# EXPLORING THE KEY SUCCESS FACTORS FOR SUSTAINABLE E-COMMERCE ADOPTION IN SMEs

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**Abstract**: The Internet has introduced trade and commerce to newer possibilities, which is e-commerce. E-commerce has a tremendous impact on processes and practices where the internet is used for advertising any products or services, taking orders through the internet, e-payment systems, and supplying goods to the consumers. Compared to traditional trading systems, deficiencies of businesses, but now e-commerce has become a 'boundary crossing' for the new businesses with several unique models based on technology adoption. The developing countries are adopting e-commerce in businesses, whether the companies are micro-level or medium level. This research aims to examine the key success factors of e-commerce adoption for sustainable SMEs. This research utilizes the TOE framework. The data of research is collected through a questionnaire from Bangladesh's Small and Medium-sized Enterprises. The findings of the research showed that technological, organizational and environmental factors have a profound influence on the adoption of e-commerce. The role of organizational factors is limited. Perceived complexity, compatibility and relative advantage, information intensity, management support have a big impact on Bangladesh's adoption of e-commerce. The government of Bangladesh has initiated several models for adopting e-commerce, though the complexity factor is a barrier in the way of e-commerce adoption. If the compatibility is improved, the sustainability of SMEs in Bangladesh will observe a major change to compete with the international standards of quality. The results of the study have been drawn over Smart PLS version 3.0.

**Keywords:** e-commerce, Sustainable development, Bangladesh, SMEs

## Introduction

E-commerce is not limited to buying and selling products and services but to the exchange of goods through the internet (Babenko, 2019). The Internet has provided a variety of tools and services to enrich businesses through social media platforms, websites, smartphone devices and email services (Nathan & Victor, 2019). That is how it reaches the end-user through different means. Through these platforms,

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millions of buyers visit each day for shopping due to the sustainable development of e-commerce in Bangladesh (Xio et al., 2017). The continuous rise in the world's economics has increased the competition among Small and Medium-sized Enterprises (SMEs) (Julien & Ramangalahy, 2003). The e-commerce industry in the country is flourishing with different types of businesses. Companies are providing a valuable share in their development. SMEs have put a particular share in the products of e-commerce through websites, social media platforms and online stores (Rayport & Jaworski, 2003). In 2005, the e-commerce adoption process started by SMEs, which paved the way for the customers to buy products online and made shopping easier in beneficial for Bangladesh's economy (Rahayu, 2015).

E-commerce adoption remained higher among buyers and manufacturers. Modern methodologies were adopted through online methods, which helped get the latest data from the internet (Ciotti, 2019). Also, modern techniques of statistics were principled. In the literature review, the technology adopted and the methods are discussed. These methods proved the positive role of e-commerce adoption in Bangladesh. It is beneficial for the economic stability in the country as well as for the progressive management of the country. If the overall setup of e-commerce adoption is advanced, that will bring systematic and proven positive growth in the right direction. To keep e-commerce at a positive level, it is necessary to better the supply chain process. In the supply chain, the role of logistics and couriering is notable (Al-Bakri, 2015).

The important parts of the research are the technological, organizational and environmental contexts that help understand the e-commerce role for the industries of Bangladesh through sustainable economic development (Billal, 2019). In this case, the analysis of this paper goes through statistical results. 'e-commerce' is facilitated by several tools; knowledge management is one of them. E-commerce adoption heavily relies on a knowledge management system because of its valuable mass customization through a proper framework (Jankovic, 2020). Knowledge Management System (KMS) provides various tools to gather information, and store and distribute it. Also, the KMS provides knowledge-based innovation designing for the end-users (Santoro, 2018). Knowledge management is a business process because it identifies the required knowledge, distributes it to the bodies, and stores it for further use. This process is scientific, making it a business process (Lesakova, 2014). This research aims to explore the key success factors for sustainable e-commerce adoption in Bangladesh's small and medium-sized enterprises.

This paper is organized in a way in which section 1 introduces the topic, its importance, and its usage. Section 2 presents the literature review and the research hypotheses drawn from the literature review. Section 3 elaborates on the material and methods used in data collection. Section 4 displays the study results, and section 5 presents the conclusion along with limitations and future recommendations.

## Literature Review

In the 1960s, the idea of e-commerce was conveyed as an exchange of information through digital media with a specific purpose of buyer and seller (Karjaluoto, 2015). The terms e-commerce and e-business are frequently used interchangeably in the literature, as defined by the Organisation for Economic Co-operation and Development (OECD) countries. The essential component of e-business is Information and Communication Technology (ICT), which is about the services and information processed, stored, transformed, or manipulated through a different medium (Hollenstein, 2004). A concept introduced by Kim and Ko (2015) about the infrastructure of ICT helps shape e-commerce diffusion. The ICT enables economic growth by inducing high-speed internet, broadband facility, and computing and mobile application support to enhance the business industry through technology. This makes it easier for people to communicate and interact for productive benefits. Along with benefits, there are barriers as well to e-commerce adoption. The ICT enables economic growth by inducing high-speed internet, broadband facility, and computing and mobile application support to enhance the business industry through technology (Kitukutha & Olah, 2021). This makes it easier for people to communicate and interact for productive benefits. Along with benefits, there are barriers as well to e-commerce adoption. There are numerous barriers to e-commerce adoption, but improvement in the information and communication technology of enterprises would be a catalyst for further e-business implementations (Abdurazzakov, 2020).
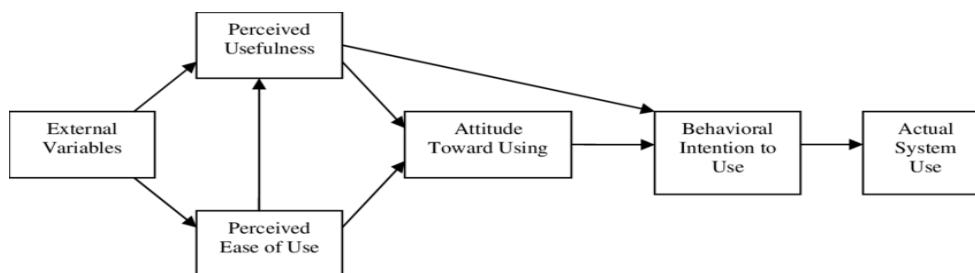


**Figure 1: Illustration of the Technology Acceptance Model (TAM).**
**Source:** Miller & Khera, 2010

This model presents information on user acceptability and utilization of technology. The behavioural component that motivates people to use the technology is crucial. The perceived usefulness and ease of use determine the user's capacity to adopt the computer system. The perceived benefits (Rahayu, 2015) and perceived compatibility are important in the technological factors. Perceived benefits are the benefits acquired in the management process through the relative advantage that e-commerce provides to organizations. These are the important factors for the adoption of innovation as well as change in a drastic way. The "degree to which a system is

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regarded as being consistent with the current values, needs, and experiences of users" is defined as perceived compatibility. In this regard, the perceived compatibility judges whether the acquired knowledge of the potential users is enough to adopt the technology (Thabit, 2016). e-commerce is beneficial in improving relationships with trading partners. Trade partners are the parties with agreement on the trade of information, goods, or services. The agreement between them is the trade partner agreement (Prasad & Manigipudi, 2021). In e-commerce, the trade partner is the high-level support provider that encourages and participates in the problem-solving mechanism between two organizations. Trade partners utilize knowledge sharing to enrich the supply chain operations by gaining a better position of advantage (Önder, 2016). According to Assad and Yusoff (2015), organizational context includes information intensity to adopt information technology in SMEs. The limit or extent of information regarding the products and services is the information intensity. Firms with great information intensity are more compelled to pursue e-commerce. The rise in the requirement for information processing is from the internal uncertainties of SMEs. Through more investment in e-commerce adoption, information intensity increases with flexibility and the decision-making process (Cohen, 1990). Several factors profoundly influence the e-commerce implementation in which the competitive pressure is most common, which has a significant impact (Lin, Luo & Benitez, 2020; Ignat, 2020). According to Li, Turel and Luo (2020), the important elements that have a strong influence on the adoption of e-commerce are (1) external support, which includes support from peers, relevant groups, and (2) competitive pressure as a significant factor that adds more and more value to the firm's performance. Although the role of government in establishing better standards for e-commerce is necessary regarding the reshaping of policies, taking great initiatives to improve the setting of e-commerce adoption's acceptability and providing e-business support and building sustainable business models using creative technology (Seroka-Stolka, 2017).

*Hypothesis*

Giving the hypothesis of key success factors for the adoption of e-commerce is discussed in a variety of literature. The testing of technological, environmental, and organizational factors has been done in several pieces of research.

*Technological Context*

There are pivotal indicators of e-commerce adoption in relative advantage. Rogers defines the relative advantage – as an innovation when perceived better in reality than its idea (Rogers, 1971). If the product works better, then the idea about its performance is the relative advantage. Every innovation has ideas and values. These preconceived values about the innovation, if perceived as consistent with preconceived values, previous experiences, and fulfill the consumers' needs, then it is known as 'Compatibility' (Rogers & Blonski, 2010). The complexity is; when innovation is perceived as hard to understand and challenging to use for the consumers (Hernández-García, 2010). In most countries, the internet facility is not reliable and efficient for the consumers. Ample of organizations, due to several

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factors, lack of proper information, telecommunication networking issues, and other networking and power shortage issues avoid the adoption of e-commerce in their respective organizations. As a consequence, the majority of the SMEs feel unsatisfied to adopt E-commerce (Kozma, 2014). The increase in the probability of e-commerce adoption is directly related to perceiving relative advantage by businesses. E-commerce adoption offers a variety of benefits for businesses, including the flexibility to work remotely, lower costs and on-demand task completion (To, M.L. & Ngai, 2006). Once e-commerce is adopted in businesses, the requirement to change the hardware and software becomes easy. Each part relating to e-commerce is available in the market with minimal capital investment. In addition, the expected assistances of e-commerce implementation are to increase the business communication speed, easy access to the market and mobilization of market information. According to, To and Ngai (2006), a rational argument can be drawn from the previous studies that adopting e-commerce for businesses benefits the organizations and outweighs the disadvantages by achieving a competitive advantage over business partners. E-commerce adoption becomes challenging for the organizations if they perceive it uneasy about using existing systems or the process is more complex. As Oprescu (2019) emphasized, new technology must be simple for the workers and organizations should acquire enough confidence to utilize the full scope of adopted technologies. Similar is the case with complexity, which has a significant bond with 'adoption decision'; rather, it has a negative link with 'probability of adoption. The hypotheses of technological context are:

H1a. Relative advantage has a significant influence on the adoption of e-commerce.
H1b. Perceived Compatibility has a significant influence on the adoption of e-commerce.
H1c. Perceived Complexity has a significant influence on the adoption of e-commerce.

### Organizational Context

According to Thong (1999), "the information intensity of a product or the service is the extent of information about the product or service". Also, the Information intensity is the information relating to the 'reliability' of the product. Every organization has issues and problems. Management support provides valuable time and investment with effective execution to sort out issues (Wang & Ahmed, 2009). Organizations gain knowledge from different sources. These sources are; internal or external. Absorptive capability is when an organization gains knowledge from different sources and applies the knowledge to make a profit from products or services. According to OECD adoption of Information and communication technology isn't sufficient and reliable. Also, ICT adoption for SMEs is not very satisfactory due to network and system costs in developing countries (Kurniawati, 2020). SMEs in developing countries are unable to adopt ICT due to poor infrastructure. The hypotheses of organizational context are:

H2a. Information intensity has a significant influence on the adoption of e-commerce.

H2b. Management support has a significant influence on the adoption of e-commerce.

H2c. Absorptive capacity has a significant influence on the adoption of e-commerce.

*Environmental Context*

Business partners are an organization's relationships with its suppliers or with the consumers (Assad & Yusoff, 2015). The external support is from the technical staff providers, associates, and training partners (Ramsden, 2005). Many organizations depend on business partners for the implementation of product designs and services. A business partner has a specific role in the development of internet-based businesses. Also, the organization's size is important. Large-scale organizations need less support from their business partners (Mole & Baldock, 2017). Organizations, either small or medium-sized, depend on the skills and expertise of their business partners when adopting e-commerce. Marketing activities and previous projects have a significant impact on the business partners; it also has a profound impact on the decision of organizational management to adopt e-commerce because the business partners have already adopted the same. In this regard, the organizations adopt e-commerce to compete with other organizations and facilitate their workers for rapid completion of tasks. Managers also seek help from the business partners regarding regulatory support (To & Ngai, 2006). The hypotheses of the environmental context are:

H3a. Business Partner has a significant influence on the adoption of e-commerce.

H3b. External support has a significant influence on the adoption of e-commerce.

**Research Methodology**

This study is based on a questionnaire adopted from several types of research cited in the literature review. The data of the research has been collected through Google Form. The period of the data collection starts from May 2021 to August 2021. The respondents of the research are managerial staff of the leading SMEs in Bangladesh. The sample of the research is 500 managerial staff from SMEs of selective divisions of Bangladesh. Divisions of Bangladesh selected for data collection are Dhaka, Khulna, Mymensingh and Chittagong. The selection of these divisions has been made on a 'convenience-based model' to collect data during the Covid-19 pandemic. This study is based on a 5-Point Likert scale. Smart PLS is a structural modelling partial least square software for windows used to examine the results. The indicative variables are also addressed as observed variables, and the latent variables are also known as unobserved variables. The latent variable has two different types, endogenous and exogenous. The latent variables of the study are Organizational Factors, which include further, Information intensity, Management support and Absorptive capacity; Technological Factors, which include, Compatibility, Complexity and Relative Advantage; Environmental factors, which include Business partner and External Support. These are unobserved or exogenous variables, and they have an impact on the endogenous variable e-commerce adoption, which is the dependent variable.

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*Research Framework*

The TOE is the Technology-Organization-Environment Framework (Baker, 2012). TOE is a framework based on the level of application for the perception of research with special reference to the organization. There are three major components of the TOE framework to explore the effect or acceptance level of the organization for innovation technology; Technological, Environmental, and Organizational contexts. The technological factor is vital in dealing with the useful features of the technology, internal and external technologies, as well as prospective technologies. TOE framework remained helpful in research relating to information systems, knowledge management, e-commerce-related research, web services, and cloud computing (Zhou, 2011). This research adopted Roger's Diffusion of Innovation (DOI) theory's five characteristics. Similar research was conducted by (Rodríguez-Ardura, 2010) with proper conjunction of DOI theory and technological factors to explore the e-commerce adoption process in enterprise systems. Another theory based on a similar pattern investigated the case of e-commerce adoption by findings that 'compatibility' is the influencing factor for e-commerce adoption (Fedorko, 2018). Research conducted by Chandra (2018) shows that higher-level positions in organizations substantially impact e-commerce adoption. Organizational factors are the inner factors relating to 'inside the premises of the organization'. Another research conducted by (Choshin, 2017) shows that employees tend to shape themselves according to innovative technology. A study conducted by Zhou (2011) found that competitive pressure and external support enable SMEs to adopt e-commerce, and these two are significant for e-commerce adoption. Another study conducted shows that trade partner relationships have a strong impression on the adoption of e-commerce. Though the government's attitude towards a boosted economy is one factor, support is another factor. Awiagah (2016) demonstrates that government support for e-commerce adoption exists in many emerging countries. The research model constructs were derived from the literature review.
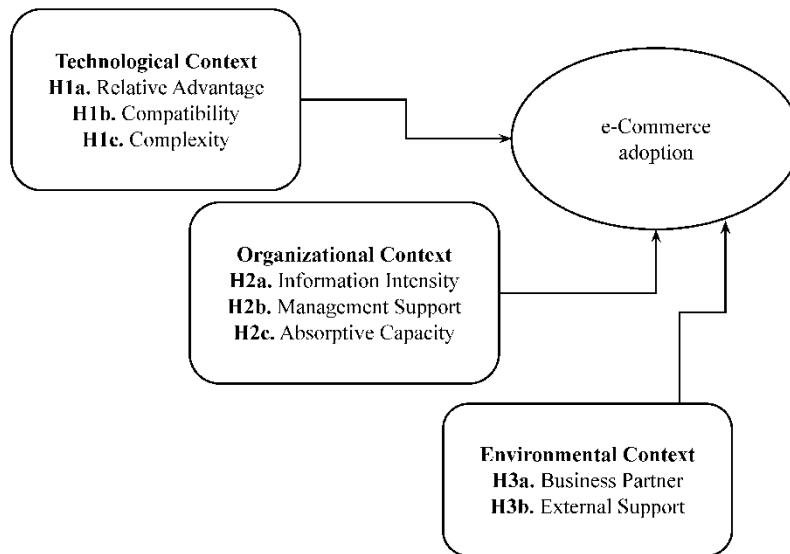
**Figure 2: Conceptual Research Framework.**

## Research Results

The results of the study Cronbach's Alpha, reliability, composite reliability and Convergent validity are shown in Table 1.

**Table 1. Convergent validity, and Reliability assessment.**

|  | Item | OL | A | CR | AVE | VIF |
|---|---|---|---|---|---|---|
| Perceived relative advantage | RA1 | 0.817 | 0.760 | 0.832 | 0.521 | 2.052 |
|  | RA2 | 0.407 |  |  |  | 1.915 |
|  | RA3 | 0.890 |  |  |  | 2.722 |
|  | RA4 | 0.440 |  |  |  | 1.954 |
|  | RA5 | 0.886 |  |  |  | 2.64 |
| Perceived compatibility | PC1 | 0.783 | 0.618 | 0.835 | 0.718 | 1.25 |
|  | PC2 | 0.906 |  |  |  | 1.35 |
| Perceived complexity | CPLX1 | 0.732 | 0.655 | 0.807 | 0.583 | 1.483 |
|  | CPLX2 | 0.781 |  |  |  | 1.494 |
|  | CPLX3 | 0.776 |  |  |  | 1.136 |
| Information Intensity | II1 | 0.792 | 0.661 | 0.815 | 0.596 | 1.303 |
|  | II2 | 0.799 |  |  |  | 1.398 |
|  | II3 | 0.723 |  |  |  | 1.227 |
|  | MS1 | 0.822 | 0.729 | 0.844 | 0.644 | 1.377 |

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| | | | | | | |
|---|---|---|---|---|---|---|
| Management support | MS2 | 0.725 | | | | 1.426 |
| | MS3 | 0.855 | | | | 1.603 |
| Absorptive capacity | AC1 | 0.909 | 0.860 | 0.909 | 0.769 | 1.874 |
| | AC2 | 0.829 | | | | 2.382 |
| | AC3 | 0.891 | | | | 2.627 |
| Business Partner | BP1 | 0.73 | 0.742 | 0.854 | 0.662 | 1.308 |
| | BP2 | 0.884 | | | | 1.843 |
| | BP3 | 0.820 | | | | 1.655 |
| External Support | ES1 | 0.773 | 0.722 | 0.821 | 0.535 | 1.533 |
| | ES2 | 0.729 | | | | 1.659 |
| | ES3 | 0.701 | | | | 1.127 |
| | ES4 | 0.722 | | | | 1.695 |
| e-commerce | EC1 | 0.739 | 0.735 | 0.820 | 0.479 | 1.675 |
| | EC2 | 0.651 | | | | 1.362 |
| | EC3 | 0.747 | | | | 1.643 |
| | EC4 | 0.692 | | | | 1.754 |
| | EC5 | 0.719 | | | | 1.911 |

**Note:** *a=Cronbach's Alpha, CR=Composite reliability, AVE=average variance extracted, OL=outer loadings*

This study showed the reliability of the constructs ranges from 0.618 to 0.810. Cronbach's Alpha results show that all the constructs have a reliability value above 0.6 (Tavakol & Dennick, 2011), indicating good reliability. Further, the Composite reliability, Average variance extracted and VIF are measured. Convergent validity assures that the concepts are related to each other (Lekwa & Shernoff, 2019). If the Average Variance value extracted is 0.5 or above, convergent validity is achieved. In our case, the AVE is above the threshold value. Hence, convergent validity is achieved. The multicollinearity among the constructs is observed by calculating the variance inflation factor (VIF). The value of VIF explains the other construct of the same indicator. In this case, the value of VIF of all the constructs is below 10, which indicates that there is no issue of multicollinearity in the scale.
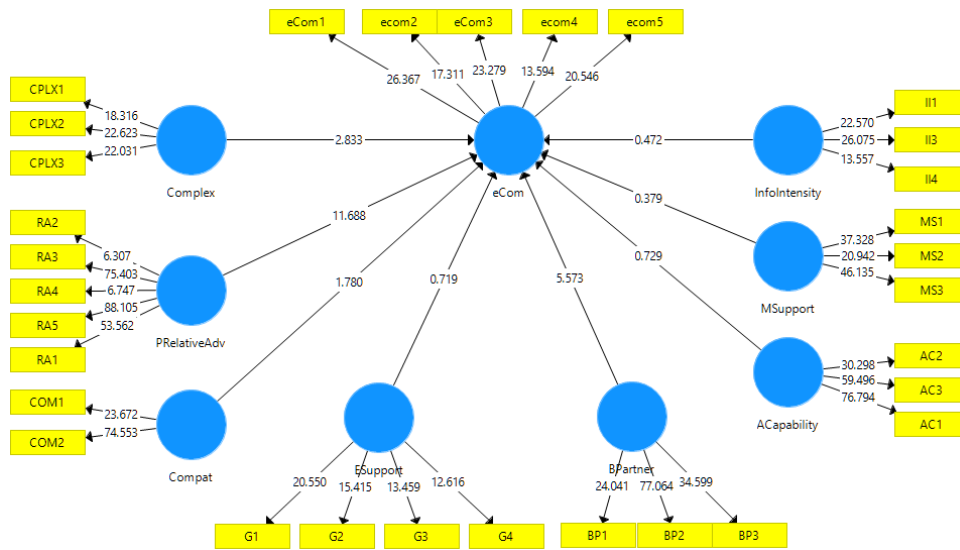
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**Figure 3: Reflective measurement model.**

The technological context in the graphical representation shows that perceived relative advantage (RA) has a significant relation with e-commerce adoption. Perceived complexity (CPLX) and perceived compatibility (PC) also significantly influence e-commerce adoption. The organizational context shows the results as, Information intensity (II) has a significant relationship with e-commerce adoption, Similar is the case with Management Support (MS). The Absorptive capacity (AC) has a non-significant relationship with e-commerce adoption. It shows that Organizational context has a lesser impact on the adoption of e-commerce. The environmental constructs, Business partner (BP) has a significant relationship with e-commerce adoption, while the External Support (ES) has a non-significant relationship with e-commerce adoption.

**Table 3. Hypothesis testing results**

|  | Beta | STDEV | T | P | 2.5% | 97.5% |  |
|---|---|---|---|---|---|---|---|
| RA -> EC | -0.489 | 0.046 | 5.693 | 0.000 | -0.048 | 0.087 | Supported |
| PC -> EC | 0.096 | 0.055 | 1.737 | 0.043 | 0.173 | 0.354 | Supported |
| CPLX -> EC | 0.101 | 0.036 | 3.837 | 0.005 | -0.005 | 0.208 | Supported |
| II -> EC | 0.015 | 0.033 | 2.460 | 0.026 | 0.036 | 0.171 | Supported |
| MS -> EC | 0.021 | 0.052 | 4.392 | 0.005 | -0.112 | 0.050 | Supported |
| AC -> EC | 0.022 | 0.033 | 0.663 | 0.508 | -0.044 | 0.082 | Not Supported |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| BP -> EC | 0.261 | 0.048 | 5.480 | 0.000 | -0.086 | 0.119 | Supported |
| ES -> EC | -0.029 | 0.040 | 0.716 | 0.475 | -0.572 | -0.389 | Not Supported |
| | **R2** | **Q2** | | | | | |
| EC | 0.698 | 0.315 | | | | | |

**Note:** RA= Relative advantage, PC=Compatibility, CPLX= Complexity, II= Information intensity, MS= Management support, AC= Absorptive capacity, BP= Business partner and ES= External support

In the assessment of the goodness-of-fit model, testing of the hypothesis was done to ensure the relationships between variables. H1a examines RA has a significant impact on EC. The results revealed that RA significantly impacts EC (Beta=-0.489, t=5.6, p<.001). Hence, H1a was supported. H1b examines PC has a significant impact on EC. The results revealed that PC significantly impacts EC (Beta=0.096, t=1.73, p<.001). Hence, H1b was supported. H1c examines CPLX has a significant impact on EC. The results revealed that CPLX significantly impacts EC (Beta=0.046, t=3.83, p<.001). Hence, H1c was supported. In the Technological context, Relative advantage, Perceived Complexity and perceived compatibility have a significant influence on the adoption of e-commerce. H2a examines II has a significant impact on EC. The results revealed that II significantly impacts EC (Beta=0.015, t=2.46, p<.001). Hence, H2a was supported. H2b examines MS has a significant impact on EC. The results revealed that MS significantly impacts EC (Beta=-0.021, t=4.39, p<.001). Hence, H2b was supported. H2c examines AC has a significant impact on EC. The results revealed that AC has insignificant impact on EC (Beta=0.022, t=0.66, p>.001). Hence, H2c was non-supported. In the Organizational context, Information intensity, Management Support was significant with e-commerce adoption.H3a examines business partner (BP) has a significant impact on EC. The results revealed that BP significantly impacts EC (Beta=0.261, t=5.48, p<.001). Hence, H3a was supported. H3b examines external support (ES) has a significant impact on EC. The results revealed that ES has an insignificant impact on EC (Beta=-0.029, t=0.71, p>.001). Hence, H3b was non-supported. In the environmental context, Business partner (BP) was significant with e-commerce adoption.

*Findings*

The significance of independent variables, Perceived relative advantage, Complexity, Compatibility, Information intensity, Management support, Absorptive capacity, Business partner, and external support on a dependent variable, e-commerce adoption, is observed in this research paper to know the key success factors of sustainable e-commerce adoption in Bangladesh. The results showed the supporting variables from the technological context are Perceived relative advantage (H1a), perceived compatibility (H1b), and perceived Complexity (H1c). The supporting variables from the organizational context are Management support (H2a)

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and Information intensity (H2b). The supporting variables from the environmental context are Business partners (H3a). These variables have a significant influence on the adoption of e-commerce. Perceived compatibility and perceived complexity factor are much faster in influencing the adoption of e-commerce. Perceived Complexity is the degree to which a product is experienced or perceived as difficult to use or incompatible with the environment. In that case, if a product or service is not easy to use for the consumer, the product is considered 'discarded' and 'ill-profited'. Similar results have been drawn by the studies (Awiagah, 2016; Sohail & Ali, 2012). A study conducted by Zhou (2011) found that complexity is the strongest determinant in the adoption of e-commerce. Another study conducted by (Baker, 2012; Liu, Brock & Tseng, 2013) found that complexity, compatibility and perceived relative advantage have a strong impact on the adoption of e-commerce. The relative advantage also has a significant impact on e-commerce adoption in Bangladesh. Business support also has a significant influence on e-commerce adoption. A study conducted by Etemad (2004) shows the positive role of business partners (BP) in adopting e-commerce. Management support has a strong positive role in the adoption of e-commerce, but in the coronavirus pandemic duration, the management (MS) role remains passive, with only 1% in favour of e-commerce adoption. The Absorptive capacity (AC) has a weaker impact on the adoption of e-commerce, yet the role of Absorptive capacity (AC) in other studies is also not very profound (Lin & Benitez, 2020; Easter & Ferdinand, 2008). However, the role of external support (ES) in the adoption of e-commerce is not suitable. The competition among the industries is one reason, and the leading 'market' with unique products is another. In that case, there is less support for the external partners as well.

**Conclusion**

This study exposed the key success factors of e-commerce adoption, where e-commerce is the dependent variable of the research. This study holds the view that relative advantage, compatibility and complexity in the technological context have a strong positive influence on e-commerce adoption in Bangladesh. The role of perceived complexity is higher among other variables of the study. Similar is the case with perceived compatibility showing the remarkable influence on e-commerce adoption. The information intensity has a massive impact on e-commerce adoption. Research conducted by Valarezo (2018) shows complexity is highest among other variables. The higher intensity of complexity is a barrier to the adoption of e-commerce by SMEs. The business partner has a strong impact on the adoption of e-commerce. This study observes that external support is limited and has a negative impact on e-commerce adoption. Government support cannot be neglected in that process, as per earlier research (Valarezo, 2018; Rosenberg, 2004). Minor support from the government is available for the adoption of e-commerce. There are several issues related to it, as the impact of the dollar on the economy is so great that it makes it harder for the industries and organizations to upgrade their system. Also, the product costs and the taxes imposed by the government are so high that the level of

complexity increases in the adoption of e-commerce. These positive indicators show the sustainability level of e-commerce adoption by SMEs in Bangladesh. However, to successfully implement e-commerce in Bangladesh, it is necessary to liberate the telecommunication and information technology sector by introducing reforms. Having a website for the business is not the adoption of e-commerce in marketing. There is a dire need for uniformity to build contracts over the internet (Bhowmik, 2012). Also, there is a need to adopt internationally accepted quality control certificates for the Bangladeshi SMEs to explore the new opportunities for sustainable business models and they also need to follow other developed countries' e-commerce adoption schemes.

*Limitations and Future recommendations*

The study explores the key success factors for sustainable e-commerce adoption in Bangladesh. This study is limited to the data collected in Bangladesh. This study is also limited to specific regions of Bangladesh, and the limitation of the study persists in the collection of data to the relevant department only. However, there is no limitation in the participation of the research from any sector, as e-commerce adoption is the basic need and necessity of every industry. In that case, many industries may be skipped in the data collection due to the non-availability of staff participation. The B2B e-commerce sale will increase in the upcoming years in Bangladesh. As the online business is flourishing and companies are dominating through B2B operations. However, in the future, e-commerce adoption will face different challenges that future researchers must address.

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## BADANIE KLUCZOWYCH CZYNNIKÓW SUKCESU W ZRÓWNOWAŻONEJ ADOPCJI E-COMMERCE W MŚP

**Streszczenie:** Internet wprowadził handel i handel do nowszych możliwości, jakim jest e-commerce. Handel elektroniczny ma ogromny wpływ na procesy i praktyki, w których Internet jest wykorzystywany do reklamowania dowolnych produktów lub usług, przyjmowania zamówień przez Internet, systemów płatności elektronicznych oraz dostarczania towarów konsumentom. W porównaniu z tradycyjnymi systemami handlowymi, braki firm, ale teraz handel elektroniczny stał się „przekroczeniem granic" dla nowych firm z kilkoma unikalnymi modelami opartymi na przyjęciu technologii. Kraje rozwijające się wprowadzają e-handel w przedsiębiorstwach, niezależnie od tego, czy są to firmy na poziomie mikro, czy na poziomie średnim. Niniejsze badanie ma na celu zbadanie kluczowych czynników sukcesu przyjęcia e-commerce dla zrównoważonych MŚP. W badaniu wykorzystano model TOE. Dane z badań są zbierane za pomocą kwestionariusza od małych i średnich przedsiębiorstw z Bangladeszu. Wyniki badań wykazały, że czynniki technologiczne, organizacyjne i środowiskowe mają ogromny wpływ na przyjęcie e-commerce. Rola czynników organizacyjnych jest ograniczona. Postrzegana złożoność, kompatybilność i względna przewaga, intensywność informacji, wsparcie zarządzania mają duży wpływ na przyjęcie handlu elektronicznego przez Bangladesz. Rząd Bangladeszu zainicjował kilka modeli przyjmowania e-commerce, chociaż czynnik złożoności stanowi barierę na drodze do przyjęcia e-commerce. Jeśli kompatybilność ulegnie poprawie, zrównoważenie MŚP w Bangladeszu zaobserwuje poważną zmianę, aby konkurować

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z międzynarodowymi standardami jakości. Wyniki badania zostały sporządzone na Smart PLS w wersji 3.0.

**Słowa kluczowe**: e-commerce, zrównoważony rozwój, Bangladesz, MŚP

# 探索中小企业采用可持续电子商务的关键成功因素

**抽象的**：互联网将贸易和商业引入了新的可能性，即电子商务。电子商务对使用互联网为任何产品或服务做广告、通过互联网接受订单、电子支付系统以及向消费者提供商品的流程和实践产生了巨大的影响。与传统的贸易系统相比，企业的不足之处，但现在电子商务已经成为新业务的"边界跨越"，**具有基于技**术采用的几种独特模式。发展中国家在企业中采用电子商务，无论企业是微观层面还是中等层面。本研究旨在探讨可持续中**小企业**采用电子商务的关键成功因素。本研究使用 TOE **框架**。**研究数据是通**过孟加拉国中小企业的问卷调查收集的。研究结果表明，技术、组织和环境因素对电子商务的采用有着深远的影响。组织因素的作用是有限的。感知复杂性、兼容性和相对优势、信息强度、管理支持对孟加拉国电子商务的采用有很大影响。孟加拉国政府已经启动了几种采用电子商务的模式，尽管复杂性因素是电子商务采用方式的障碍。如果兼容性得到改善，孟加拉国中小企业的可持续性将发生重大变化，以与国际质量标准竞争。研究结果基于 Smart PLS 3.0 版。

**关键词**：电子商务、可持续发展、孟加拉国、中小企业