



# The Ecommerce Adoption in Small Businesses - An Empirical Evidence from the Electrical Sector In India

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## ABSTRACT

The cutting edge of business today is electronic commerce. All the world is totally dependent on electronic items with the rapid advantage of the help of e-commerce. Electronic commerce is also becoming more popular. E-commerce and electronic applications in automation have brought tremendous growth to India. E-commerce is connecting rural India for business, hence developing the village economy. The future does look very bright for e-commerce in India. India is showing tremendous growth in e-business. Many large corporations, small and medium companies, and individuals are investing more and more in the e-commerce business. The main purpose of this paper is to study the effect of e-commerce on the adoption of small and medium enterprises in the electronics sector.

**Keywords:** e-commerce, SME's

## 1. INTRODUCTION

Globalization, liberalisation, and information and communication technology are the three most potent trends influencing the global economy (ICTs). Electronic commerce, often known as e-commerce, has emerged because of ICT's recent exponential expansion, changing the nature of business as usual. To alter how goods and services are created, sold, and provided, organisations have changed their business models and procedures (Chaudhury & Kuilboer, 2002). E-commerce was described by Turban et al. (2002) as the exchange of goods, services, and information through a computer network. According to the European Union's Electronic Commerce Team, "Electronic Commerce refers specifically to purchasing and selling of goods and services over the internet" (Schulze & Baumgartner, 2000 E-commerce is the "creation, distribution, marketing, sale, and delivery of products and services through electronic means," according to the World Trade Organization. Since there have been many definitions of e-commerce over the years, this study adopted Globerman et al.

(2001)'s definition, which states that e-commerce is "any economic transaction where the buyer and seller come together through the electronic media of the Internet, form a contractual agreement concerning the price and delivery of goods and services, and complete the transaction through the payment as contracted." E-commerce presents organisations in developed and developing nations with a variety of options. Businesses in poor nations are still hesitant to integrate e-commerce into their operational procedures, nevertheless. Compared to companies in industrialised nations like the United States and Europe, they seem to be less active in online shopping (Jon et al., 2001). The complexity of e-commerce adoption in underdeveloped nations is increased by issues including outdated technology, lax regulations, and poor infrastructure (Titi, 2005). Gains are expected to be concentrated in wealthy nations in the near term, while developing nations stand to earn more from the adoption of ecommerce in the long run (Rahayu & Day, 2017). Terzi, 2011). This study is noteworthy for a number of reasons. It intends to research the e-commerce usage-profile of small and medium-sized firms in order to close the information gap about e-commerce dissemination in a growing nation like India (SMEs). In a significant industrial city in India, variables that influence people's readiness to adopt e-commerce are also investigated. the act of purchasing and selling goods or services through the transfer of electronic data through the Internet and the web. Both buyers and sellers can benefit from e-commerce in a number of ways. For instance, Napier et al. noted that by implementing and using ecommerce, sellers can access niche markets segments that are widely distributed while buyers can benefit by accessing global markets with greater product availability from a variety of sellers at lower prices. Additional advantages include an increase in product quality and the development of fresh ways to market already-existing goods. E-commerce has advantages for small and medium-sized businesses (SMEs), too, not only for big corporations. Additionally, it may "level the playing field" with large corporations, offer flexibility regarding time and place, and facilitate communication. E-commerce still has a limited uptake by SMEs despite its numerous potential benefits. For instance, a Verizon poll revealed that 36% of small firms created websites primarily to market and showcase their enterprises, as opposed to 9% who created them to engage in online sales or marketing. Similarly, Pratt discovered that many SMEs were hesitant to execute transactions online; more than 80% were only using the Internet to interact (through e-mail) and acquire business information in a study of 444 SMEs conducted in 2002. Does this imply that the senior executives/owners of SMEs do not understand the strategic value-commerce to their company or that they face substantial obstacles when attempting to adopt it? Here, we concentrated our attention on this "understudied" sector of business organisations where research findings on large businesses cannot be generalised; for example, Welsh and White identified significant differences in the financial management of small and large businesses, while Ballantine et al. identified specific characteristics of SMEs as lacking a business and IT strategy, having limited access to capital resources, and placing more emphasis on using IT and IS to automate than information systems. Similar claims and conclusions are presented in other studies.

## 2. REVIEW OF LITERATURE:

According to Raju T.V. and Gopal's R.K.'s 2006 article, "Developing Relationship Marketing Strategies by Implementing E-Commerce Technology in Industrial Markets," ICFAI University Press, 5(1), 35–40, e-commerce is the key to success in industrial marketing and must be used by all organizations, regardless of size.

The methods used in e-commerce must be creative and dependent on the skills of the marketers. Before engaging in e-commerce, they encourage classifying the consumer based on their relationship emphasis area and performing a cost-benefit analysis.

According to Aggarwal Vaishali's article "Role of Retailers in Reducing Inventory and Improving Customer Satisfaction: An Empirical Study Consumer Non-Durables," published in the Journal of Marketing in 2008, pages 36–43, Agarwal, Vaishali believes that to stay ahead of the competition, businesses must use cutting-edge marketing strategies like internet blogs and e-commerce.

According to the new Government, "it would definitely cheer up sector, the world, and complementary with the Financial Express," According to Dikshit, Dheeraj's opinion, SMEs should reevaluate their business models and develop their core strengths through ecommerce, as stated in The Indian Express Limited, Mumbai, (26) (2009). In order for SMEs to expand, he also demands that they explore outside of their home country.

According to Usha Nair and Sylvia Maier's "Empowering Women Through ICT-Based Business Initiatives: An Overview of Best Practices in E-Commerce/E-Retailing Projects," published by The MIT Press in 2008, information and communication technologies (ICTs) are being hailed as a critical tool for achieving universal development, eliminating poverty, and empowering historically marginalised groups like women and minorities in the Global South. E-commerce ventures in particular have been lauded as "potential gold mines" for women's empowerment through ICT-based business initiatives.

According to T.P. Pavan Kumar's article "ICT For Economic Growth In Andhra Pradesh, A State In India" published in the International Business & Economics Research Journal in May 2007 Volume 6, Number 5, Andhra Pradesh has undertaken numerous measures to transition to a knowledge-based economy. The state government should create ICT policies and initiatives to accelerate growth and close the digital divide because of factors like the high literacy rate, expanding manufacturing and service sectors, the availability of skilled labour, private sector investments, good telecom, power, and road infrastructure, etc.

According to Louis A. Lefebvre and Elisabeth Lefebvre's "E-commerce and virtual enterprises: concerns and challenges for transition economies," published in 2002 by Elsevier Science Ltd, electronic commerce, or "e-commerce," is a phenomenon that has recently caught the attention of developing nations. Is this just a fad or just another route of distribution that businesses are free to use or not use? Or, on the other hand, is it necessary if one wants to continue doing business and succeed? This essay examines a few of the technological problems and obstacles connected to the growth of virtual businesses and e-commerce.

According to "Prospects of E-Commerce in India" by Shweta Sharma and Sugandha Mittal Many Asian nations are utilising e-commerce by liberalising their economies, which is crucial for fostering competition and the spread of Internet technologies. To have an impact on ecommerce and e-governance, it must be big enough to have a critical mass of 10 to 20 million users.

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According to Asghar Afshar Jahanshahi's study, "Analysing the Effects of Electronic Commerce on Organizational Performance: Evidence from Small and Medium Enterprises," Government policies must be concentrated on creating and implementing a strong telecommunications infrastructure that enables and facilitates increased user access to the Internet, creating strict regulations and legal structures to support e-commerce initiatives, protecting users from fraud, and providing fiscal policies that stimulate business growth if they are to be successful in the e-business environment.

According to Sarbapriya Ray's article, "Emerging Trend of E-Commerce in India: Some Crucial Issues, Prospects, and Challenges," the collapse of the dotcom bubble has caused some businesses to realize that operating an online business is more difficult than it first appears. Undoubtedly, the ability of the Internet to connect people in any location on the planet has great potential to expand global trade and the economy. But just as every coin has a flip side, it has been noted that conducting business online also comes with hazards and legal complications.

According to Saroj Kumar Singh's book "E-Commerce: Challenges and Future Potentialities in India," Only until people in semi-rural and rural areas can benefit from e-commerce in India will it be truly successful. Government and e-commerce enterprises should both take steps to strengthen supply chains and make payments simple in order to achieve this.

According to Sylvia Maier's article, "Empowering Women Through ICT-Based Business Initiatives: An Overview of Best Practices in E-Commerce/E-Retailing Projects," ICTs are increasingly being hailed as a crucial tool for achieving overall development, eradicating poverty, and empowering historically marginalized groups, like women and minorities in the Global South. E-commerce ventures in particular have been lauded as "potential gold mines" for women's empowerment through ICT-based business initiatives.

Firms should invest in eBusiness capabilities if they want to increase the intensity of their production information integration, according to Sarv Devaraj's article, "Impact of eBusiness technologies on operational performance: The function of production information integration in the supply chain." However, businesses shouldn't try to use the immediate impact of ebusiness technology on operational performance to justify investment decisions.

According to Muammer Zerenler's study, "The Impact on Electronic Commerce Activities of SMEs: A Study of the Turkish Automotive Supplier Industry," electronic commerce is evolving across practically all industries, as evidenced by the growing number of cases. It offers businesses and other organizations far too many advantages. Electronic commerce has substantially changed how businesses operate, giving them greater options for growth and a competitive edge.

### 3. AIM:

The current study is to specialize in the e-commerce adoption in the SME industry. The study's goal is to comprehend the situation and driving forces behind e-commerce adoption in SMEs. The goals are to:

1. To know the seller's preference towards adoption of e-commerce platforms.
2. To know the awareness level of sellers towards e-commerce platforms.
3. To know the seller's intention to adopt e-commerce platforms.
4. To identify the factors that encourage the adoption of e-commerce platforms.

### 4. HYPOTHESIS

H1: Adoption of e-commerce platforms is positively associated with the size of business.

H2: There is significant and positive influence of awareness on the intention to adopt ecommerce platforms.

H3: There is significant and positive influence of preference on the intention to adopt ecommerce platforms.

H4: To examine the influence of factors on adoption of e-commerce platforms.

### METHODOLOGY

The small and medium-sized companies (SMEs) in the electrical industry were the focus of the current investigation. 82 owners of SMEs made up the sample for the study. 5 likert scales ranging from strongly disagree to strongly agree were adopted in measuring the research variables. We use Factor Analysis and KMO and Bartlett's Test to analyse the responses. Using factor analysis, a potent data reduction tool, researchers can examine ideas that are difficult to directly assess. Factor analysis produces clear, actionable data by condensing a vast number of variables into a small number of underlying, understandable components. All relevant data are evaluated simultaneously using the KMO and Bartlett tests. There may be significant correlation in the data if the KMO value is greater than 0.5 and the Bartlett's test's significance level is lower than 0.05. The degree to which one variable is associated with other variables is known as variable collinearity.

For data analysis, the study purposely employed the most recent version of the SPSS software.

## 5. RESULTS

**Table 1:**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.879
Approx. Chi-Square		1350.906
Bartlett's Test of Sphericity	df	136
	Sig.	.000

Table 1 shows the result of KMO and Bartlett’s Test where all the data evaluated together where a KMO value is .879 and a significance level for the Bartlett's test below 0.05 suggest there is substantial correlation in the data. Variable collinearity indicates how strongly a single variable is correlated with other variables in adopting the e commerce in small business.

	Component	
	1	2
E-commerce platform in the market is a new way of business.	.867	-.289
Maximum industry using e-commerce so I want to move my business to e-commerce.	.854	-.246
Adoption of e-commerce helps to promote the business of the seller.	.805	-.268
Firm is willing to invest in e-commerce initiatives.	.849	-.242
Other industry players are shifting business to e-commerce.	.872	-.225
If we don't adopt e-commerce, we will lose out to our competitors.	.804	-.213
Adopting of e-commerce platform create challenges for competitors.	.854	-.182
E-commerce website easy to navigate for the customer.	.861	-.166
Not adopting e-commerce can harm relationship with customer.	.301	.681
E-commerce can assist firms in broader their business.	.801	.118

Here we Done the Factor analysis part where we applied the KMO And Bartlett’s Test where all the data together We evaluate. Here we got the significant value of the sellers are

If we see the Hypothesis no 1

Here we notice that here mentioned about the size of the business and we notice in the questionnaire that most of the sellers give their preference 28% neutral and 28 % Agree means most of the seller’s preference in e commerce that they think e commerce business are depending on the size of the business or size of the infrastructure. Here hypothesis 1 is proved.

Hypothesis no 2

Here we notice the awareness level of the sellers most of the sellers know about the ecommerce platform and they also know that now days most the sellers are adopting the e commerce as their future business and we get it form the

E-commerce activities adopted to improve the business of the firm.	.800	.086
Customer reach in e-commerce is more than offline.	.434	.725
More discounts in e-commerce than offline market will attract more customers.	.668	.477
Infrastructure is needed to adopt the e-commerce platform.	.318	.804
Data protection of the customer is more in the e-commerce.	.549	.529
Distribution channel is more important in the e-commerce.	.790	.118
Quality of the product expectation is more in the e-commerce platform.	.855	-.108

questionnaire , here we proved hypothesis no 2 .

Hypothesis no 3

If we see the questionnaire of that we see for all of the intentions of the sellers are maximum high on the intention to adopt is high, other notification are the neutral so there we can say that most of the sellers have some intentions to adopt the e

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.491	55.827	55.827	9.491	55.827	55.827
2	2.620	15.415	71.242	2.620	15.415	71.242
3	.838	4.929	76.171			
4	.758	4.459	80.630			
5	.591	3.478	84.107			
6	.511	3.006	87.113			
7	.446	2.624	89.736			
8	.322	1.892	91.628			
9	.282	1.661	93.289			
10	.239	1.406	94.695			
11	.200	1.175	95.870			
12	.178	1.048	96.918			
13	.163	.958	97.876			
14	.132	.774	98.651			
15	.100	.587	99.237			
16	.085	.501	99.738			
17	.045	.262	100.000			

Extraction Method: Principal Component Analysis.

## Hypothesis 4

As per the questionnaire taking the variable, we identified that most of the sellers want to shift their business to the e-commerce platform where all the responses show that there are some factors which mostly influence the sellers to adopt the e-commerce platform. Here we proved the hypothesis no 4

## CONCLUSION

From the finding of the study *The Ecommerce Adoption in Small Businesses - An Empirical Evidence from the Electrical Sector in India*. The result showed that there is a significant relationship with the influence of awareness to adopt e-commerce and also the significant influence of technological tools in implementing the adoption of E-commerce towards SMEs.

## LIMITATIONS

It should be emphasized that there are a number of restrictions on this study. The study's data came from regional SMEs in India's electrical sector. Therefore, even though results can be formed, it's possible that the findings couldn't be applied to SMEs in other industries or nations.

## REFERENCES:

1. Saulnier, M. & Rosson, P. (2006), 'E-Business Readiness in Canadian SMEs', in M. Bhattacharya (ed.) *E-Innovation : Trends and Applications*, The Icfai University Press, Telangana. [https://serialsjournals.com/abstract/54419\\_ch\\_75\\_f-ashok\\_reddy.pdf](https://serialsjournals.com/abstract/54419_ch_75_f-ashok_reddy.pdf)
2. Kuan and Chau (2001), Determined the factors influencing the adoption of EDI in small businesses using a technology, organization, and environment framework. [https://www.researchgate.net/publication/220652267\\_A\\_PerceptionBased\\_Model\\_for\\_EDI\\_Adoption\\_in\\_Small\\_Businesses\\_Using\\_a\\_T](https://www.researchgate.net/publication/220652267_A_PerceptionBased_Model_for_EDI_Adoption_in_Small_Businesses_Using_a_T)
3. Premkumar and Roberts (1999), Identified the use of various communication technologies and the factors that influence their adoption in small businesses located in rural US communities. <https://www.sciencedirect.com/science/article/abs/pii/S0305048398000711>
4. Subramanian, G.H. and Nosek, J.T. (2001), 'An Empirical study of the Measurement and Instrument of Perceived Strategy Value of Information Systems', *Journal of Computer Information Systems*, (Spring) [https://www.researchgate.net/publication/233062178\\_An\\_Empiric](https://www.researchgate.net/publication/233062178_An_Empiric)
5. Grandon, E.E. & Pearson, J.M. (2004), "Electronic Commerce Adoption: An Empirical Study of Small and Medium US Business", *Information & Management*, Vol. 42, <https://www.scirp.org/%28S%28351jmbntvnsjt1aadkposzje%29%29/reference/referencenbspapers.aspx?referenceid=2371899>
6. Misra, R., Mahajan, R., Singh, N., Khorana, S., & Rana, N. P. (2022, August 23). Factors impacting behavioural intentions to adopt the electronic marketplace: findings from small businesses in India. *PubMed Central (PMC)*.



Retrieved January 11, 2023, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9395906/>

7. chandra, N. (n.d.). Questionnaire Factors Affecting SMEs to Adopt E-commerce (A study Based on the SMEs of Khulna city. (DOC) Questionnaire Factors Affecting SMEs to Adopt E-commerce (a Study Based on the SMEs of Khulna City | Nayan Chandra - Academia.edu. Retrieved January 11, 2023, from [https://www.academia.edu/39053047/Questionnaire\\_Factors\\_Affecting\\_SMEs\\_to\\_Adopt\\_E\\_commerce\\_A\\_study\\_Based\\_on\\_the\\_SMEs\\_of\\_Khulna\\_city](https://www.academia.edu/39053047/Questionnaire_Factors_Affecting_SMEs_to_Adopt_E_commerce_A_study_Based_on_the_SMEs_of_Khulna_city)

8. chandra, N. (n.d.). Questionnaire Factors Affecting SMEs to Adopt E-commerce (A study Based on the SMEs of Khulna city. (DOC) Questionnaire Factors Affecting SMEs to Adopt E-commerce (a Study Based on the SMEs of Khulna City | Nayan Chandra - Academia.edu. Retrieved January 11, 2023, from [https://www.academia.edu/39053047/Questionnaire\\_Factors\\_Affecting\\_SMEs\\_to\\_Adopt\\_E\\_commerce\\_A\\_study\\_Based\\_on\\_the\\_SMEs\\_of\\_Khulna\\_city](https://www.academia.edu/39053047/Questionnaire_Factors_Affecting_SMEs_to_Adopt_E_commerce_A_study_Based_on_the_SMEs_of_Khulna_city)

9. Garg, & Choeu. (n.d.). The Adoption of Electronic Commerce by Small and Medium Enterprises in Pretoria East. ResearchGate. Retrieved January 11, 2023, from [https://www.researchgate.net/publication/310234839\\_The\\_Adoption\\_of\\_Electronic\\_Commerce\\_by\\_Small\\_and\\_Medium\\_Enterprises\\_in\\_Pretoria\\_East](https://www.researchgate.net/publication/310234839_The_Adoption_of_Electronic_Commerce_by_Small_and_Medium_Enterprises_in_Pretoria_East)

10. (n.d.). Questionnaire: Determinants of E-commerce Adoption among Malaysian SMEs. Retrieved January 11, 2023, from <http://studentsrepo.um.edu.my/1320/8/APPENDIX.pdf>

11. Misra, R., Mahajan, R., Singh, N., Khorana, S., & Rana, N. P. (2022, August 23). Factors impacting behavioural intentions to adopt the electronic marketplace: findings from small businesses in India. PubMed Central (PMC). Retrieved January 11, 2023, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9395906/>

12. (n.d.). Making Sense of E-Commerce Customers Awareness in a Developing Country Context: A Framework for Evaluation. ResearchGate. Retrieved January 11, 2023, from [https://www.researchgate.net/publication/319332735\\_Making\\_Sense\\_of\\_ECommerce\\_Customers\\_Awareness\\_in\\_a\\_Developing\\_Country\\_Context\\_A\\_Framework\\_for\\_Evaluation](https://www.researchgate.net/publication/319332735_Making_Sense_of_ECommerce_Customers_Awareness_in_a_Developing_Country_Context_A_Framework_for_Evaluation)

13. (n.d.). Firm Size and the Business Environment: Worldwide Survey Results. INTERNATIONAL FINANCE CORPORATION. Retrieved January 11, 2023, from <https://documents1.worldbank.org/curated/en/574601468739143195/585559324200409289103425/additional/multi0page.pdf>

14. Amir Taheri (Autumn 2012), The adoption of the E-Commerce A study of the Iranian Oil Industry, from Thesis for the Master's degree in Business Administration Microsoft Word - Taheri (diva-portal.org)

15. Kit Yeng, Osman A, Yusuf Haji Othman & Safizal (September 2015). ECommerce adoption among Small and Medium Enterprises (SMEs) in Northern State of Malaysia, Mediterranean Journal of Social Sciences, MCSER Publishing, Rome Italy from E-Commerce Adoption among Small and Medium Enterprises (SMEs) in Northern State of Malaysia (researchgate.net)