

## **Implementation of E-commerce in Denpasar City SMEs**

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### **Abstract**

As a provincial capital that depends on tourism, the development of Denpasar City's SMEs, especially in the tourism support sector, is growing rapidly. Coupled with technological advances, the development of SMEs must be able to adapt, one of which is by implementing e-commerce. This research aims to 1) explore the e-commerce needs of SMEs in Denpasar City and 2) analyze the factors that influence the use of e-commerce among SMEs in Denpasar City. The research was conducted on SMEs in Denpasar City with 140 respondents. A mixed-method approach was used to answer the research objectives. The research results show that e-commerce is a marketing medium for Denpasar City SMEs, primarily through Shopee and TikTok. Analysis using Atlas.ti indicates that human resources are still the main obstacle to implementing e-commerce in Denpasar City. Related to the factors that influence the decision to implement e-commerce, business duration, income, knowledge, technology, and product type are variables that significantly influence the implementation of e-commerce in Denpasar City. These results can be a reference regarding increasing SMEs' capacity, especially regarding human resources and capital. Training, mentoring, and access to capital can raise SMEs' awareness of the importance of technology in promoting and selling goods and services to increase income, which will lead to empowerment and prosperity.

Keywords: e-commerce, SMEs, mixed methods, Denpasar city

### **Abstrak**

Sebagai ibukota provinsi yang bergantung pada pariwisata, perkembangan IKM Kota Denpasar terutama pada sektor pendukung pariwisata sangat berkembang dengan pesat. Ditambah dengan kemajuan teknologi, perkembangan IKM harus mampu menyesuaikan diri salah satunya adalah dengan menerapkan e-commerce. Penelitian ini bertujuan untuk 1) mengeksplorasi kebutuhan e-commerce pada pelaku IKM di Kota Denpasar, dan 2) menganalisis faktor - faktor yang mempengaruhi penggunaan e-commerce pada IKM di Kota Denpasar. Penelitian dilakukan pada IKM di Kota Denpasar dengan jumlah responden sebanyak 140. Pendekatan mixed method digunakan untuk menjawab tujuan penelitian. Hasil penelitian menunjukkan bahwa e-commerce menjadi salah satu media pemasaran bagi IKM Kota Denpasar terutama melalui shopee dan tiktok. Analisis menggunakan atlas.ti menunjukkan bahwa sumber daya manusia masih menjadi kendala utama dalam penerapan e-commerce di Kota Denpasar. Terkait dengan faktor - faktor yang mempengaruhi keputusan penerapan e-commerce lama usaha, pendapatan, pengetahuan dan teknologi; serta jenis produk menjadi variabel yang berpengaruh signifikan terhadap penerapan e-commerce di Kota Denpasar. Hasil ini dapat menjadi acuan terkait peningkatan kapasitas pelaku IKM terutama dari sisi sumber daya manusia maupun modal. Pelatihan dan pendampingan serta akses modal merupakan solusi yang dapat meningkatkan kesadaran pelaku IKM akan pentingnya teknologi dalam promosi dan penjualan barang dan jasa untuk meningkatkan pendapatan yang akan berujung pada keberdayaan dan kesejahteraan.

Kata Kunci: e-commerce, Industri Kecil dan Menengah (IKM), mixed method, Kota Denpasar

## **INTRODUCTION**

One sector that has a significant role in economic development is the industrial sector. According to Ofori (2006), economic and industrial development in the national socio-economic development process are closely related because industry can provide new progress to developing countries. Indonesia has development goals to be achieved, namely in job creation, equality, and increasing people's income, which can encourage economic growth and achieve national stability. Apart from being the largest group of economic actors in Indonesia, the ability of SMEs to survive the economic crisis is a particular concern. This industry is developing without dependence on capital or loans from abroad (Yuliarmi et al., 2023). Small industries can expand employment opportunities and economic services to the community, participate in equalizing and increasing people's income, and are not dependent on the global market so that small industries will be more flexible to market changes (Majid, 2021). Apart from that, the strong resilience of MSMEs is supported by their capital structure, where they depend more on their capital (Daou et al., 2019).

The internet allows Small and Medium Enterprises to conduct marketing with the aim of the global market so that the opportunity to penetrate exports is possible. Suyanto (2005) provides an opinion regarding the positive things that can be obtained by utilizing the internet network in developing a business (1) it can increase the promotion of products and services through direct, information-rich, and interactive contact with customers (2) creating one distribution channel for existing products (3) the cost of sending information to customers is more economical when compared to packages or postal services (4) the time required to receive or send information is concise, only a matter of minutes or even seconds.

Electronic Commerce or e-commerce is all buying and selling activities or transactions using electronic media (the internet) (Bonfanti et al., 2023). Even though telephones and television are included as electronic means, e-commerce now refers more to digital technology or the internet. The development of e-commerce in Indonesia began in 2010-2011 with the emergence of Gojek. Initially, this application only offered customer pick-up and drop-off services. In the following years, Gojek began to innovate by adding other features such as food delivery and goods packages. The emergence of Gojek was followed by other marketplaces such as Shopee, Tokopedia, and Bukalapak. Unlike Gojek, this application displays a list of products that can be purchased easily via the smartphone screen. Technological developments support the development of e-commerce itself. So, the more advanced the technology and the wider its availability to society, the faster the growth of e-commerce will be.

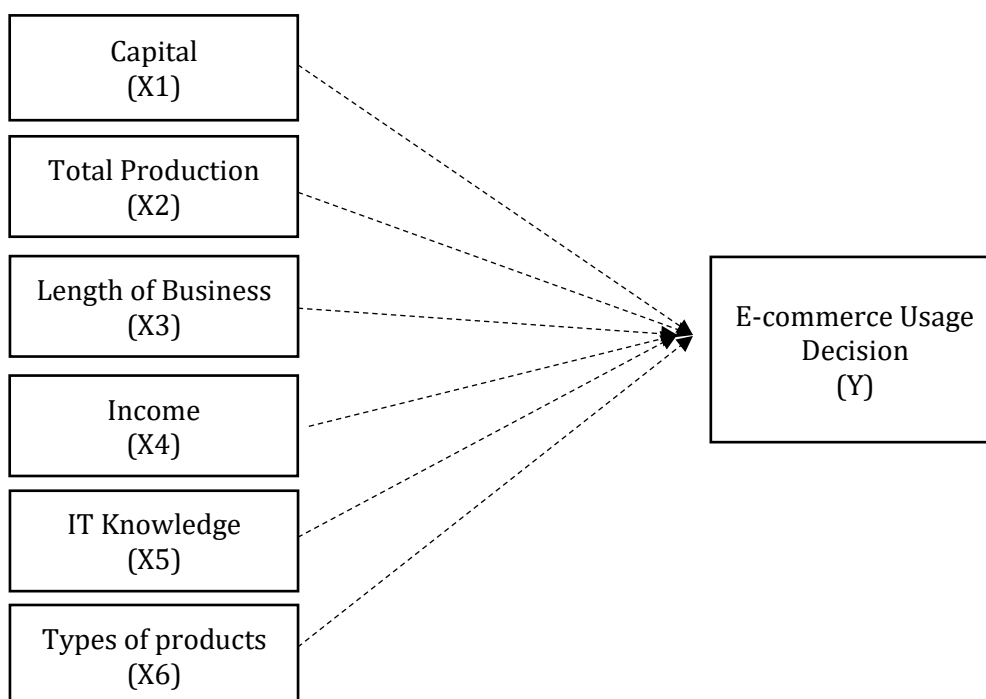
Technological developments will inevitably greatly influence the industrial sector. As a tourism area, adopting technology for SMEs in Bali will significantly contribute to regional income and further strengthen the tourism industry. Research related to the use of e-commerce is conducted in many areas with different industries. This research will combine qualitative and quantitative approaches that will provide better facts about how businesses utilize e-commerce to sustain their business. Based on this, this research aims to 1) explore the e-commerce needs of SMEs in Denpasar City and 2) analyze the factors that influence the decision to use e-commerce among SMEs in Denpasar City.

## **RESEARCH METHOD**

The research included combined qualitative and quantitative research, better known as the mixed method (Prastyadewi, 2023). The research was located at SMEs in the regency/city of Denpasar City based on the type of business: services, trade, and industry. Because SMEs in Denpasar City have different digital

understanding and abilities, the problems they experience also vary. The number of samples selected in this research used proportional sampling from SMEs in Denpasar City with 140 respondents.

Research objective 1 (one) will be answered through descriptive methods, while objective 2 (two) will be answered through logistic analysis. Explorations related to e-commerce needs will be explained through descriptive methods supported by qualitative data analysis. Informants for qualitative analysis are SMEs who focus on 1) the types of e-commerce that are most frequently used; 2) knowledge of business actors regarding e-commerce; 3). use of e-commerce; and 4) experience in using e-commerce. Factors that influence the decision to use e-commerce for SMEs in this research include 1) capital, 2) production quantity, 3) length of business, 4) income, 5) knowledge of technology, and 6) types of products/services. Data collection related to the second objective will use a questionnaire in the form of respondents' perceptions with a Likert scale. The description of the relationship between variables in the logistic analysis of this research is as follows Figure 1.



**Figure 1. Relationship between variables**

The influence of capital, production amount, length of business, income, IT knowledge, and product type on the decision to use e-commerce can be shown in the following equation.

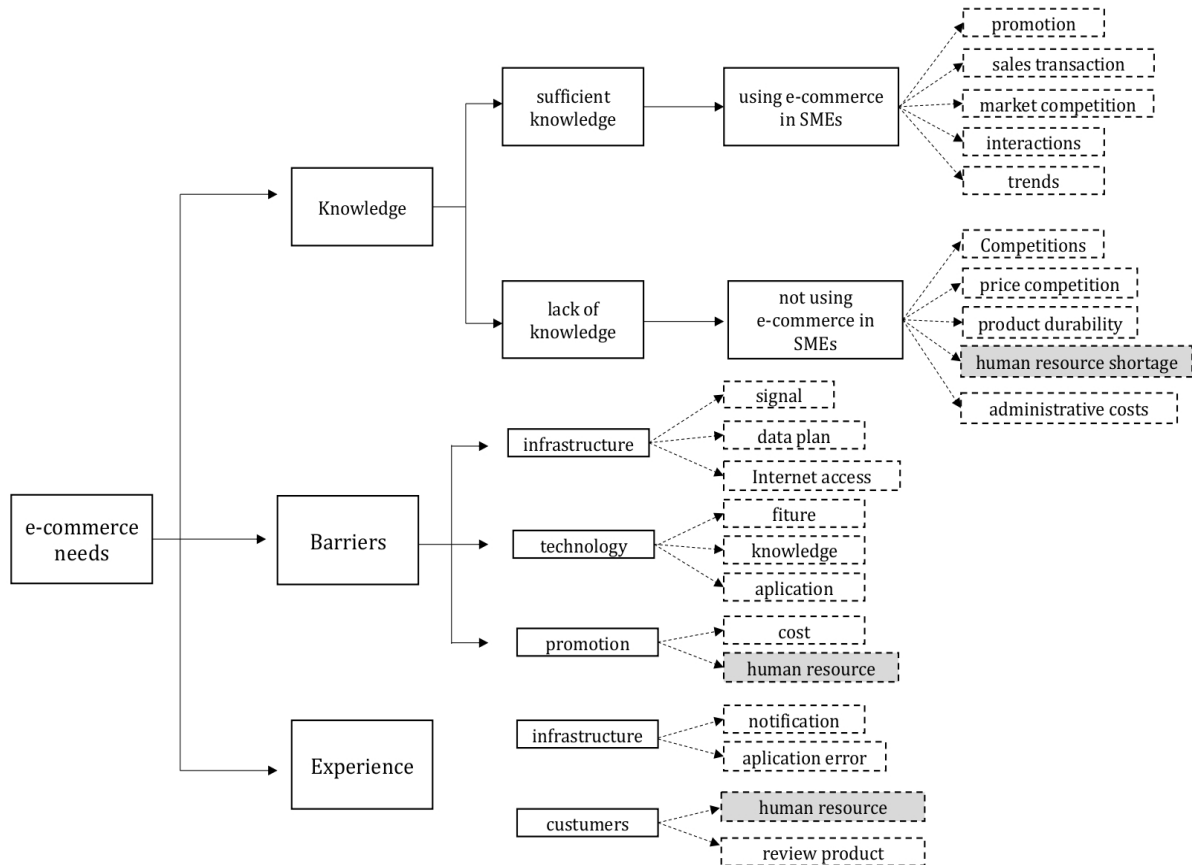
$$\ln \left( \frac{P}{1-P} \right) = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + e \dots\dots\dots (1)$$

With :

- a = constant
- b<sub>1,2,3,4,5,6</sub> = coefficient
- Y = E-commerce Usage Decision  
(1 = using and 0 = not using)
- X<sub>1</sub> = capital
- X<sub>2</sub> = total production
- X<sub>3</sub> = length of business
- X<sub>4</sub> = income



first quarter (Kedah,2023). Data.ai also noted that throughout 2022, Shopee was recorded as the number one online shopping platform in Indonesia with the highest total downloads on either Google Play or Apple Store and became the number one online shopping platform with the highest number of monthly active users. The results of the in-depth interviews are summarized in Figure 3 as follows.



**Figure 3. Network of E-commerce Needs in Denpasar City SMEs**

Source: interview results, 2022 (processed data)

Figure 3 shows the results of a network analysis of e-commerce needs for SMEs in Denpasar using Atlas.ti software. The network was compiled based on the results of interviews with informants regarding the reasons for using e-commerce in SMEs in the city of Denpasar. The three main points based on the interview results lie in 1) business actors' knowledge regarding e-commerce, 2) things that become obstacles for business actors in using e-commerce, and 3) the experience of business actors who have used e-commerce. The description of these results can be explained as follows.

***Knowledge of e-commerce***

The network results show that SME business actors are divided into groups with sufficient knowledge of e-commerce and those with minimal understanding of e-commerce. Business actors in the fairly knowledgeable group use promotions, sales transactions, competition in the market, ease of interaction with buyers, and trends in application usage among business actors as reasons for choosing to use e-commerce in promotions and sales.

“It’s easiest to promote via social media. Now, with IG Live or TikTok, my sales are increasing. But I really need someone who can edit interesting photos and videos. I don’t need a lot of capital to rent a shop, but my turnover can cover the collection of goods” (PF, 25 years old)

The results of interviews with informants generally yielded information that using e-commerce was an attractive option because it did not require large amounts of capital for promotion and sales. They are not burdened by shop rental costs and purchasing display items. Meanwhile, for business actors who do not use e-commerce, price competition, product durability, lack of human resources, administration costs, and the frequency with which applications encounter technical problems (errors) are factors that make them choose not to use this technology.

### ***Barriers to the use of e-commerce***

Network results regarding barriers to using e-commerce show that infrastructure, technology, and promotion are their obstacles. Regarding infrastructure, business actors consider signal limitations, the obligation to purchase data packages, and internet access to be the main obstacles. Limited features and their knowledge of the application are factors from the technological side. Meanwhile, administrative costs and human resources are obstacles to promotion.

“I’m lazy about learning to use applications. If you look for someone, it will cost you more. People who can edit are expensive, right? It won’t be interesting if the photo is uploaded directly without editing. Normal sales like this are also quite good for those who buy them. Someone has already taken care of my fortune; I don’t want to get involved.” (WY, 37 years old)

Along with globalization and rapid technological change, the role of SMEs in increasing economic development and employment becomes increasingly important amidst limited resources. The emergence of the knowledge economy requires SMEs to have intellectual capital, namely human capital, structural capital, and relational capital, to compete in a challenging business environment. Considering the unique characteristics of SMEs, previous research reveals that human capital has the strongest influence on SME performance compared to other sub-elements of intellectual capital (Muda & Rahma, 2016).

### ***Experience using e-commerce***

The results of the network of experiences using e-commerce are divided into opinions from the application usage side and the customer side. In general, the interview results show that notifications that often appear late and applications that often have errors are their experience in using e-commerce. Meanwhile, collecting buyer data and product reviews is another experience in implementing e-commerce.

“Sometimes, buyers just give reviews at will. Even though it really affects other customers. That’s the bad thing about selling online like this. That’s why sometimes we intervene and ask for good comments. We can’t delete bad comments on Shopee.” (FS, 27 years old)

### **Factors that Influence the Use of E-commerce among SMEs in Denpasar City**

The use of logistic analysis in research has met statistical requirements so that logistic analysis can be carried out. The summary of the results of the logistic analysis test using SPSS software is summarized in Table 1 as follows.

**Table 1. Summary of Logistic Analysis Results**

Constant/Variable	Coefficient	Z-statistic	Notes
E-commerce			
Constant	-1,410609	-2,628521	
Capital (X <sub>1</sub> )	-0.0134	-2,439338	Insignificant
Total Products (X <sub>2</sub> )	0,0017	0,529967	Insignificant
length of business (X <sub>3</sub> )	0,1587	2,497411	Significant
Income (X <sub>4</sub> )	0,0147	2,845473	Significant
IT Knowledge	0,0023	3,456741	Significant
Types of productions	0,00112	2,786356	Significant
McFadden R-squared	0,646552		
LR Statistic	39,41083	sig = 0,0000	
N	140		
D=1	78		
D = 0	62		

Source: analysis results, 2022 (processed data)

The analysis results show that capital does not positively influence E-commerce implementation by SMEs in Denpasar City because it does not follow the hypothesis, which states that capital positively influences E-commerce implementation in Denpasar City. Even though the coefficient of capital is statistically significant, the sign of the direction is negative, so the efficiency is still insignificant and cannot reject the proposed null hypothesis. Adequate access to financing is critical for SMEs to survive and ultimately grow beyond their SME status. In Asia, the reality is that SMEs have poor access to finance. This is one of the main factors hindering the development of SMEs. Information asymmetry between SME lenders and borrowers increases the risk of adverse selection and moral hazard for financial institutions. It is responsible for the widening gap between supply and demand in SME financing (Abidin et al., 2023). However, capital is not the reason for SMEs to decide to use e-commerce in sales and marketing because business actors need more ability to adapt to technological developments, especially gadgets and the internet.

The analysis results show that the amount of production does not significantly affect E-commerce implementation in the SMEs in Denpasar City. However, the sign is positive but not significant. Thus, it can be said that the average amount of production for SMEs, whether or not they implement e-commerce, is not significantly different. SMEs produce production amounts that vary greatly based on the type of product made. For example, SMEs creating carving crafts produce less than the units produced by clothing, jewelry, and cosmetic craftsmen, but the price varies greatly. Even though the number of units produced is small, the cost per unit is high, and vice versa; even though the amount of production produced is large, the price per unit is much lower than those making types of products such as wood carvings or jewelry. This shows that looking at the amount of production SMEs produce, E-commerce applications have no difference.

Length of business or experience as an IKM actor positively and significantly influences E-commerce implementation in SMEs in Denpasar City (Septiadi, 2023). The expertise of SMEs significantly affects the implementation of E-commerce. The more experienced they are, the higher their chances of implementing E-commerce. The possibility of SME actors implementing E-commerce is determined by their experience as an IKM actor, which is increasingly high. If you are able to implement E-commerce, there is a tendency for business performance to increase. The longer you have experience as an SME actor, the more experienced you will be in production and the more sources of information you will get for both input and output. With the development of internet technology so far, more experienced SMEs will receive more complex data so that they can make adjustments and adopt these technological developments

because experience as an SME actor is significant to improving the performance of SMEs by implementing E-commerce.

The results of the analysis show that income has a positive and significant effect on implementing e-commerce in SMEs in Denpasar City. The higher income obtained can also occur due to the use of marketing systems with increasingly better technology, namely via the internet, as well as implementing E-commerce as a marketing system to sell the products produced and the information used to obtain input. The income received by SMEs can also be influenced by the fact that they implement an e-commerce marketing system. In this research, what is used as a variable that affects the implementation of E-commerce is the level of income earned. The more they can increase income, the higher the possibility of implementing E-commerce in the marketing system. The opposite can also happen because they implement e-commerce and their income increases. After all, they can maintain loyal customers for the product. Through social media, customers find information about the products produced.

The analysis results show that business actors' IT mastery positively and significantly influences the decision to implement e-commerce in Denpasar City SMEs. The results of this research align with research on e-commerce in India, which concluded that using cell phones and the internet is why business people use e-commerce services in India (Das et al., 2015). Reynold (2000) stated that the development of e-commerce will align with the increasing use of mobile phones and ease of internet access. People can even sell without needing a place or business permit because of e-commerce. Even business people in China make e-commerce a necessity, especially to break the long distribution supply chain when selling goods conventionally (Laksana & Abduh, 2023).

For the last variable, namely types of products, based on the analysis results, a positive and significant relationship was found with the decision to implement e-commerce in Denpasar City SMEs. Business actors with long-lasting products choose to use e-commerce compared to those with non-durable products. Business actors with fragile or easily damaged products decide to market them conventionally. This right is intended to avoid losses that may occur because the product arrives in a condition that does not match the order. Research conducted by Girard et al. (2003) revealed that the type of product will significantly influence consumers' online purchasing decisions. This can also be why manufacturers should be careful when selling via e-commerce.

The literature offers a comprehensive list of the benefits and obstacles that small and medium-sized businesses (SMEs) face when implementing and utilizing e-business and e-commerce information technology (EEIT) (Isazade, 2023). Consistent with the findings of this investigation, another study carried out by came to the conclusion that small and medium-sized businesses view cost as a deterrent to using e-commerce (Li et al., 2022). The analysis analyzed the perceived differences between the criteria for SMEs that have adopted a business website, those that want to adopt, and those that will not adopt, in addition to looking at all of the respondents. Six barriers and 10 rewards totaling sixteen elements were shown to be significant. The study comes to the conclusion that adopters, prospective adopters, and individuals who do not plan to adopt have diverse perspectives on the issues.

The environment, technology, and customer trust were found to be the primary barriers to e-commerce adoption. Developing nations are perceived to have advantages in the environment, organization, and performance that they might utilize to increase the uptake of e-commerce. We discovered that all difficulties and advantages are related. Nonetheless, the adoption of e-commerce is contingent upon management's perception and comprehension of its advantages and principles (Hendricks & Mwapwele, 2023).



## CONCLUSION

E-commerce is a marketing medium for Denpasar City SMEs, primarily through Shopee and TikTok. Analysis using Atlas.ti indicates that human resources are still the main obstacle to implementing e-commerce in Denpasar City. Related to the factors that influence the decision to implement e-commerce, business duration, income, knowledge, technology, and product type are variables that significantly affect the implementation of e-commerce in Denpasar City. Although it provides results that are in accordance with theory and previous research, this research can still be further developed by adding other relevant variables. The wider the research location and the more diverse the respondents used will also enrich the results of research related to the use of e-commerce

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