner pressure; CP=Competitive pressure; II=Information intensity; GS=Government support; MISK= Manager/Owner's IS Knowledge & MI= Manager/Owner's Innovativeness

Table-2 : Inter-Constructs of Correlation Matrix

Research Variables	TPP	CP	II	GS	MISK	MI	ECAI
Trading partner pressure (TPP)	1						
Competitive pressure (CP)	0.539	1					
Information intensity (II)	0.592	0.576	1				
Government support (GS)	0.546	0.583	0.545	1			
Manager / Owner's IS Knowledge (MISK)	0.567	0.532	0.517	0.601	1		
Manager / Owner's Innovativeness (MI)	0.512	0.498	0.506	0.516	0.554	1	
E-commerce adoption & Implementation (ECAI)	0.621	0.592	0.512	0.501	0.613	0.605	1

Source: Primary Data (Smart PLS analysis results)

Table - 3: Path / Structural Modelling Results

Hypothesis	Posited Hypothetical Associations	Path coefficient (β)	t-value	Significance Level	Decision on proposed Hypothesis	R ²
H1	TPP → ECAI	0.302	2.463	**	Supported	0.461
H2	CP → ECAI	0.159	1.672	*	Supported	
H3	II → ECAI	0.045	0.571	NS	Not Supported	
H4	GS → ECAI	0.025	0.418	NS	Not Supported	
H5	MISK → ECAI	0.520	4.049	***	Supported	
H6	MI → ECAI	0.355	2.143	**	Supported	

Source: Primary Data (Smart PLS analysis results)

Note: NS=Not significance & Not Supported, *P<0.10, **P<0.05, ***P<0.01

ECAI= E-commerce adoption & Implementation; TPP= Trading partner pressure;

CP=Competitive pressure; II=Information intensity; GS=Government support;

MISK= Manager/Owner's IS Knowledge & MI= Manager/Owner's Innovativeness