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Do Business Growth and Technology Maximization Assist MSMEs Sustainability under Uncertainty?

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Abstract

This research aims to analyze the impact of business growth and technology maximization on Business Sustainability in uncertain times, especially post-pandemic era. To conduct this study, 685 questionnaires were surveyed to collect information from the owners of Micro, Small, and Medium Enterprises (MSMEs) on their growth and technology maximization. Linear regression analysis was applied to investigate the impact of both variables on business sustainability. The research was conducted in Thai Nguyen Province, Vietnam after the Covid-19 crisis hit. This research contends that business growth and technology Maximation both benefit to help maintain business sustainability. Many micro, small, and medium-sized enterprises (MSMEs) in many sectors, including food and beverage (F&B), handicraft, clothing and accessories, service and manufacturing, and so on, are located in Thai Nguyen Province, where this research was conducted.

Keywords: Business Growth; Technology Maximization; Business Sustainability; MSMEs; Uncertainty

Introduction

Reaching business sustainability is difficult but reaching it in the turbulent period is far more challenging. Turbulence time is closely related to crisis and uncertainty resulting from the crisis (Ding et al., 2020). The problem occurs because, in this hyper-dynamic environment, uncertainty presents more often than usual. Economic policy uncertainty, political instability, and the effect of climate change on market uncertainty are included and added by the most recent uncertainty caused by the COVID-19 pandemic (Jia & Li, 2020). Aside from that, uncertainty can be caused by institutional pressures that are committed by stakeholders and create institutional uncertainty (Kelling et al, 2021).

Apart from having negative impacts, uncertainty is proven to trigger entrepreneurship and sustainable management within organizations and enterprises. Liu et al (2020) even stated that entrepreneurship mediates market uncertainty and sustainability. Hence, to be able to survive in the industry, business needs to innovate, be proactive, and risk-taking, and build a strong organizational culture (Liu et al., 2020).

Literature recorded uncertainty leads to the shifting of business operations, business model, revenue, workforce, and sustainability orientation (Cosenz et al., 2020; Demirel & Kesidou, 2019; Dyllick & Muff, 2016; Lüdeke-Freund et al., 2018). Hence, to tackle the issues, researchers have underpinned various strategies. For decades, resilience, entrepreneurs' character, motivation and orientation have been stated as powerful weapons to support business sustainability (Carayannis et al., 2015; Golicic et al., 2017; Nugroho et al., 2022; Prastian et al., 2022; Williams & Schaefer, 2013). Following that, modern strategies emerge to support those internal strategies such as the development of conventional marketing to digital marketing, the shifting from word of mouth to electronic word of mouth, the exploitation of social media marketing, affiliate marketing, collaborative marketing, and so on (Das et al., 2021; Dhameria et al., 2021; Kannan & Li, 2017; Khan et al., 2022; Lahtinen et al., 2020).

In terms of business growth, previous studies record that the main reason for business failure is its inability to grow (Achtenhagen et al., 2010, 2019; Chung et al., 2017). Hence, studies regarding business growth have been well-developed (Lewis & Churchill, 1983; Nelson, 1997) and become substantial due to their role in avoiding failure and achieving business goals. Researchers relate business growth to business performance (Hughes & Morgan, 2007), business sustainability (Prastian et al., 2022), and economic contribution (Vickers & Lyon, 2014). To pursue growth, firms apply numerous growth strategies from innovation (Love & Roper, 2015), networking (Zhao et al., 2010), resilience (Dahles & Susilowati, 2015), diversification (Bachtiar, 2020), business model (DaSilva & Trkman, 2014), so on.

Following that, the development of IoT plays a significant role in technology maximization in business as a driver of changing customer preferences and behavior. In this modern time, customers can easily find real-time information about certain products, comparing a broader range of products and finding a substitute product. That simplicity is advantageous to customers but at the same time becomes a threat to firms that are unable to keep up and maximize technology. Literature noted several barriers to adopting technology in business, one of which is gender. Suhaeli & Bachtiar (2019) discovered that women entrepreneurs utilize technology less than their male counterparts. Geographical location, education, and motives also counted as barriers to technology maximization (Bachtiar, 2022).

This study aims to contribute to the literature in at least three ways. Firstly, revealing variables affect sustainability. In this step, we employ two major variables namely business growth and technology maximization on business sustainability in uncertainty. Secondly, we extend the literature by pushing forward the role of uncertainty in business sustainability and including uncertainty not only as a certain condition but as the core of sustainability which differs our study from previous studies. In doing so, we collect the data in the context of an uncertain time after the Covid-19 hit. Thirdly, we contribute to the theory by enriching sustainability theory. This study starts by reviewing prior studies relevant to our research aims and presenting our hypothesis about variables affecting sustainability. The next section explains the research design followed by a discussion of findings. The conclusion will be delivered last.

Literature Review

Business Growth

The growth of the business is one of the indicators of business success (Bachtiar, 2020) and it is also a machine for increasing business performance (Prastian et al., 2022). At the same time, GSM also explains the business progress, its peak, and its decline (Bachtiar & Amin, 2019; Kim & Yoo, 2019; Storey & Greene, 2010). Following that, the growth of the business is shaped by several aggregators such as growth through creativity, direction, delegation, coordination, and collaboration (Prastian et al., 2022). Nagy et al (2018) added that the Internet of Things (IoT) changed the way businesses operate to be more automatic, real-time, and open to a broader market leading to increasing business growth (Nagy et al., 2018). On the other side, it also affects business growth due to uncertainty caused by IoT development (Bachtiar & Amin, 2019). Apart

from describing business processes, business growth also can be used as a predictor of businesses' peak and decline due to its informative picturing in showing the business life cycle. Hence, firms can use it as a baseline for strategic planning and forecasting trends. Bear in mind, that every stage of business growth requires a different approach and strategy to be able to pass through the stage and go forward to the next stage and at the same time avoid business decline. With its strong role in business sustainability, performance, and success, we set the hypothesis as follows:

H1: Business growth has a positive significant effect on business sustainability in an uncertain time

Technology Maximation

Technology maximization undeniably benefits business performance and sustainability in general (Jeon et al., 2006; Kannan & Li, 2017; Martínez-Román & Romero, 2017). It adapts and applies business processes by operating modern machines and tools, in business marketing by implementing digital marketing, in business strategy by utilizing big data and blockchain, and in business sustainability by predicting trends and future forecasting. To assist the transformational process from conventional business to modern business, a certain model called the Technology Acceptance Model (TAM) is introduced (Davis, 1989). In its development, TAM combines behavioural, attitude, intention, experience, subjective norm, and image as triggers and assistance to create usage behavior and action to jump to technology-based business. The development of IoT plays a significant role in technology maximization in business as a driver of changing customer preferences and behavior. In this modern time, customers can easily find real-time information about certain products, comparing a broader range of products and finding a substitute product. That simplicity is advantageous to customers but at the same time becomes a threat to firms that are unable to keep up and maximize technology. Even though Literature noted several barriers to adopting technology in business, namely gender, geographical location, education, and motives (Bachtiar, 2022; Suhaeli & Bachtiar, 2019), we believe that technology maximization can boost business sustainability in uncertainty. Hence, we propose:

H2: Technology Maximization has a positive significant effect on business sustainability in an uncertain time

Research Method

Data and sample

This research employed a quantitative research approach due to its advantage in testing the generalized data to add and strengthen the theory development. We conducted convenience sampling of the owners of Micro, Small, and Medium Enterprises (MSMEs) in Thai Nguyen Province in Vietnam. This province was chosen as the location of study due to the high number of MSMEs in the area. In collecting the data, we use the questionnaire as the main tool as it formulates appropriate questions to be answered by the respondents. A sample of 752 MSMEs across the province consists of businesses in Food and Beverage, Handcraft, Manufacturing, Service, and Trading. In the end, 685 questionnaires were eligible to be included in data processing and we excluded 67 questionnaires due to incomplete answers.

Data Analysis

This research aims to test the relationship between business growth and technology maximization to business sustainability in the context of uncertainty. Figure 1 below shows the research model.

To measure the answer, we used a five-point Linkert scale where 5 indicated "strongly agree", 4 for "agree", 3 for "neutral", 2 for "disagree", and 1 for "strongly disagree". Each variable was tested with its indicators which will be explained more in the next section.

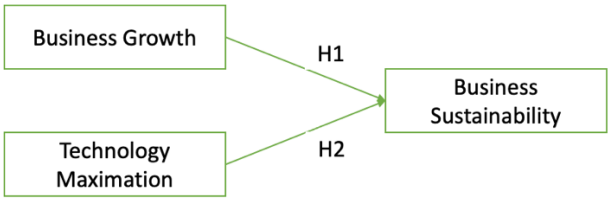

Figure 1. Research Model

Results and Discussion

Demographic Profile

As mentioned above, this research employed a questionnaire to collect data from MSME owners in Thai Nguyen Province, Vietnam. A total of 1000 questionnaires were sent online and shared on the spot in the MSMEs centre which resulted in 752 questionnaires returned. However, among the returned questionnaires, we could only process 685 questionnaires after excluding the incomplete ones. The respondent's demographics as follows: 74.25 % were male and 25.75% were female. 72% of respondents were between 30 – 50 years old and the rest were below and more seniors. A majority of the respondents were bachelor's degree graduates, which took 72% of the respondents, 14 % were Master's degrees, and 14% were senior high school graduates. Finally, 73.2% of them had been running the business for 1 – 5 years, 12% for over 10 years, and 14.8% for less than a year.

Validity and Reliability

Table 1 shows that all items used for this research are valid and reliable. The table used the Kaiser–Meyer–Olkin Measure (KMO) with a value of 0.759, surpassing the 0.5 threshold. The range of commonalities is between –.515 and 0.792 which suggests a strong explanation factor by the items.

Table 1. Validity and Reliability Test

Variable	Measurement items	Commonalities	Cronbach alpha	Note
Kaiser–Meyer–Olkin Measure of Sampling Adequacy				0.759
Business Sustainability	A1: My business runs will a proper management with different divisions cover different task	0.515	0.819	Valid & Reliable
	A2: We apply entrepreneurship practice in the business, such as: business strategy, business expansion, and else	0.700		
	A3: the manager/owner of the business does the job properly and act as leader to inspire the employees.	0.727		
Business Growth	B1: The business grows financially	0.601	0.766	Valid & Reliable
	B2: The business grows in term of market reach	0.726		
	B3: The business shows increasing in entrepreneurial performance	0.665		
Technology Maximation	C1: We utilise technology in each activity of the business	0.792	0.770	Valid & Reliable
	C2: We employ variety of technology in our business activity	0.687		

Regression Testing

To test H1 and H2, we apply multiple regression analysis. The ANOVA result indicates a positive and significant relationship between business growth and technology maximization for

business sustainability. As shown in Table 2 below, the p-values are 0.000 and 0.007, which is below the 0.05 significance threshold.

Table 2. ANOVA and Coefficients of Determinant

Model	Adjusted R2 / Standard error of the estimate / F-value / Sig. / Standardized Coefficients	df	0.353 / 0.292 / 160.727 / 0.000[b] / t	Sig.	Note
B[c]	1.142		12.795	0.000	
Business Growth	0.066	658	3.743	0.000	Sig.
Tech Maximizing	0.037	658	2.677	0.007	Sig.

a. Dependent Variable: Business Performance
b. df 3, Mean square 2.795
c. Constant

Following that, the Adjusted R^2 value indicates that both variables account for 35.3% of the MSME's sustainability. This leaves 64.7% of the variability explained by other factors. With both variables resulting in a positive significant relationship on business sustainability, the derived multiple linear regression equation is as follows:

$$Y = 1.142 + 0.066 + 0.037$$

The multiple linear regression analysis indicates the increase of one unit of business growth is associated with an increase of 1.142 in MSMEs sustainability. Similarly, the increase of one unit of technology maximization. This suggests that MSMEs in Thai Nguyen Province, Vietnam, regardless of their industry, need to increase their growth and technology maximization to increase their business sustainability in this uncertain time. The assumptions behind these arguments will be elaborated in the next section.

Discussion

a. The role of business Growth in MSMEs sustainability in a time of uncertainty.

Growth has a significant impact on the sustainability of MSMEs' businesses, according to data calculations of this study. The sustainability of a business increases with growth. Based on the responses of respondents in this research with development markers like development through imagination, development through heading, development through appointment, development through coordination, and development through cooperation the development in MSMEs will improve and keep up with business sustainability. The use of growth is vital for MSME entertainers since it can further develop business government assistance and increment pay so business keeps on being manageable and can contend amidst open rivalry in the ongoing period. On the off chance that growth isn't gotten by MSMEs, the business can't keep going long. It is clear from the study's findings that growth is one factor that affects business sustainability. Furthermore, this examination is likewise as per past research led by (Yun et al., 2020) that stated a positive effect of business growth on business. The role clearly increases in uncertain times when more complex and rapid dynamics result in more challenges. In this case, this research confirms Prastian et al (2022) who mention the strong need for business growth in the uncertain time.

b. The role of technology maximization in MSMEs sustainability in a time of uncertainty.

The maximization technology is well-practiced nowadays. We can find businesses in various sectors depending on their marketing strategy, sales strategy, and customer engagement through digital media. Most businesses even shift from traditional business models to Digital Business Models. To accomplish business sustainability, MSME owners need to be mindful of the significance of the strategies in business and make an honest effort to take advantage of them in their activity, advertising, research, and else. This finding follows past literary works

about the significance of technology. maximization in business (Lailah & Soehari, 2020; Perdana & Mokhtar, 2022; Suhaeli & Bachtiar, 2019).

Conclusion

The recent Covid-19 pandemic put the survival of businesses to the ultimate test. Incalculable business experience has slumped down these past two years because of different reasons, for example, quick rivalry, market conclusion, and changing client inclination to the arising of a substitute item. Different methodologies have been adjusted to answer the difficulties, and expanding technology maximation and business execution are some areas of strength for to keep up with business sustainability.

In any case, this study contends that both business growth and technology maximization play an important role in business sustainability in uncertain times. This study was conducted in Thai Nguyen province, Vietnam, which has a large number of micro, small, and medium-sized enterprises (MSMEs) in a variety of industries, including food and beverage, handcraft, fashion, service, and manufacturing, among others. It was taken from 752 examples yet among that aggregate, just 685 legitimate responses can be handled for the following stage. This study tried to test two hypotheses by using Linear regression analysis to measure the direct effects of technology maximization and business growth on business sustainability.

The outcome shows that business growth and technology maximization effect business sustainability in uncertain times, especially after the Covid-19 crisis. Even though the model has been tested on a large number of samples, comparative research is necessary for general application. To establish a more stable model, additional research may attempt to incorporate additional components and conduct a comparative study with another region or nation.

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