

Analysis of Factors Leading to E-commerce Adoption

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Abstract. The current research aims to investigate the reasons behind companies' decision to adopt e-commerce. With the rise of online shopping, businesses are utilizing the latest technology to expand their operations. However, there is a lack of understanding as to what factors drive companies to embrace e-commerce. The study uses a qualitative descriptive approach and a literary analysis to gather information. The findings indicate that various organizational elements, such as technology, organizational structure, and environmental factors, contribute to a company's adoption of e-commerce. The results of this research are intended to provide a deeper understanding of the elements that influence businesses' decisions to adopt e-commerce. It is also aimed to provide a context for future discussions on the topic of e-commerce adoption by companies.

Keywords: Technology, Organization, Environment, E-commerce

1 Introduction

Information technology has advanced and evolved in response to societal demands. Every industry, but especially commercial enterprise, is benefiting from the expansion and improvement of information technology [1]. Because of this, corporate actors are under constant pressure to develop novel information technology-based services in order to gain widespread acceptance, particularly in commercial exchanges [2]. E-commerce, or electronic trade, is one example of the lightning-fast development and improvement of information technology [3]. This means that the role of information technology is employed for electronic commerce in the commercial world. E-commerce is widely regarded as a potent method of boosting the efficiency and viability of any given enterprise, nation's economy, or industry. The focus of this article is on the author's investigation of e-commerce within a business. For this reason, it's crucial to learn about the various forces that shape the growth of the e-commerce industry, as well as the theoretical models that have emerged to address this phenomenon.

The United States Department of Defense established the Advanced Research Projects Agency (DARPA) in 1969 to oversee the Advanced Research Projects Agency (ARPA) Communications Network Project, which is considered the beginning of the e-commerce industry. In 1969, with the help of PDP-10 and PDP-11 computers, ARPA was revamped into ARPANET, or the Advanced Research Projects Agency Network, a communication system [4]. There was a second wave of e-commerce growth after the invention of EDI and EFT technologies in the late 1970s. Additionally, by the late 1980s, technology had developed to facilitate the use of electronic credit cards, ATMs (Automated Teller Machines), and Telephone Banking. With the advent of internet technology in 1990, e-commerce has exploded, and its use is now widely recognized as having substantial positive effects on the efficient operation of businesses and their processes [5].

E-commerce adoption studies can make use of a number of different theoretical frameworks. Commonly employed theories include the TAM, TPB, UTAUT [6], DOI [7], and TOE (technology, organization, environment Framework) [8]. While TAM, TPB, and UTAUT focus on the person level, researchers will only build DOI and, in particular, the TOE framework because these two models are at the organizational or corporate level as the unit of analysis of the current research [9].

Previous researchers and scientists have conducted extensive work on the factors that can influence e-commerce adoption via the Diffusion of Innovations (DOI) and Transfer of Experience (TOE) frameworks to explain the relationship between factors that influence the implementation of technological innovations in an organization or company. According to the TOE theoretical framework, the creative application of e-commerce technology is influenced by three factors: technological, organizational, and environmental.

Meanwhile, Diffusion of Innovation theory (abbreviated DOI) outlines a standard method for studying the spread of novel technologies. To explain why some businesses are more receptive to new ideas than others, [7] proposed the Diffusion of Innovations (DOI) hypothesis, which posits that two factors—innovation qualities and organizational characteristics—influence the acceptance and use of innovation by businesses. Variations in the rate of adoption of innovation by a company or organization range from 49 to 87%, however these differences can be explained by distinguishing aspects of the innovation itself [7].

TOE's theoretical framework, according to [10], overlaps and is related to DOI theory. Both the properties of innovation and technology, as well as the features of organizations, are shared by the two theories. The DOI hypothesis, on the other hand, doesn't take into account the effect of environmental factors like they do in the TOE framework, hence the two aren't interchangeable. Therefore, the current study will utilize technological, organizational, and environmental aspects that affect organizations' adoption of e-commerce.

2 Method

A descriptive qualitative research methodology was adopted. The researcher serves as the primary instrument in the qualitative research method, which is used to assess the condition of natural things [11]. Therefore, it is abundantly evident that the researcher chose this approach because she wants to be a vital tool in exploring study themes. Of course, this analysis uses reliable sources as a basis. Another reason is that the researcher wishes to make a methodical, factual, and correct account of the investigated facts by describing the topic of discussion from objects, situations, systems of thought, or current events. In other words, the researcher's choice of qualitative descriptive research is intended to describe and describe existing phenomena, both natural and man-made, that place a greater emphasis on characteristics, quality, and relationships between activities. Through the analysis of literature, researchers can gather data using the descriptive qualitative method. This is due to the fact that until the study is over, researchers only get data by studying books, journals, and online or web libraries that are pertinent to the subject under discussion. They also acquire basic and written comments based on thinking. The Interactive Analysis model was the analysis method in use at the time of the study. Three parts—data reduction, data display, and conclusion drawing or verification—make up this paradigm.

3 Result and Discussion

These indicators and the elements that influence a company's decision to implement e-commerce are discussed in this section. To further illustrate how an organization might innovate with the help of particular systems, the author will also give a valid discussion of what is meant by the context of technology, organization, and environment.

3.1 Technology

The rapid advancement of digital technology has made it so that people expect instantaneous access to digital gadgets and the internet, and these new digital capabilities have revolutionized human interaction. The term "digital marketing" refers to the practice of promoting and selling a brand's wares or services using digital mediums. Internet marketing is on the rise as more and more businesses include digital channels into their product promotion strategies [12]. Companies could benefit from IT's capacity to aid in market research and international marketing. There are, however, doubts about whether or not businesses will actually reap the benefits of digital technology. The empirical evidence suggests that smaller and medium-sized businesses are less able to reap the benefits of adopting cutting-edge technologies [13].

E-rise commerce's has created numerous openings for businesses to showcase their clientele, expand into new areas, and streamline operations. As a result, assessing a company's or startup's level of technological preparedness is crucial. The level of technological preparedness among businesses and startups is still fairly low. When context is taken into consideration, there are notable discrepancies in technical preparedness [14]. As a result, the decision to implement e-commerce will be influenced by the technological backdrop, namely the readiness of an organization and the organizational entrepreneurs towards technology. This analysis draws on multiple previous studies to identify the following technology indicators as shaping e-commerce adoption [15] [10]. Namely perceived benefit and compatibility:

1. The term "perceived benefit" refers to the likelihood that an individual thinks adopting particular technology will enhance the manner in which they carry out particular jobs. This term could be used to describe the likelihood that an organization's marketing results would improve if they adopted an e-commerce strategy, as discussed in this research. A positive attitude toward a technology's implementation is more likely to develop within an organization if its leaders believe that implementing the technology would improve the company's performance. A company's propensity to adopt cutting-edge Internet technologies may be influenced by their opinion of those technologies' utility.
2. Consistency with preexisting norms, prior knowledge, and user requirements is what we mean when we talk about compatibility with a new idea. The term "compatibility," as defined by [15], denotes how well an organization's e-commerce strategy meshes with its existing systems, values, and procedures. When an invention is in line with the established norms, it can provide for the organization's needs, and it fits with the culture, it is more likely to be adopted. Innovations will be simpler to describe because of the natural fit between organizational policies and technology developments.

3.2 Organization

Organizational factors, such as size, influence the motivation to use IT; in general, smaller businesses are less likely to see the value in IT. This is because of factors including low competitiveness, a lack of financial resources, and a dearth of available human labor [13]. Smaller businesses often struggle to obtain such systems since they lack the financial means that large corporations enjoy. E-commerce usage is higher in larger organizations than in smaller ones [16]. The indicators of organizational determinants in influencing e-commerce adoption used in this study were adapted from a number of previous studies, including [15] [10] [16]. Namely business age and firm size:

1. Business age refers to how long a company has been operational. A company's age is determined from the day it was founded till the date of the investigation. Experiments by [3], suggest that established businesses have learned a great deal over the years. As a corporation ages, more information becomes available to the general public. Furthermore, this will increase trust in the quality of the company's offerings. As an added bonus, long-standing businesses are more likely to be prepared for the future with tried and true techniques. The longer a business has been around, the more likely it is that it has encountered a wide variety of successes and failures. When a business is able to effectively address issues that crop up throughout management, it fortifies its very foundations. In spite of the various threats that confront businesses today, there are a plethora of strategies that can help ensure their continued success. Because of this, the business is well-equipped to face and successfully resolve any challenges that may arise in the future, whether they are similar or entirely new. With more years in the game, naturally comes greater expertise. Further, the longer the firm operates successfully, the more people will come to acknowledge the company's existence and acknowledge the company's excellence. This is especially true if the company's products consistently exceed customer expectations. Customers will see the organization favorably and consider it a safe bet for a positive experience overall.
2. Size of the firm There are a number of reasons why large firms are less likely to go bankrupt than small ones. It is easier for huge corporations to adopt new technologies like e-commerce and to borrow money to boost their performance because they have more assets than smaller corporations. According to [15], the reason for this is because the availability of a company's financial and human resources is directly proportional to the firm's size. Business size is a strong predictor of both the availability of these resources and the likelihood of the company's adoption of e-commerce technologies. In fact, capital (money) is recognized as a key component of production alongside labor, raw materials, and machinery in the theory of capitalist organization.

3.3. Environment

There is both an external and an inside environment. The purpose of an external environment analysis is to identify potential opportunities and risks that lie beyond the company's immediate sphere of influence [17]. Both the macro and industrial environments are typically considered when doing an external environment analysis. Factors in the macro environment include governmental policies, legislation, the economy, society, and technology. Simultaneously, the industrial setting is more like that which is conducive to conducting business. Management of the external environment is referred to by experts as the ability to respond to elements beyond a company's control, such as the negotiating power of consumers and sellers, the arrival of possible new participants, and severe competition from industrial enterprises (external factors). Companies will not be able to

manage these elements without the correct strategy, which must be adapted to changing environmental conditions. Organizational resources like HR, IT, marketing, sales, and physical plant all make up the internal environment of a business [18].

Because competitors are a part of every company's external environment, a sustainable competitive edge is essential. Performance is based on the company's capacity to compete in its external environment by utilizing its advantages to attract the greatest number of customers. According to [19], a company's "business environment" is made up of both internal and external elements. Behavior, resources, strengths and weaknesses within or within the business, consumers, rivals, government agencies, supplier workforce, and so on, are all mainly the outcome of decisions made during the management process. Because of this, it's safe to say that external factors significantly affect the viability of an organization's potential adoption chances. Because of the competitive and unstable business climate, e-commerce can boost organizational performance, leading to higher sales and higher profitability. Therefore, it is evident that both internal and external elements can be identified as a business catalyst in launching e-commerce initiatives.

4 Conclusion

The business world has become increasingly dynamic in recent years. Electronic commerce (E-commerce) is the most widely spread of the many applications used to draw in clients. The empirical evidence shows that e-commerce has both positive and negative aspects. Modern commercial activity is predicated on the use of the Internet. The shift from traditional stores to online marketplaces has occurred. This study shows that companies' adoption of e-commerce is not a given; rather, it is influenced by a wide range of factors across the technological, managerial, and political spectrums. Organizations and individuals seeking data on the complexities of e-commerce adoption can navigate those aspects with ease. For the simple reason that any system can be adopted by any group or individual that wants to use it, be it a business or an individual. The author's thought is grounded in the system described below, which is the DOI and TOE theoretical framework. Anyone interested in the elements that influence businesses' decisions to adopt e-commerce can use this study's findings as a supplementary resource. However, another methodological lens, such as quantitative, could be applied to this study's evaluation. Why? To provide concrete evidence of the extent to which a given region or company has adopted a given technology.

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