

## The Impact of Digital Economy Literacy Strategy Model on Firm Performance of Small Medium Enterprises

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### Abstract

*This study aims to find a digital economic literacy strategy model for SMEs in Indonesia and the factors that can influence it by using a technology acceptance model (TAM) approach consisting of beliefs (perception of usability and perceived ease of use) and their impact on the performance of food SMEs companies in Indonesia particularly in the provinces of Banten, DKI Jakarta, and West Java. This study uses a quantitative method with a sample of 200 SMEs companies using Smart PLS 3 analysis. The results of this study indicate that there is a gap from the absence of the influence of perceived usefulness on firms performance, the results are negative. While perceived usefulness, digital economic literacy is very positive and has an effect on SMEs firms performance. The novelty in this research is finding a new model of strategy model for implementing digital economy literacy, its impact on improving the firms performance of SMEs Food companies.*

### Keywords

digital economic literacy;  
technology acceptance model;  
SMEs firms performance



## I. Introduction

At this time the development of strategic management science which was developed in the research process continues to develop according to current conditions and needs, one of the most popular studies in the development of information technology strategies. Various studies in the future will be carried out by scientists and scholars, more on themes that have to do with management and information technology strategies (Chan, Y.E. and Reich, 2007; Chi et al., 2018; Tallon, 2007). Research shows how information technology processes are part of every company's business processes (Bharadwaj, et al 2013). The information technology strategy will align with the implementation of the business strategy of each company. The development of the world, especially in the need for information technology, facilitating supply chain systems, the growth of computers is changing our society into a new digital era (Bharadwaj, et al 2013).

The development of digitalization in all sectors will form a business strategy towards a more advanced global business process so that it has no time, space and distance limits (Rai, A., et al, 2012). This digital business strategy is a combination of information technology and business strategy so that it has an important role in the development of every company's business development during changing conditions and global business to maintain the company's firms performance (Bharadwaj, et al 2013).

At this time digital developments have changed the pattern of research on firm performance, companies are starting to utilize digital resources to formulate and implement digital business strategies, but there are still few researchers who link digital aspects with firm performance (Maomao Chi; Xinyuan Lu; Jing Zhao; and, 2018). In the context of

digital literacy skills as one of the pillars of digital inclusion can build digital literacy which has an impact on improving firm performance (Radovanović et al., 2020). Especially the performance of SMES companies, where the contribution of SMEs in regional and national economic development is very important and strategic, the contribution to increasing gross domestic product (GDP) continues to increase every year (LPPI, 2015; Supriadi & Ahman, 2018).

Economic growth is still an important goal in a country's economy, especially for developing countries like Indonesia (Magdalena and Suhatman, 2020). Covid 19 pandemic caused all efforts not to be as maximal as expected (Sihombing and Nasib, 2020). The presence of Covid-19 as a pandemic certainly has an economic, social and psychological impact on society (Saleh and Mujahiddin, 2020).

The COVID-19 pandemic has hurt the domestic economy, such as a decline in firm performance, threats to the existence of SMEs. In this pandemic situation, around 37,000 SMEs were seriously affected, around 56 percent reported a decline in sales, 22 percent reported problems in the financing aspect, 15 percent reported problems with distribution of goods, and 4 percent reported difficulties in getting raw materials (Pakpahan, 2020; Rahman, 2020; Santoso, 2020). Therefore, the solution in dealing with COVID-19 is the use of digital economic literacy because it will be able to develop and increase revenue receipts up to 80% for digital-based Indonesian SMEs (Rahmah, 2015). Changes in consumption patterns during the COVID-19 pandemic from offline to online opportunities for SMEs in Indonesia to increase their trading business digitally to stay afloat and improve their firm performance amid the uncertainty of the SME business (Rvspk et al., 2020; Supriadi et al., 2020).

Our understanding of the conditions under which economic digital literacy affects firm performance is far from comprehensive. While some studies found a negative relationship between economic digital literacy and firm performance (Rvspk et al., 2020; Sugiharto, Toto; Suhendra Euphrasia Susy; Hermana, 2010), others showed a positive impact of economic digital literacy and firm performance perusahaan (Mohammadyari & Singh, 2015; Omiunu, 2021). To fill the research gap, we developed a conceptual mediation of technology acceptance model (TAM) which was developed from two theories Theory reasoned action (TRA) and Theory Planed Behavior (TPB) both of which investigate the reasoned behavior performed by a person (Marangunić & Granić, 2015). In addition, the development of variables contained in the TAM model as follows: 1). Perception of usability (PU), 2). Perception of ease of use (PEU), 3). Attitude toward Using (ATU), 4). Behavioral Intention (BI), 5). Actual Use 6). External and factors. These factors are the main factors that influence the use of technology in human life (Davis, 1993; Marangunić & Granić, 2015).

Our research focuses on important strategic management factors that are rarely considered. This study describes the relationship between DI, TAM, and SMEs performance from the perspective of dynamic capabilities. Enterprise-level capabilities fall into two separable dimensions: ordinary capabilities and dynamic capabilities (David J. Teece, Gary Pisano, 1997). While ordinary capabilities involve the operational performance of business functions related to task activities, dynamic capabilities sense, seize, and change. Dynamic capabilities theory explains that dynamic capabilities are high-level capabilities for selecting, developing, and coordinating ordinary capabilities. Following the idea (Marangunić & Granić, 2015; Rvspk et al., 2020) recombine resources for SME Performance improvement supported by a suite of TAM and DI processes.

Improving company performance is dedicated as the goal of SMEs in maintaining their business in an unstable business situation through operational and marketing

strategies that emphasize the priority of implementing SMEs Go Online through the application of economic digital literacy to maintain competitive advantage (Erlanitasari et al., 2020; Supriadi et al., 2020). Given the existence of business competition, increasing product competitiveness is an obstacle for Indonesian SMEs. Thus, SMEs companies in Indonesia need to implement the right strategy, evaluation process, and alternative selection (Supriadi. et al., 2020) Therefore, through deep thought and field studies, the author offers the role of Digital literacy and TAM in increasing the growth of SMEs company performance in Indonesia as a critical systems approach to provide input on new perspectives of SMEs business.

The new challenges faced by the SMEs world are not just changing the conventional way of doing business but also being able to take advantage of developments in information and technology (Rvspk et al., 2020; Supriadi et al., 2020). Therefore, there must be a change but it concerns the issue of mindset and also changes in the governance system in running the business. In that context, the cooperative must carry out a total reform of its business management system that has been running so far. As we all understand at this time, the Covid-19 pandemic has encouraged and demanded that SMEs not only have to grow and develop in the 4.0 era but also follow the progress of IT digitalization and Artificial Intelligence (AI) is coloring industrial life which is spreading to people's daily behavior (Kutlu, 2008). On the basis of these interests, we will present ideas and ideas in a study that focuses on the strategy model for the implementation of digital economy literacy, its impact on improving the performance of micro, small and medium enterprises.

## **II. Review of Literature**

### **2.1 Perceived Usefulness**

Perceived usefulness is a measure of the use of technology that can be trusted to bring benefits to every company that uses it (Davis, 1989, 1993). Its role greatly influences a person's attitude towards the use of technology. Perceived usefulness (PU) is a perception that explains the extent to which users trust in using technology, and it will improve their performance (Davis, 1989, 1993). Thus, the degree of use of technology by a person or company will be influenced by the understanding that technology is the most accessible or difficult for its users. The perception of the usefulness of a system or technology is a determinant that has a major influence on the use of a system that facilitates the work of a person or company that can affect a person's interest in using a system or technology (Tarhini et al., 2017). Conceptualized that perceived usefulness is measured through indicators such as increasing work performance, facilitating work, and overall the technology used is felt to be useful (Davis, 1989, 1993). Perceived usefulness can be measured by indicators of increasing productivity, making work more effective, and speeding up work (Yahyapour, 2008).

### **2.2 Perceived Ease of Use (PEU)**

Perceived usefulness is a measure of the use of technology that can be trusted to bring benefits to every company that uses it (Wingo et al., 2017) Penggunaan teknologi dalam kegiatan bisnis akan membantu mempermudah. According to (Wang et al., 2003) perceived ease of use is a measure of which future users perceive a barrier-free system to explain that PEU is closely related to student satisfaction in utilizing online SME businesses. According to (Davis, 1989, 1993) the indicators used to measure perceived ease of use are easy to learn, flexible to control work, and easy to use. According to (David

Gefen, 2003) the perception of ease of use can also be measured through indicators that are clear and easy to understand, and easy to master.

This study will prove that perceived ease of use has a significant effect on perceived usefulness. In addition, these two factors are very important in influencing a person's attitude towards the use of technology. The company's perception of the ease of use and the perception of the usefulness of Online SMEs have a positive effect on attitudes towards the use of Online SMEs. Furthermore, the higher the perception of SMEs about the usability and ease of use, the positive or negative the SME business must use online will also increase. Research conducted by (Isaac et al., 2016) explains that perceived usefulness and perceived ease of use are influenced by attitudes towards intentions. A person's positive and negative feelings in the system have a significant effect on the intention to use SMEs Online.

### **2.3 Digital Economy Literacy**

Digital economic literacy is defined as the ability to use economic information by utilizing information technology, there are four aspects; a). Ability to recognize when information is needed; b). Ability to find the required information files; c). Ability to evaluate the suitability of the information obtained, and d). The ability to use the required information effectively and appropriately (Association, 1998). The ability to read and interpret digital texts as a result of technological advances has changed the operational scope of digital economic literacy (Erstad, 2006). According to (Pool, 1997) mastery of ideas into the digital internet has become a trend for daily activities. Simultaneously, according to (Lennon et al., 2003) the interests, attitudes, and abilities of individuals to use digital technology and communication tools well in accessing, managing, integrating, and evaluating information as new knowledge in the process of communicating with others to participate actively effective. Digital economic literacy is ICT literacy whose dimensions are increasingly being considered when studying the digital economy literacy of companies (Esselaar et al., 2006).

Digital economic literacy has indicator dimensions that can be measured, namely as follows: 1). Can operate a computer, 2). understand the website, 3). Familiar with social media, 4). Familiar with various technologies 5). Able to use technology for presentation 6). Familiar with web issues (Prior et al., 2016). This indicator shows that every company has the ability and flexibility towards digital and technology. The presence of digital literacy implemented by the company can help companies take advantage of online SMEs businesses because of their ease of use and effective functions. In line with the opinion (Feriady et al., 2020) digital economic literacy is the ability to reach and use economic information supported by critical thinking skills in using information technology. This means that the higher the digital economy literacy, the more companies will know the benefits and functions. So it can be explained that there is a relationship between digital economic literacy variables and perceptions of ease of use.

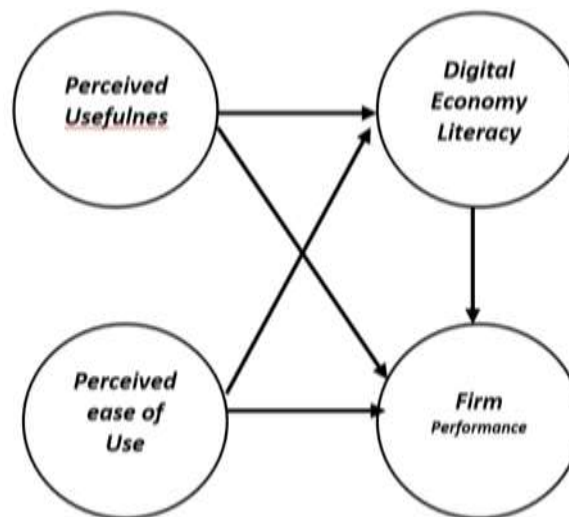
### **2.4 Firm Performance**

Firm performance is a concept of business strategy as one of the most relevant parts of the results achieved in a company (J. B. Santos & Brito, 2012; Chien-Huang Lin, Ching-Huai Peng, 2008). Performance measurement is an important part of performance evaluation and control is always measured in terms of the difference between income, namely production, and expenditure of resources (Wheelen, David Hunger, & Alan, 2015). The dimensions that are used as the basis are market share growth, asset growth, net income growth, net income growth, number of employee growth (Santos & Brito, 2012).



Assessment of firm performance on convergent results of different magnitudes. According to (Ketokivi & Schroeder, 2004) advocacy supports practices intended to increase validity and reliability, such as collecting data from several respondents and using different methods and indicators. The firm performance model was developed to reflect new thinking in the competitive era and company effectiveness through four perspectives which are the main components, and then measurements will be made on each of these perspectives with several measuring tools used to assess overall firm performance.

Development of variables that can be used as the basis for forming hypotheses, perceived usefulness affects firms performance such as research (Isaac et al., 2016) hypothesis 1. Development of variables that can be used as the basis for forming hypotheses, perceived usefulness on digital economic literacy based on research (Feriady et al., 2020) s hypothesis 2, The effect of perceived ease of use on firms performance (Bitler, 2001) hypothesis 3. Research results (Isaac et al., 2016; Liang et al., 2010; Wingo et al., 2017; Yahyapour, 2008) explain the influence of perceived ease of Use on digital economic literacy hypothesis 4. There is a positive relationship between digital economic literacy on firms performance research results (Tarutė & Gatautis, 2014; Tiara Dewi, Muhammad Amir Masruhim, 2021) hypothesis 5. Based on from the literature review, a research paradigm was created to link the five variables above, as shown in Fig ar following.



Source: data processing, 2021

**Figure 1. Research Paradigm Model**

### III. Research Method

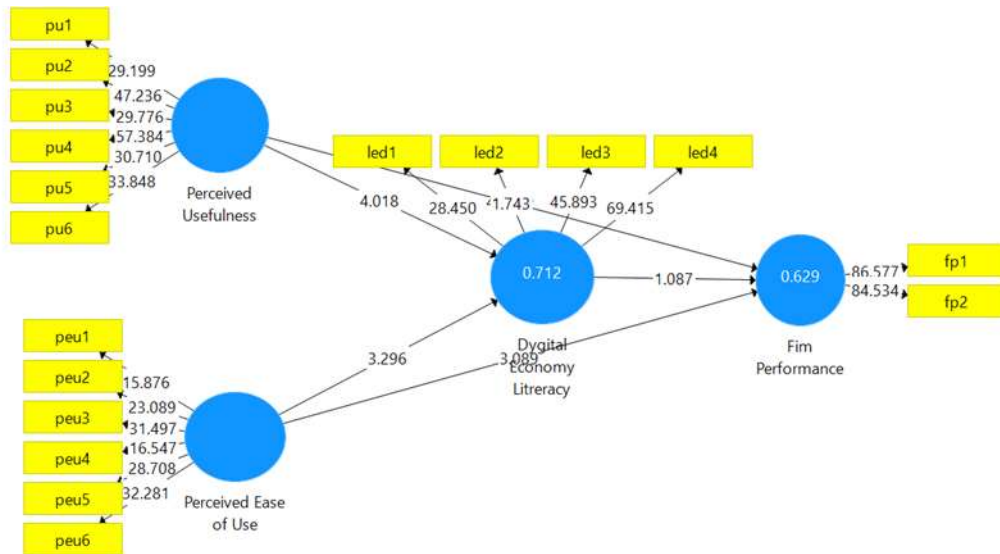
This research was tested on the scope of food industry SMEs firms that have implemented a digital economic literacy process in the provinces of Banten, DKI Jakarta, and West Java, Indonesia. The method used in this study uses a quantitative approach with a purposive sampling technique of 200 questionnaires distributed to respondents. The measurement of this research has four variables. First, Perceived Usefulness (PU) Indicator adopted (Davis, 1989) are 1). Using this system at work will enable faster completion of tasks, 2). Using this system will improve job performance, 3). Using this system will increase the effectiveness in work, 4). Using this system will make it easier to do work 5). This system is useful in work, 6). Using this system at work will increase productivity. The second variable is the Perceived Ease of Use (PEU) (Davis, 1989) indicators such as 1).

Interaction with the system is clear and understandable, 2) find it easy to do whatever you want, 3) Navigation on the site is easy, 4) It's easy to become an expert in using this system, 5) Learning to operate this system is easy for you. The three variables of Digital Economic Literacy adopted from (Tarutė & Gatautis, 2014) has dimensions consisting of 1) the ability to use economic information by utilizing information technology, 2) Ability to recognize when information is needed, 3) Ability to find the required information file, 4) Ability to evaluate the suitability of the information obtained, and 5) The ability to use the required information effectively and appropriately. The fourth variable, the company's performance with indicators, namely 1) Market share growth, 2) Asset growth, 3) Net profit growth, 4) Multiple employee growth (Santos & Brito, 2012). All variables were measured by indicators using a Likert scale with 1 for very low to 5 for very high.

The type of analysis that uses the correlation (there or no relationship) and the relationship (the existence of a causal relationship). Data collection techniques used Sources of data used as research materials are primary data and secondary data, primary data is data obtained directly from respondents or objects under study or has something to do with the object under study. Data can be obtained directly from the SMEs companies under study and can also come from the field. In this research, the writer uses a judgmental sampling technique. Judgmental sampling is a sampling method in which the researcher determines that the selected sample is the most appropriate to provide the desired information. In this study, data analysis used a partial least square approach using Smart PLS software. Structural equation model (SEM) based on components or variants, smart PLS is more addictive so it is a strong analytical method (Ferdinand, 2014; Ghazali, 2017; Kusnendi, 2010; Sekaran, 2003; Siswoyo Haryono, 2017), because it is not based on many assumptions.

#### **IV. Results and Discussion**

The indicators used in this study will be valid if the correlation value is above 0.7 but in research in the development stage of the outer loading scale, 0.50 to 0.60 is still acceptable (Ghozali, 2014). Indicators in this study were measured by reflective indicators. Reflective indicators were tested with discriminant validity. Individual indicators are considered reliable if they have a correlation value above 0.70, but on a development scale, indicators are acceptable with a load of 0.50 to 0.60. Based on the results of the PLS Algorithm, all indicators that have a significant correlation value are above 0.50. Now the results have met convergent validity because all loading factors are above 0.50. The results of the SmartPLS graphic output are shown as follows:



Source: Data processed, 2021

**Figure 2. Outer Model of PLS Algorithm**

After the estimated model meets the discriminant validity criteria, the structural model test (inner model) is then carried out. Assessing the inner model is to see the relationship between latent constructs by looking at the estimation results of the path parameter coefficients (paths) and their level of significance. The following is the value of R square on the construct:

**Table 1. R-square**

	<b>R-square</b>	<b>Adjusted</b>
<b>Firm Performance</b>	0.629	0.618
<b>Dygital econnomic Literacy</b>	0.712	0.706

Source: Data processed, 2021

The table above shows that the R Square Firm Performance value of 0.629 is 62.90%. This means that Digital Economic Literacy can explain Firm Performance of 62.90%, while the rest is explained by other variables. The construct of Digital Economic Literacy is explained by the organizational commitment of 0.712 or 71.32% and the rest is explained by other variables. The basis used in testing the hypothesis is the value contained in the following output result for inner weight.

**Table. 2** Results for Inner Weights

	Sampel A...	Rata-rata...	Standar ...	T Statistik...	P Values
Dygitel Economy Literacy -> Fim Performance	0.138	0.136	0.127	1.087	0.277
Perceived Ease of Use -> Dygitel Economy Literacy	0.392	0.398	0.119	3.296	0.001
Perceived Ease of Use -> Fim Performance	0.480	0.475	0.128	3.742	0.000
Perceived Usefulness -> Dygitel Economy Literacy	0.489	0.482	0.122	4.018	0.000
Perceived Usefulness -> Fim Performance	0.344	0.349	0.134	2.575	0.010

Source: Data processed, 2021

From the table above, it can be seen that there is a relationship and a positive and significant effect between perceived usefulness and a negative effect on firms performance, the result is a negative t statistic of 1.087 with a P-value of 0.277. Thus the first hypothesis is declared not accepted because 1.96). The results of the analysis of the calculation of perceived usefulness on digital economic literacy have a positive result of a t statistic of 3.296 with a P-value of 0.001. Thus, the second hypothesis is accepted because 1.96. The results of the analysis of the research on the influence of perceived ease of use on firms performance the results can be accepted positively at t statistic 3.742 with a P-value of 0.000 the third hypothesis is accepted because 1.96. For the research results, the effect of perceived ease of use on digital economic literacy is declared accepted as the fourth hypothesis of t statistic 4.018 with a P-value of 0.000, the third hypothesis is accepted because 1.96. The result of a positive influence on the digital economic literacy variable on positive firms performance means that hypothesis 5 can be accepted at a t statistic of 2.575 with a P-value of 0.010 the fifth hypothesis is accepted because 1.96.

Based on the results of data processing, it shows that while perceived usefulness affects firms performance, this result is in line with the research (Isaac et al., 2016). Operationally, food SMEs firms have increased the frequency of internet use and duration of internet use, this will not increase the benefits of acquiring new knowledge and skills, generating innovative ideas, helping learning, quality of communication (communication between employees, communication between employees and employees) clients, employee discussions, and service delivery) and quality decisions (identifying problems, involving other people in decision-making for SMEs firms in improving their firms performance. In addition, Isaac et al., (2016) showed that user has no impact on improving the company's firms performance.

The results of the effect of perceived usefulness on digital economic literacy according to the results of research (Feriady et al., 2020) have a positive effect. In field operations, food SMEs firms feel a positive impact on perceptions of ease of use and perceived benefits so that digital economic literacy will run well. The existence of perceived ease of use has a major influence on perceived usefulness and internet use facilitates understanding of digital economic literacy. So that the perceived benefits have a strong positive impact on internet use with an understanding of digital economic literacy.

While the effect of perceived ease of use on firms performance is very positive according to the results of research (Bitler, 2001), in the field, food SMEs firms investigate the relationship between information technology investment and the performance of SMEs firms, companies that adopt information technology and those that do not. The application of internet technology, according to the perception of computer operators, has nothing to do with their company's firms performance. In other words, there are differences in the company's firms performance between companies that use information technology in this



case internet technology (that is, internet adopters or potential adopters) and those who do not use it. The gap or difference between their theoretical knowledge of technology and the advantages associated with their practical experience of utilizing technology in food SMEs firms will have an impact on the progress of food SMEs firms performance.

The results of the effect of perceived ease of use on digital economic literacy have a positive impact, this is the following research (Isaac et al., 2016; Liang et al., 2010; Wingo et al., 2017; Yahyapour, 2008). Operationally, food SMEs can have digital literacy influences because the ability to use digital technology can optimize the fulfillment of company needs. The ability to use digital technology among food SMEs firms gives companies the ability. The results of this study show that the perceived ease of use variable affects the digital literacy economy (Tiara Dewi, Muhammad Amir Masruhim, 2021). For positive results of digital economic literacy on firms performance by research (Tarutė & Gatautis, 2014), operationally SMEs food firm through digital literacy, SME players only introduce digital media, in more depth they can synergize with daily activities, especially to support its business activities, including promotion and marketing activities through social media to provide benefits for its business. Social media is used to promote owned products such as WhatsApp, Instagram, and Facebook, the more often business actors do marketing on social media, the higher the application, the more business profits they will get to improve their firms performance (Hastuti, 2020). The food industry currently plays a very important role in the regional economy. Along with the development of the current world of tourism, which creates a multiplier effect, especially an increase in demand for regional specialties. However, due to the COVID-19 PANDEMIC, sales decreased due to the PSBB policy and decreased purchasing power, strategies for utilizing online sales through social media and digital platforms. Changes in the marketing strategy of SME products are currently also being carried out through social media and digital platforms that have the potential to increase SMEs to make product purchases. Changes in consumption patterns during the pandemic from offline to online opportunities for small and medium enterprises (SMEs) in Indonesia to increase their trading business through electronic means

## V. Conclusion

The current study provides evidence that the effect of perceived usefulness harms firm performance for food companies in DKI Jakarta, West Java, and Banten. Thus, the use of perceived usefulness on digital economic literacy has positive results, research on the influence of perceived ease of use on firms performance can be received positively, perceived ease of use on digital economic literacy is accepted and digital economic literacy on firm performance is positive. It is recommended that food companies must implement perceived ease of use and maximize digital economic literacy so that food companies can improve company performance, especially SMEs must-do marketing on social media, the higher the application, the more business benefits will be in firm performance.

The value of originality and novelty in this study found a new model of the strategy model for implementing digital economy literacy, its impact on improving the performance of small and medium enterprises. Therefore, the discovery of this novelty will be able to implement improving the performance of food SMEs firms. However, the role of perceived usefulness is considered not optimal in improving the company's firm performance, the results of theoretical analysis and in-depth thoughts from empiricists about the performance of food SMEs companies. The development of this research takes into account global economic conditions, especially the impact of the COVID-19 pandemic. So

the author offers an idea through research on the perceived ease of Use process and economic digital literacy on firm performance to be the best reference so that all food SMEs firms implement it, if done properly it is predicted to be able to increase and maintain the SMEs business.

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