



# Factors influencing the adoption of Electronic Commerce among Small and Medium Scale Enterprises in Ghana

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## Abstract:

Small and medium enterprise (SME) business owners often face challenges when adopting e-commerce strategies for product marketing. By leveraging e-commerce technology and tools, SME business owners have the potential to expand their customer base and enhance overall business performance. Using a quantitative method, this study aimed to investigate the factors influencing the adoption of e-commerce among SME businesses in the Ghanaian market, employing the Technology Acceptance Model (TAM) as its theoretical framework. The study involved twenty SME business owners in Ghana who had implemented e-commerce strategies for product marketing. Through the use of questionnaires, the research examined the drivers of e-commerce adoption among SMEs and explored the associated benefits, challenges, and strategies for ensuring successful adoption in the Ghanaian context. A key recommendation arising from the study is that SME business owners should implement robust security systems to safeguard against fraud or hacking. Additionally, it is essential for the management of e-commerce platforms to make substantial investments in information technology (IT) to develop infrastructure and enhance human capacities in support of e-commerce adoption. Furthermore, the findings suggest that e-commerce platform providers should focus on promoting the benefits of e-commerce to encourage other SMEs to adopt their services. The study also recommends that the government utilize legislative tools to establish a comprehensive regulatory framework supporting e-commerce, thereby safeguarding businesses and customers from potential hacking and fraud.

## Keywords:

E-commerce; Marketplace; Globalisation; Information Communication Technology.

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## 1. Introduction

The adoption and use of e-commerce technologies by small and medium enterprises (SMEs) have been the focus of considerable research over the past decade. The interest in this topic has been driven by a basic assumption that e-business and e-commerce information technology (EEIT) offer new opportunities for SMEs to offset competitive disadvantages of size, resources, geographic isolation, and market reach (Laudon & Laudon, 2022). It is a well-known fact that the Internet and e-commerce technologies can benefit an organization. The use and application of Internet-based technologies in commerce, government, and education are claimed to be undergoing extraordinary growth, with the World Wide Web significantly altering the manner in which traditional commerce is undertaken (Laudon & Laudon, 2022). According to Hu et al. (2019), e-commerce adoption is an enabler for global competition for small businesses through enhanced efficiency and better customer and supplier relationships. Indeed, e-commerce competition patterns are evolving as businesses leverage e-commerce with supply chain operations. Consumer and supplier interactions and payments are streamlined, with marketing made more flexible and accessible while extending business hours worldwide (Boateng et al., 2021). Organizations that adopt e-commerce are expected to gain several benefits, including reducing transaction costs, automatic product identification, and sharing information efficiently among organizations of the same and different industries.

Most SMEs in developing countries encounter several difficulties, including infrastructural problems and restricted diffusion of technical devices and information. Nonetheless, given the dynamic market climate and the need to thrive, SMEs must embrace e-commerce. Adopting innovative and informed e-marketing strategies by SMEs is necessary to remain distinct, profitable, and successful in domestic and international markets. Considering the fundamental role of technology in SMEs' development, it is regarded as a socio-economic development enabler and a critical tool for effective political governance. As a result, technology has been utilized by Ghanaians as a critical developmental tool to bridge the digital gap between their trading partners and themselves. Consequently, several policies and measures have been established over the years to facilitate ICT infrastructural developments and human resource capacity building and encourage the use of technology. The Ghana ICT for Accelerated Development policy and the ICT sector's liberalization are among some of the policies and measures which aim to spearhead the use of ICT for development (National Information Technology Authority (NITA), 2003). The ICT4AD policy is also intended to provide an enabling platform to safeguard the ICT industry's development and foster e-commerce and Internet usage in Ghana (Boateng et al., 2021). This research expands the theoretical discourse on the discipline of electronic marketing and offers significant practical welfare as well as managerial implications for SMEs in developing or emerging economies. Specifically, this study was guided by the following objectives:

1. To identify the drivers or enablers of electronic commerce adoption among SMEs in Ghana.
2. To examine the benefits that SMEs derive from using electronic commerce.

## 2. Literature review

Academic literature offers several theories and constructs which assist in investigating the determinant factors of e-commerce adoption by SMEs. This chapter reviews the theories that have been employed in technology adoption, especially e-commerce adoption in small and medium-sized enterprises. These theories include the Theory of Planned Behaviour (TPB), the Technology Acceptance Model (TAM), the Technology-Organization-Environment (TOE) framework, Resource-Based Theory (RBT), the Perceived e-readiness Model (PERM), and the Diffusion of Innovation Theory (DIT).



### 2.1 The Theory of Planned Behavior (TPB)

The Theory of Planned Behaviour (TPB) is an extension of the Theory of Reasoned Action (TRA) established by Ajzen (2019). The theory posits that three constructs can be used to predict the intention to use an innovation. These constructs are perceived behavioural control, subjective norms, and attitude toward behaviour (Taylor & Todd, 1995; Choshin, 2017). Perceived behavioural control is described as the extent to which a person feels able to enact the behaviour. Subjective norms characterize a person's own evaluation of social pressure to perform the target behaviour (Ajzen, 2019). While attitude in the theory refers to a person's overall evaluation of the behaviour. The theory has been applied or modified to understand e-commerce adoption in the context of developing countries. For example, Sutisna and Handra (2022) used the theory to investigate the behavioral factors that influence e-commerce adoption as a case study. The authors found perceived advantages, accessibility, management support, internet, and complexity to have a major influence on e-commerce adoption decisions, while perceived disadvantages and other facilitating conditions do not affect e-commerce adoption decisions. Sutisna and Handra (2022) noted that their findings tend to agree with the TPB. However, attitude seems to weigh more than the subjective norm and perceived behavioral control.

According to Ajzen (2019), the strength of TPB is that it measures and predicts actions in the immediate future. However, the theory has been criticized for its inability to capture the complex interrelationships between SME owners, government agencies, customers, and other stakeholders. Ajzen (2019) also argued that TPB largely ignores the contextual nature of SMEs. For that reason, Ajzen (2019) suggested that researchers seeking to explore e-commerce adoption in SMEs will require an explanatory theory rather than the individualist prediction that TPB currently offers. The literature observed that TPB only focuses on user behaviour and largely ignores other factors that shape SMEs' e-commerce adoption, such as resources, customer readiness, and infrastructure. Consequently, TPB on its own cannot be used to understand SMEs' adoption of e-commerce in developing countries.

### 2.2 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) has underpinned many studies related to Information Systems (IS) adoption. TAM was established by Davis (1989) to describe user adoption of new technology innovation in organizations. The TAM model posits that perceived usefulness (PU) and perceived ease of use (PEOU) are the two most important determinants of technology adoption. Perceived usefulness is defined in the model as the degree to which a person is certain that the continuous usage of a particular system will enhance his or her job performance. While perceived ease of use is the extent to which a person believes that using a particular system would be free of physical and mental effort (Hasni et al., 2021).

Several e-commerce researchers have used TAM as a model for understanding e-commerce adoption in organizations, including SMEs (Nyoro et al., 2015). For example, TAM has been used as the model to assess the usefulness and ease of using e-commerce among SMEs in India, Pakistan, and Thailand manufacturing and service industries (Singh et al., 2020). TAM has also been used to investigate the effect of perceived system risk on the behavioral intention of tourism organizations in Pakistan to use e-commerce (Hasni et al., 2021). These studies commend TAM as a useful model to understand and explain a user's intention to use e-commerce. Evidently, TAM is a key model that has been applied in many types of SME research for explaining the use, behaviour, and attitude of e-commerce adoption (Singh et al., 2020; Hasni et al., 2021).

### 2.3 Technology Organisation Environment (TOE)

The Technology Organisation Environment (TOE) framework was developed by Tornatzky and Fleischer (1990) to explain the factors that affect a firm's decision to adopt innovation. The framework posits that



technological innovation in organisations is influenced by three factors specifically: the technological, the organisational, and the external environment. Organisational factors consist of informal and formal methods, communication processes, and the size of the organisation. The environmental factors comprise characteristics such as government regulation market structure and technology infrastructure. Technological context encompasses the availability and features of the technology (Fonseka et al., 2022).

TOE has been used in studies related to e-commerce adoption in SMEs. For instance, Huy et al. (2012) and Hu et al. (2019) used the TOE framework to identify factors influencing e-commerce adoption in 926 Vietnamese SMEs. The researchers found that lack of skilled personnel, scarcity of resources, communication barriers between SMEs and supporting groups, limited options for online payment, and cultural barriers to online shopping were the main factors influencing e-commerce adoption. Huy, et al. (2012) commended the TOE framework as serving as a foundation for understanding the internal and external factors that could influence e-commerce adoption for all types of SMEs in Vietnam. One of the limitations of TOE in relation to SMEs in developing countries is that some of the constructs in the adoption predictors are presumed to be more applicable to large organisations due to the wealth of their resources. For this reason, TOE on its own is not sufficient in explaining the adoption of SMEs (Ocloo et al., 2020; Mohtaramzadeh et al., 2018). Therefore, Ocloo et al. (2020) suggested that the integration of TOE and TAM would offer a richer theoretical lens for understanding the adoption of e-commerce by SMEs in developing countries. The same point was also echoed by Fonseka et al. (2022), after conducting an empirical online study on retailing utilisation in digital transformation using TOE and TAM constructs in Sri Lanka.

#### 2.4 Factors that Influence SMEs in Adopting of E-commerce

E-commerce adoption factors can be described as those that motivate or inhibit the adoption of e-commerce. This review adopts a four-dimensional framework for reviewing the factors affecting e-commerce adoption and use in SMEs. The framework has been slightly modified from Tornatzky and Fleischer's (1990) model. According to Tornatzky and Fleischer, the process by which a firm adopts and implements technological innovations is influenced by individual factors, technological factors, organizational factors, and environmental factors. These factors are now discussed.

##### 2.4.1 Individual Factors

Issues surrounding individual persons are an important aspect of the adoption of ICT and e-commerce in any organisation. There is a need for SMEs to be generalists in the performance of their functions, as a result, the position of individuals matters. Most SME personnel either are in key managerial positions or are classified in a unit or function that performs a certain task or numerous tasks. A manager who is usually an owner runs most SMEs organisation (Demirbas et al., 2011).

##### 2.4.2 Organisational Factors

Organizational factors are those defined by the nature and characteristics of the firm itself, typically making it unique. Several factors have been cited that hinder or motivate e-commerce adoption within the organization's boundaries. Organizational factors identified in the literature relate to enterprise size, types of products and services, capital, human resources, expertise, efficiency, priorities, and profitability (Al-Tit et al., 2019). Some studies have examined the influence of factors such as the information intensity of products and services (Al-Tit et al., 2019) on e-commerce adoption. Manideep and Reddy (2020) also examined efficiency, effectiveness, and expertise in e-commerce adoption, while Chouki et al. (2020) found cost, security, and training to be barriers to EEIT adoption. On the other hand, Susanty et al. (2020) found issues related to money to affect the adoption of e-commerce. Organizational factors, referred to as internal context factors by Caldeira and Ward (2002), include the availability of financial resources, human resources, users' attitudes, power relationships, organizational structure, and IS/IT competencies. Furthermore, Khosrow-Pour (2019) examined growth

orientation, ownership structure, and size of firms in addition to the information intensity of products/processes in relation to the adoption of e-commerce. In Susanty et al. (2020), their study revealed that the most frequently identified barrier to the adoption of EEIT was that staff has inadequate technical or web-specific skills.

#### *2.4.3 Technological Factors*

Technological factors refer to factors associated with the nature and characteristics of ICT which an SME intends to use or employs for the adoption of e-commerce (Scupola, 2003). Technological factors include technology availability, cost, security, reliability, and capabilities. (Al-Tit et al., 2019) examined technological factors including relative advantage, cost, and compatibility, whereas other literature (e.g., Laudon & Laudon 2022) identified several technology variables such as the availability of external expertise and services, quality of software available in the market, vendor support, type of IS/IT solutions available to the firm, IS/IT objectives and assumptions, and evaluation of IS/IT benefits. In Turner and Endres (2017) study of global digital trends, one of the most frequently identified barriers to adoption of EEIT was that technology and tools were inadequate, unavailable, or unreliable. Moreover, Costa and Castro (2021) examined the presence of and access to information networks as barriers that affect the adoption of EEIT. Some of the variations in factors and findings may be attributed to whether researchers focused exclusively on electronic commerce or used a somewhat broader definition of information technology. These factors may include cost to set up and maintain (Cost); technology for selling products or services online (EC Technology); access to network services or infrastructure to support Web and Internet Technologies (Infrastructure); reliability of Web and Internet technologies (Reliability); security issues (Security); and availability or adequacy of existing technology (Technology Availability).

#### *2.4.4 Environmental Factors*

The external environment affects the adoption of e-commerce by SMEs. Environmental factors describe the realm of business engagement of the firm (Koe & Sakir, 2020). Koe and Sakir (2020) examined several marketplace forces including competitive conditions, transactions with trading partners, competitive threats, and demands of marketplace participants as some environmental factors which affect the adoption of e-commerce among SMEs. Again, Al-Tit et al. (2019) identified some environmental factors to include competition, external support (from technology vendors), and supplier/buyer pressure. Koe and Sakir (2020) on the other hand, identified limited knowledge of customers and competitive pressures among factors affecting adoption decisions (Sin & Sin, 2020).

Aside from these factors, Tavengerwei (2018) and Oliveira et al. (2019) examined the transactions with trading partners or vendors as environmental factors that influence the adoption of e-commerce. However, Koe and Sakir (2020) did not find that pressure from suppliers and allied firms was a statistically significant factor for the adoption of intranets or extranets in their sample. Also, Sin and Sin (2020) examined the impact of government policy on the adoption of e-commerce. Some factors identified included government role; business partner affiliation and preferences; nature and characteristics of the value chain; logistics and telecommunications infrastructure; economic and political instability; human-rights issues; and business culture.

### **3. Research methodology**

The study adopted a quantitative research methodology using a descriptive survey design approach to systematically collect data from respondents. The data was analysed to help discuss the factors that influence the adoption of e-commerce among SMEs in Ghana. This research design has the advantage of ensuring that the phenomenon under investigation can be analysed in its most natural and unchanged state (Fatmawati & Fauzan, 2021).





### 3.1 Population

The focus of this study was on small and medium enterprises in Ghana engaged in e-commerce business activities. Thus, the targeted population for this study was twenty (20) registered e-commerce small and medium enterprises (SMEs) in Ghana. The population for this study consists of SME business owners based in Ghana who has successfully adopted e-commerce to market their products. The sampled enterprises were selected from three major sectors of the economy namely: manufacturing, service, and agricultural sectors.

### 3.2 Sampling Procedures

A non-probability convenient sampling method was used for this study. A convenience sample is the one that is drawn from a source that is conveniently accessible to the researcher (Lavrakas, (2019). The researchers adopted this sampling method because it was impossible to collect the data of the entire population given the time and financial constraints. As a result, a total sample of twenty (20) respondents from three (3) SMEs who have adopted e-commerce and their customers were used for the study.

### 3.3 Data Collection Instrument

Data was collected primarily through the use of a survey questionnaire instrument. The instrument used for this study was a five-point Likert-scale designed to collect data quantitatively based on primary data from the field in answer to the research questions. The questionnaires contained some closed-ended questions as well as a few open-ended questions.

### 3.4 Data Analysis

Data collected was analysed using Microsoft Excel, this enabled the researchers to statistically answer the research questions. Tables were used to illustrate the analysis to ensure that the data is quickly and easily understood. In addition, the discussion of the findings was linked to relevant and related literature throughout the paper.

## 4. Data analysis and discussion of findings

Table 1: E-Commerce sites for business

Response	Frequency	Percentage (%)
Tonaton	7	35
Jumia	13	65
Zongo-Mart	-	-
<b>Total</b>	<b>20</b>	<b>100.0</b>

Source: Field Data, 2022

In finding out the e-commerce sites used by SMEs to transact their business, majority of the respondents (65%) indicated the use of Jumia while 35% of the respondents used Tonaton to market their products (Table 1). These e-commerce platforms are part of the leading e-commerce platforms in Ghana, therefore, making their experience of these sites suitable for the study.

#### 4.1 Drivers of electronic commerce adoption by SMEs in Ghana

Research objective one sought to find out the drivers or enablers of electronic commerce adoption among SMEs in Ghana. The results are presented in Table 2.

Table 2: Drivers of electronic commerce adoption by SMEs in Ghana

Statements	SA	A	N	D	SD	TOTAL
Electronic commerce enables me to market my products.	11 (55%)	7 (35%)	2 (10%)	-	-	20 (100%)
I think that using electronic commerce enables me to reach a larger market.	11 (55%)	8 (40%)	-	1 (5%)	-	20 (100%)
I think that using electronic commerce increases my productivity and sales.	14 (70%)	4 (20%)	2 (10%)	-	-	20 (100%)
My interaction with electronic commerce is clear and understandable.	10 (50%)	7 (35%)	2 (10%)	1 (5%)	-	20 (100%)
I find electronic commerce easy to use.	7 (35%)	13 (65%)	-	-	-	20 (100%)
I think that learning to operate electronic commerce is easy for me.	11 (55%)	7 (35%)	2 (10%)	-	-	20 (100%)
Small and medium scale enterprises who use electronic commerce services have more prestige than those who do not.	7 (35%)	1 (5%)	7 (35%)	3 (15%)	2 (10%)	20 (100%)
Small and medium scale enterprises who use electronic commerce services have a high profile.	7 (35%)	7 (35%)	5 (25%)	1 (5%)	-	20 (100%)
I have the resources necessary to use electronic commerce.	8 (40%)	10 (50%)	2 (10%)	-	-	20 (100%)
I have the knowledge necessary to use electronic commerce.	10 (50%)	8 (40%)	2 (10%)	-	-	20 (100%)
Electronic commerce is compatible with other systems I use.	8 (40%)	8 (40%)	2 (10%)	1 (5%)	1 (5%)	20 (100%)
Help is available when I get problem using electronic commerce.	9 (45%)	5 (25%)	4 (20%)	2 (10%)	-	20 (100%)

SD = strongly disagree | D = Disagree | N = Neutral | A = Agree | SA = Strongly Agree

Source: Field Data (2022)

The results in Table 2 depict that 11 (55%) of the respondents strongly agreed that electronic commerce enables them to market their products while 7 (35%) agreed that e-commerce helps in marketing their products. On the other hand, 2 of the respondents representing 10% neither agreed nor disagreed, thus, taking a neutral position.

Secondly, in ascertaining whether e-commerce allowed SMEs to reach a larger market, 11 of the respondents representing 55% strongly agreed that e-commerce helped them to reach a larger market while 8 respondents representing 40% fairly agreed. The results also showed that 1 (5%) of the respondents disagreed with the statement.

Moreover, 14 of the respondents representing 70% strongly agreed that the use of e-commerce increased their productivity and sales while 4 (20%) agreed to this statement. However, 2 representing 10% remained neutral. Again, to find out how user-friendly these e-commerce sites are, respondents were asked to indicate how clear and understandable these platforms were. 10 (50%) of the respondents strongly agreed, with 7 (35%) agreeing that the e-commerce sites were user-friendly, thus, clear, and understandable. Meanwhile 2 (10%) were neutral while 1 (5%) disagreed with the user-friendliness of the e-commerce sites.

Table 2 also indicates that 7 (35%) of the respondents strongly agreed to the ease of use of e-commerce, while 13 (65%) agreed.

Furthermore, 11 (55%) of the respondents strongly agreed that learning to operate e-commerce is easy while 7 (35%) agreed. However, 2 (10%) of the respondents were neutral.

In addition, 7 (35%) of the respondent strongly agreed that the use of e-commerce made them more prestigious than other SMEs who did not use these platforms. Meanwhile, 1 (5%) agreed whereas 7 (35%) disagreed with this point. Again, 2 (10%) of the respondents strongly disagreed that the use of e-commerce made SMEs more prestigious. Meanwhile 3 (15%) of the respondent disagreed.

The Table 2 above also indicates that 7 (35%) the respondents strongly agreed that SMEs who use electronic commerce services have a high profile. Similarly, 7 (35%) of the respondents also agreed with the statement. The results also revealed that 5 (25%) of the respondents were neutral while 1 (5%) of the respondents disagreed with the proposed statement. Regarding the statement on whether the respondents have the necessary resources to use electronic commerce, 8 (40%) of the respondents strongly agreed while 10 (50%) agreed. Again, 2 (10%) were neutral.

The results also indicate that 10 (50%) of the respondents strongly agreed to having the necessary knowledge to use electronic commerce whereas 8 (40%) of the respondents agreed. However, 2 of the respondents were neutral.

Moreover, 8 (40%) of the respondents strongly agreed that electronic commerce is compatible with other systems used in their operations. Similarly, 8 (40%) agreed to the statement whereas 2 (10%) expressed neutrality Meanwhile 1 (5%) of the respondents disagreed with the statement, and 1(5%) of the respondents strongly disagreed with the statement.

Finally, when asked on the availability of help when problems are encountered with the e-commerce platforms, 9 (45%) of the respondents strongly agreed to getting help whereas 5 (25%) also agreed. However, 4 (20%) were neutral while 2 (10%) of the respondents disagreed.

#### 4.2 Benefits SMEs derive from adopting e-commerce

Research objective two sought to find out the benefits SMEs derive from using electronic commerce. The results are in the Table 3.

The results in Table 3 depict that 9 (45%) of the respondents strongly agreed that e-commerce platforms are easily accessible. Also, 7 (35%) of the respondents agreed to the accessibility of the platforms whereas 4 (20%) were neutral.

The second statement proposed that the electronic commerce is the cheapest and most efficient way of marketing products to a larger population. 10 (50%) of the respondents strongly supported the statement while 7 (35%) fairly agreed. The results also showed that 2 (10%) of the respondents were neutral while 1 (5%) of them disagreed.



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Table 3: Benefits SMEs derive from adopting electronic commerce as a platform to market their products in Ghana.

	SA	A	N	D	SD	TOTAL
I can access the service anytime and anywhere I go.	9 (45%)	7 (35%)	4 (20%)	-	-	20 (100%)
Electronic commerce is the cheapest and most efficient way of marketing products to a larger population.	10 (50%)	7 (35%)	2 (10%)	1 (5%)	-	20 (100%)
Electronic commerce is convenient and the easiest to use.	7 (35%)	11 (55%)	2 (10%)	-	-	20 (100%)
Electronic commerce service is more reliable	9 (45%)	8 (40%)	1 (5%)	2 (10%)	-	20 (100%)
Electronic commerce service is safe and secure.	10 (50%)	4 (20%)	4 (20%)	2 (10%)	-	20 (100%)

SD = strongly disagree | D = Disagree | N = Neutral | A = Agree | SA = Strongly Agree

Source: Field Data (2022)

In addition, the Table 3 above also indicates that 7 (35%) respondents strongly agreed that electronic commerce is convenient and the easiest platform to use, whereas 11 (55%) agreed with 2 (10%) of the respondents remaining neutral. Regarding the statement on whether the electronic commerce service is more reliable, 9 (45%) of the respondents strongly agreed that the service is reliable while 8 (40%) agreed. Again, 1 (5%) expressed neutrality while the remaining 2 (10%) of the respondents disagreed with the statement.

Lastly, regarding the assertion that the use of electronic commerce service is safe and secure. 10 (50%) of the respondents strongly agreed, 4 (20%) of the respondents agreed. Similarly, 4 (20%) were neutral. Meanwhile, 2 (10%) of the respondents disagreed with the statement that electronic commerce service is safe and secure.

### 4.3 Discussion of Findings

#### 4.3.1 Drivers of electronic commerce adoption by SMEs in Ghana

Following the assessment of the drivers of e-commerce adoption among SMEs in Ghana, this study further sought to identify the various determinants or factors that influence SMEs' e-commerce adoption decisions in Ghana. The findings provided almost an overall support for the TAM model.

The analysis of the study proved that performance expectancy (usefulness of the service), effort expectancy (ease of use of the Service), and social factors influenced the SMEs' behavioural intention to adopt electronic commerce platforms in Ghana. This means that SMEs' intention to use electronic commerce is highly dependent on perceived usefulness. For instance, the result of the analysis depicts that more than half of the respondents strongly agreed that electronic commerce enables them to market their products. The study further discovered that an overwhelming majority of the respondents strongly supported the statement that using electronic commerce enables them to reach a larger market. The result is in line with the assertion by previous studies that, with highly educated respondents, perceived ease of use has a higher influence on electronic commerce adoption (Hu et al., 2019). In essence, given that the respondents used for the study were highly



educated and actual users of electronic commerce technology, it was observed that the perceived usefulness influenced their decision to adopt e-commerce.

The study also discovered that the respondents prefer to use an electronic commerce platform that is comfortable to operate and easy to use. The user-friendly features of the system, familiarity with tasks, and clear and easy-to-follow instructions were important factors that encourage SMEs to use electronic commerce. For instance, regarding the statement on whether SMEs' interaction with electronic commerce is clear and understandable, most of the respondents strongly agreed. Further, regarding the statement on whether the respondents think that learning to operate electronic commerce is easy for them, some of the respondents strongly agreed. These findings support an earlier study by Meena and Parimalarani (2020) who found that users prefer electronic services due to their reliability, convenience, speed, safety and security, cost-effectiveness, user-friendliness, and error-free system. As a result, perceived ease of use influences the intention to adopt the use of e-commerce systems in Ghana.

The study also found that social factors influenced SMEs' adoption of electronic commerce. This implies that SMEs do not only look at the economic benefits but also focus on social and strategic factors. For instance, the results indicated that some of the respondents strongly agreed with the statement that SMEs who use electronic commerce services have more prestige than those who do not. Again, on the proposed statement that SMEs who use electronic commerce services have a high profile, interestingly, the results indicated that some of the sampled respondents strongly agreed. These findings support the assertion by Lehrer et al. (2021) that users might not be obliged to use an information system until motivated by social factors that influence their attitudes and behaviour. Considering this, the current study reported that social influence positively contributes to explaining the adoption behavioural intention of SMEs in Ghana. Hence, the effect of social influence on behavioural intention is a clear indication that the respondents' adoption and use of electronic commerce are driven by social factors such as the opinion of others.

#### *4.3.2 Benefits SMEs derive from adopting electronic commerce.*

The respondents were asked to express the extent to which they agree or disagree with statements relating to relative benefits, which included time, cost, convenience, safety and security, and reliability among others. For instance, the results depict that some of the respondents strongly agreed to the accessibility of e-commerce platforms. Again, half of the respondents strongly supported the statement that electronic commerce is the cheapest and most efficient way of marketing products to a larger population. Regarding the statement on whether the electronic commerce service is more reliable, some of the respondents strongly agreed that the service is reliable. It is observed from the results that cost influences e-commerce adoption by SMEs in Ghana. This is supported by the fact that most electronic commerce platforms in Ghana are cheap, and some are even free to use. The finding of this study is consistent with the finding of Boateng et al. (2021) who found that perceived cost is one of the factors that influence SMEs' adoption of e-commerce in developing countries.

Moreover, the majority of the respondents strongly agreed that the use of electronic commerce services is safe and secure. Regarding the security factor, the results of the study showed that security is an essential factor in adopting e-commerce among SMEs. Particularly, the study found that users can access the service remotely, irrespective of their location and time. The study also found that service cost has ultimately been reduced which makes SMEs to adopt these systems in their operations.

## **5. Conclusion and Recommendations**

The findings of this study regarding the drivers of e-commerce adoption among SMEs in Ghana indicate that SMEs' behavioural intention to the adoption of electronic commerce is largely influenced by perceived usefulness, perceived ease of use, and social factors.

Additionally, e-commerce practices in Ghana among SME companies ensure enormous benefits to companies and customers. These benefits include reaching a larger target market, increased profits, cost effectiveness, accessibility, and secure and safe platforms. Consequently, e-commerce platform providers should focus on creating more awareness on the benefits of using their platforms to encourage other SMEs to adopt these services in their business operations.

Table 5: Summary of recommendations

<b>Recommendations</b>	<b>Application Areas</b>
Performance expectancy and Security issues	Majority of SMEs believe that performance expectancy (usefulness of the service), and effort expectancy (ease of use of the Service), of innovation, drives them to adopt and use the innovation, amidst privacy and security concerns. Management of e-commerce SMEs should address the privacy and security concerns.
User-friendly Platforms	SMEs prefer to use electronic commerce platforms that is comfortable and have user-friendly features. Familiarity with tasks, clear and easy-to-follow instructions were important aspects, which encourage most SMEs to adopt and use electronic commerce services. E-commerce SMEs websites should be user- friendly.
Social factors and prestige	Social factors and prestige influenced SMEs’ adoption of electronic commerce. E-commerce SMEs should capitalize on these factors to promote their products/service(s) brands on the global market.
Positive Contributions	Most SMEs perceived electronic commerce to be making positive contributions to their businesses in terms of time saving, cost savings, convenience, safety and security, and reliability among others. Management of E-commerce SMEs should harness this positiveness.
Legacy Systems	The compatibility of e-commerce with existing systems of a firm or organisation such as infrastructure, culture, and values are influential factors in e-commerce adoption and implementation among SMEs in Ghana. Management of e-commerce firms should not discard legacy systems, but rather infuse such systems into e-commerce systems for maximum usage.
Investment in IT infrastructure	Management of e-commerce platforms should invest massively in IT, to build infrastructure and human capacities to support e-commerce adoption.
Value Provision	E-commerce platform providers should focus on promoting the benefits that accompany the adoption of e-commerce to encourage other SMEs to adopt them.
Government	The Government of Ghana should employ legislative tools to design a robust regulatory framework to back e-commerce adoption and protect businesses and customers against hacking and fraud.

### 5.1 Conclusion

In conclusion, most of the respondents were motivated to adopt electronic commerce by factors such as perceived usefulness, perceive ease of use, and other social factors such as reputation associated with the use of the service. Electronic commerce platforms have positively affected the service delivery to customers and



increased the adoption of e-commerce among SMEs in Ghana. Theoretically, this study offers a broader understanding of e-commerce adoption and usage among SMEs regarding factors influencing e-commerce adoption decisions, benefits, challenges, and strategies for successful adoption. In practice this study has provided insight into e-commerce adoption practices in Ghana and recommendation for future implementation by practitioners and SMEs.

## 6. Conflict of Interest Statement

The authors declare no conflicting interest in the conduct of the study.

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