

Investigation of Entrepreneurial Leadership and Digital Transformation: Achieving Business Success in Uncertain Economic Conditions

Harmon Chaniago*

Department of Business Administration, Politeknik Negeri Bandung, Indonesia.

*Corresponding author: harmon@polban.ac.id

Abstract: In an uncertain economic situation marked by the COVID-19 pandemic, economic growth is difficult to predict, people's purchasing power is falling, and many companies have collapsed. However, some small business actors can survive and thrive. They carry out various innovations, strategies, and actions according to the situation, including digital transformation. This study investigates the role of culinary sector entrepreneurial leaders in digital transformation and their impact on business success. The research uses a confirmatory survey method. Research objects are the leaders of small businesses in the culinary field in Bandung, Indonesia. The number of samples is 168 culinary entrepreneurs, and the samples are collected through snowball sampling. The results of the study show that entrepreneurial leadership has a positive effect on business success and corporate digital transformation. Digital transformation also has a positive influence on business success. Simultaneously, entrepreneurial leadership and digital transformation positively affect business success. The role of entrepreneurial leaders is not only in business success but also in dominant changes in company operations, such as the use of digital technology.

Keywords entrepreneurial leadership; digital transformation; business success; culinary; COVID-19; innovation

1. Introduction

Various research results have proven that small businesses significantly contribute to employment and a country's economy (Ibarra et al., 2020; Nugroho et al., 2017; Omri et al., 2015; Susanto & Meiryani, 2019). Small businesses in Indonesia consist of several sectors: processing, services, trade, agriculture, culinary, finance, etc. Small business is an economic activity that is not too large, is run independently, has simple technology, has a local market share, and is usually owned by the local community (Chaniago, 2020a; Ingram et al., 2018; Patel et al., 2012). However, during the COVID-19 period (From September 2019 until 2022), 60% of small businesses in the research area collapsed (BPS_Kota_Bandung, 2021), and only a small number survived were even able to develop. Companies that can survive are used as research objects, and investigations are carried out. This research is conducted in Bandung, a large city in Indonesia that is densely populated and also a tourist city.

Small businesses in Indonesia have far more numbers than large businesses. Indonesian law divides business groups into formal and non-formal/micro-groups (UU_No_20, 2008). Formal businesses are grouped into small, medium, and large businesses. Non-formal businesses group have no legality and are not documented by the government. The main obstacles faced by small businesses in Indonesia include marketing, raw materials, capital, and technology (Ariani & Utomo, 2017; Maksum et al., 2020). Due to limited capabilities and capacities, small businesses are hampered from adopting digital technology (Anim-Yeboah et al., 2020). However, from the results of the field observations during the COVID-19 period, some small businesses have transformed using digital technology, including small businesses in the culinary sector in Bandung. Companies that want to change using digital technology will be able to improve their performance (Furjan et al., 2020). Thus, in complex and uncertain economic conditions such as the COVID-19 situation, entrepreneurs have to be quick to transform digitally. Bouncken et al. (2019) stated that the growth of today's companies depends on the integration of the digital technology they use. Each company is possible to survive and develop if it transforms using digital technology. This is where the role of an entrepreneurial leader comes in. In various ways, an entrepreneurial leader must be able to achieve business success.

Huang et al. (2014) reminded us that many studies on the role of leadership in the business world had been carried out, but there is still little research on entrepreneurial leaders. Moreover, studies associated with the success of small

businesses during uncertain world economic situations are also minim. An uncertain situation is where the country's economic growth is difficult to predict, and people's purchasing power is weakening. Those conditions are due to the long pandemic (COVID-19), the impact of big countries' bloc wars, prolonged natural disasters, etc.

Based on these explanations, research is needed on entrepreneurial leadership and its role in digital transformation to achieve business success in small businesses in the culinary sector, such as restaurants, cafes, food stalls, and others. This study aims to investigate the role of a small business leader in driving the emergence of digital transformation and its impact on the success of the culinary business sector. Because in small businesses the owner also acts as the leader, the domination of the leadership greatly determines the direction and activities of the company (Chaniago, 2021; Huang et al., 2014; Ibarra et al., 2020), including assessing the use of digital technology. Thus, digital transformation activities and the success of small businesses strongly relate to the behavior of leaders and owners. The results of this research contribute to the theoretical framework of human behavior, especially the behavior of leaders in carrying out digital transformation to achieve business success in uncertain world economic times.

2. Literature review

2.1. Entrepreneurial leadership

Leadership theory explains that a leader is a human being who can influence others to want to work according to his will; hence, a leader has more ability than those he leads. Likewise, business leaders have more criteria than their employees. An entrepreneur has a clear vision, mission, and goals in running his company. According to Domańska and Zajkowski (2022), entrepreneurship is the activity of someone who can take opportunities, create added value in the economic field, and open up employment opportunities.

Entrepreneurial leaders need to adapt their actions to changing conditions and uncertain situations. They must adapt quickly to the state of their surrounding. Various factors, including natural disasters, political policies, wars, and pandemics, cause uncertainty in the business environment. These conditions require a leader to be keen to see the existing situation and requirements. A leader is more inclined to use situational leadership theory in this condition. But in other states, a business leader must combine his style with several leadership theories.

The literature explains that an entrepreneurial leader is a visionary leader who takes opportunities and uses various resources to create added value (Huang et al., 2014; Renko et al., 2013). Entrepreneurial leaders must innovate (Baron & Tang, 2011) and have more freedom to change their organizations (Goel & Nelson, 2021). Change is only achieved when there is innovation. Schumpeter's innovation theory explains that innovation is a characteristic of entrepreneurs (Ključnikov et al., 2021). In small businesses, leadership innovation determines the transformation and business success. Ruvio et al. (2010) and Mehmood et al. (2020) stated that entrepreneurial leadership greatly determines the goals and success of a business. In the hands of a leader, many things can be done, such as setting goals, using the latest methods and new technologies, transforming to adapt to environmental needs, determining strategies, etc. Chaniago (2022); Ibarra et al. (2020) stated that leaders who are also owners have a dominant influence in every step of the company's growth, and they determine the progress of the company. Leaders and owners are the determining factors for company progress (Amato et al., 2017; Huang et al., 2014).

The findings of Ruvio et al. (2010) concluded that entrepreneurial leaders positively relate to company strategy and progress. Bruni et al. (2019) emphasized that entrepreneurial leaders have an essential role in developing technological innovations for various fields, such as service processes, production, marketing, and others. From the explanations above, this study defines entrepreneurial leaders as leaders who have a strategy, are innovative, can work with subordinates to manage existing resources, use the latest methods, take current opportunities, and jointly create added value economically. Integrating the latest technology, innovation, resources, opportunities, and added value will determine business success. Based on the discussion that has been submitted, the hypothesis to be tested reads:

H1. Entrepreneurial leadership is positively related to digital transformation.

H2. Entrepreneurial leadership is positively related to business success.

2.2 Digital transformation

In digital transformation theory, it is believed that digital technology will create better changes in all organizational and business processes. There are many digital technologies; the choice depends on the needs of each company. In the

digital concept, two terms are known: digitalization and digital transformation. Digitalization refers to using digital technology for organizational activities in the form of hardware, digital software, and digital applications with various existing platforms (Endres et al., 2021; Guo et al., 2020). While digital transformation is the use of digital technology that brings changes to the organization and business model (Garzoni et al., 2020; Magnusson et al., 2021; Verhoef et al., 2021), changing business models, ways of communicating, and creating added value via digital technology (Oney et al., 2018). There is no agreement on the definition of digital transformation.

Digital transformation not only digitizes business activities via digital technology but is much more than that. It is a continuation of digitalization and is a strategy to change oneself using the latest digital technology. The change can be gradual, partial, or whole. Some references state digital transformation as a new approach for companies to be competitive. Chen et al. (2021) and Warner and Wäger (2019) mentioned digital transformation as changes in the activities of business organizations of various sizes. The goal of digital transformation is to change services because consumer behavior changes. Certain conditions, such as COVID-19, war, and natural disasters, drive this consumer behaviour change. As a result, the way consumers shop, make payments, order goods, and search for information changes; therefore, company services must change and transform digitally. However, not all companies can transform quickly, and some have failed to become digital (Schallmo et al., 2017). Causes of failure due to incorrect application: principles, ideas, innovations, and methods (Doukidis et al., 2020). The study of Ribeiro-Navarrete et al. (2021) and Chaniago and Sayuti (2022) reminded us of the importance of using social media for business, constantly updating and training internal employees to use it.

Based on the explanations that have been presented, this study formulates digital transformation as a strategy to change oneself in carrying out various organizational activities using the latest digital technology in production, sales, information services, logistics, finance, and others. It is measured by: using email, buying office software, using social media (Galindo-Martín et al., 2019), using mobile phones, social media (Fitzgerald et al., 2014), big data (Hilali et al., 2020; Rogers, 2016; Uhl & Gollenia, 2016), web availability and technological innovation (Lee et al., 2018), online business platforms (Anim-Yeboah et al., 2020).

At the time of writing, various digital platforms are available to convey product information directly to consumers. It proves that digital technology can change many business activities (Anim-Yeboah et al., 2020). The platform's suitability needs to be adjusted to each company's tastes and business environment (Baber et al., 2019). Based on the explanation that has been submitted, the research hypothesis reads:

H3: Digital transformation is positively related to business success

H4: Entrepreneurial leadership and digital transformation simultaneously related to business success

2.3 Business success

Theoretically, business success is the achievement of company goals within a certain period. The company's goals can be seen from a financial, owner, and consumer perspective, and it is a form of leadership achievement. Measuring these three perspectives requires considerable energy. Therefore this research only looks at the perspective of finance and entrepreneurs. Thus this study formulates business success as achieving company goals in the financial sector and owner satisfaction. Researchers have proven that business success is determined by leaders (Amato et al., 2017; Huang et al., 2014; Ibarra et al., 2020). Entrepreneurs always dream of successfully achieving business success. It can be measured from turnover, profit, assets, and other performance. The criteria for measuring it can be different, depending on the interests of each company. The literature shows many opinions and standards for measuring business success. Abu-Rumman et al. (2021), Besser and Miller (2010) and Omri et al. (2015) stated that there were not yet criteria agreed upon by researchers in measuring the success of a company. Gorgievski et al. (2011a) suggested using multiple criteria, such as finance, business growth, achievement of owner goals, etc.

Benzing et al. (2009) measured business success from consumer desires; Coy et al. (2007) measured the willingness of entrepreneurs, while Amato et al. (2017) measured it from financial and owner satisfaction. Meanwhile, Gorgievski et al. (2011a) measured small business success from a financial perspective and owner satisfaction. Therefore, business success can be calculated from two perspectives: finance, and owners. Because the object of this research is small entrepreneurs in the food sector, this study measures business success based on the financial and owner perspectives.

3. Methodology

The research was conducted using a confirmatory survey method. This method will explain the theories and

hypotheses used based on existing facts. The objects of this study are all small culinary entrepreneurs spread across Bandung, Indonesia, such as restaurants, cafes, and food stalls. Bandung is a large city that is densely populated and, at the same time, is a tourist city. The research range was carried out between January 2022 – March 2022.

Available data in 2021, there are 1,234 restaurants (culinary sector) in Bandung City (BPS_Kota_Bandung, 2022). This number includes large, medium, and small businesses in the culinary industry. There is no available data on the number of small businesses in the culinary sector in the research area. Therefore, the number of samples is determined based on an internal approach, multiplying the number of indicators by a certain number. Hair et al. (2010), and Gursida and Harmon (2017) suggested multiplying the number of indicators by the number minimum of 5 or 7. As there are 20 indicators, the number of samples is $20 \times 7 = 140$. The samples are increased by 20% to avoid a shortage of samples. Thus the total sample = $140 + 28 = 168$ respondents.

The focus of this research object is on small-scale restaurants and cafes. Criteria for the samples are: having an official permit, having a maximum of 20 workers, having assets excluding land and buildings to <33,000 USD, and having a maximum turnover of 166,666 USD (according to small business criteria and law no. 20 of 2008 concerning small businesses from the Indonesian government). An additional criterion, having operated for ≥ 3 years, is included to see the level of business stability.

Sampling was done using the snowball sampling technique. The first respondent was asked to recommend two business units as potential respondents, and this respondent was also asked to recommend two names, and so on, and stopped when the number of samples was fulfilled. The sampling technique was carried out using Google Forms, social media platforms, and face-to-face interviews. In each business unit, only one questionnaire was given. The questionnaire was filled in by the leader or owner who serves as the leader. Before the questionnaire was circulated, it was tested on 30 prospective respondents; this was done to obtain the validity of the measuring instrument. The results of the validity test of the measuring instrument for all items correlate > 0.3 , meaning that all measuring tools are valid and appropriate to use (Gursida & Harmon, 2017; Sugiyono, 2021).

The data from this study were processed using descriptive statistics (mean test, frequency) and multiple regression tests. SPSS and AMOS 23 software were used to speed up data processing. The indicators for each research variable are shown in Table 1.

Table 1. Source of instrumentation

Construct	Sources
Entrepreneurial Leadership:	
Promoting innovation, introducing change	Bruni et al. (2019); Baron and Tang (2011); Goel and Nelson (2021)
Facilitator of innovation	Bruni et al. (2019)
Visioner, resource mobilization, strategies	Huang et al. (2014); Renko et al. (2013)
Take advantage of opportunities	Renko et al. (2013); Domańska and Zajkowski (2022); Huang et al. (2014)
Digital Transformation:	
Use email, buy office software	Galindo-Martín et al. (2019)
Mobile phone	Fitzgerald et al. (2014)
Social media	Galindo-Martín et al. (2019); Fitzgerald et al. (2014); Ribeiro-Navarrete et al. (2021); Chaniago and Sayuti (2022).
Blog/web	Galindo-Martín et al. (2019); Lee et al. (2018)
Online business platforms	Anim-Yeboah et al. (2020)
Big data	Rogers (2016); Uhl and Gollenia (2016); Hilali et al. (2020)
Business Success:	
Financial perspective: capital gain, turnover, market share	Amato et al. (2017); Gorgievski et al. (2011b)
Entrepreneur's perspective: stakeholder satisfaction, personal satisfaction, social impact	Amato et al. (2017); Coy et al. (2007); Gorgievski et al. (2011a); Simpson et al. (2012)

Source: Compilation of literature, 2022.

4. Results

Demographic data on respondents shows that the majority of respondents are male, are in the productive age range (20 – 30 years), and 77% are high school graduates, as shown in Table 2. Table 2 also provides information that the surveyed culinary businesses have been running for six years on average, have an average workforce of 7 people, and have an average monthly turnover of around USD 1,463/month. Based on Law no. 20 of 2008 concerning small businesses from the state of Indonesia, this data meets the criteria for small businesses.

Table 2 Demographic profile

Demographic Variable	Classification	Amount
Gender	Male	64%
	Female	36%
Age	20 up to 30 yrs	51%
	More than 30 -up to 40 yrs	34%
	More than 40 -up to 50 yrs	4%
Education	High School or below	77%
	Graduate	21%
	Post Graduate and above	2%
Age of company		6 years
Average workforce		7 person
Average turnover/month		USD 1,463

The results of descriptive data processing for each variable provide various information. If the mean test results in each table are ranked, indicators important to the respondents will be obtained, as shown in Table 3, Table 4, and Table 5.

Table 3. Descriptive statistics for entrepreneurial leadership

Rank	Instrument/Indicators	Mean	Std. Deviation
1	i6 (Strategie)	4.3869	0.8183
2	i1 (Promoting innovation)	4.3095	0.8112
3	i5 (Resource mobilization)	4.2500	0.8738
4	i7n(Take advantage of opp.)	4.2321	0.8684
5	i4 (Visioner)	4.1250	0.7906
6	i3 (Facilitator of innovation)	3.9940	0.9571
7	i2 (Introducing change)	3.9524	0.9338
	Average	4.1786	0.8648

Table 3 provides information that company leaders give the highest approval score on strategy, with a mean of 4.3869. This means that they assume the priority strategic factor to be made first.

Table 4. Descriptive statistics for digital transformation

Rank	Instrument/Indicators	Mean	Std. Deviation
1	i13 (Online business platforms)	4.2202	0.7924
2	i11 (Social media)	4.1905	0.9602
3	i10 (Mobile phone)	4.1845	0.9403
4	i9 (Buy office software)	4.1667	0.9456
5	i12 (Blog, web)	4.0893	0.7418
6	i8 (Use email)	4.0417	0.9687
7	i14 (Big data)	3.9881	0.8380
	Average	4.1259	0.8839

In Table 4, which contains digital transformation, most respondents gave the most urgent score to the online business platform. In digital transformation for culinary businesses, using an online platform is more important than anything else.

Table 5. Descriptive statistics for business success

Rank	Instrument/Indicators	Mean	Std. Deviation
1	i16 (Turnover/increase sales)	4.1726	0.9414
2	i17 (Market share)	4.0952	0.9365
3	i15 (Capital gain)	4.0357	0.9720
4	i20 (Social impact)	4.0060	0.9123
5	i18 (stakeholder satisfaction)	3.9821	0.9694
6	i19 (Personal satisfaction)	3.8512	0.9327
	Average	4.0238	0.9441

Descriptive processing for business success in Table 5 indicates that the priority lands on business success as measured by increased sales, which is characterized by the approval score of 4.1726 and is the largest among other instruments. This means that business leaders value the increase in sales more than others. The explanation that can be conveyed is that an increase in sales will increase other factors.

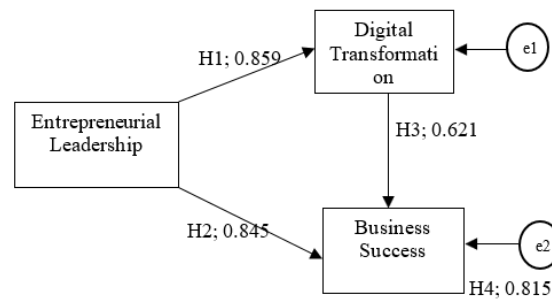


Figure 1. The relationship between entrepreneurial leadership, digital transformation, and business success

The test results for the hypotheses show that all variables are proven influential and can be accepted, as shown in Table 6.

Table 6. Result of the hypotheses test

Variable	P	Standardized Total Effects	Squared Multiple Correlations	Hypotheses
DT <--- EL	0.000	0.859		Accepted H1
BS <--- EL	0.000	0.845		Accepted H2
BS <--- DT	0.000	0.621		Accepted H3
BS	0.000		0.815	Accepted H4

Notes: EL = Entrepreneurial leadership; DT = Digital transformation; BS= Business success

This study found that entrepreneurial leadership positively affects digital transformation by 85.9% and impacts Business success by 84.5%, which is significant at 0.000. The test results also showed that digital transformation positively affects business success by 62.1%, which is significant at 0.000. The simultaneous impact of entrepreneurial leadership and digital transformation on business success is 81.5%. Its influence is included in the strong criteria.

5. Discussion

From 2021 to 2022 (when this research was conducted), several research results reported a decline in world economic growth, people's purchasing power weakened, and the world economy experienced a situation of uncertainty. This weakening of economic growth is prolonged and cannot be predicted when it will end. Several countries have minus growth caused by various reasons, such as infectious diseases (COVID-19), major natural disasters, and wars between countries that have wide-reaching impacts. In such an atmosphere, the role of the entrepreneurial leader is expected to contribute to advancing his business. One of the leadership's strategies to grow the company is to take digital

transformation actions.

The results of this study succeeded in investigating the role of leadership in digital transformation and the success of small businesses in the culinary sector. It is shown by discovering a positive influence of entrepreneurial leadership on the business success of 84.5%, significant at 0.000 or accepting the H1 hypothesis. The level of influence is included in the strong criteria; thus, the leadership of the culinary sector plays a crucial role in determining the success of the company's goals. The leader has succeeded in influencing his subordinates to work towards organizational goals. This finding follows the leadership theory. The behavior of a leader, who is also an entrepreneur, is very supportive of the company's progress or decline. This finding is also in line with the research results of Chaniago (2021); Ibarra et al. (2020); Huang et al. (2014); Mehmood et al. (2020). The leader's ability to adapt the company's management to the existing conditions is vital. A leader needs to align his actions with the current situation. A leader must have flexibility, accuracy, and speed of decision-making to achieve his vision. It requires rapid organizational innovation and change (Baron & Tang, 2011; Goel & Nelson, 2021). Without flexible innovation, entrepreneurial leaders will find it challenging to bring the company forward. Flexible innovation should use the COIN (Customer Orientation Innovation Need) principle, namely cloning from others who have succeeded and modifying it to make an improvement (Chaniago, 2021). These actions are needed to adapt; to be victorious amidst an uncertain economic situation.

Digital transformation is also proven to be influenced by entrepreneurial leadership by 85.9 significantly at 0.000 or accept the H2 hypothesis. The impact is positive and is included in the strong criteria. It means that leadership also determines the transformation activities in culinary companies. The finding in research carried out by Bruni et al. (2019) showed that leaders determine the development of technological innovation. Therefore, the more precise the role of the leader, besides assessing the business's success, the more it determines the digital transformation process. When analyzed further, the descriptive data in Table 4 has the highest mean value in the online business platform indicator (mean 4.2202). It means that leaders and small business owners feel that online platforms are beneficial for business activities. For them, this technology is a priority for digital transformation. Several references on digital theory also state that digital transformation will bring progress to companies. In Indonesia, several online business platforms exist, such as GoFood, ShopeeFood, GrabFood, and BukaFood. To market their products, entrepreneurs use more than one online business platform. They use other digital technologies in order: social media, mobile phones, office software, web, email, and big data. Testing the H3 hypothesis states, "digital transformation has a positive effect on business success"; this is evident and can be accepted; the total effect on business success is 62.1% significant at 0.000. The influence includes moderate criteria. It means that the use of digital technology will increase business success. Furjan et al. (2020) stated that business performance would improve if companies use digital technology.

The results of descriptive statistical tests for business success indicators "increased sales" are more critical to business leaders. It is shown by the results of the mean test, which is the largest, 4.1726 (See Table V). If an increase in sales occurs, it will be followed by an increase in the market, profit, social impact, etc.

Statistical testing for the H4 hypothesis concluded that simultaneously entrepreneurial leadership and digital transformation positively affect business success by 81.5%, significant at 0.000. Its influence is included strong criteria (Gursida & Harmon, 2017; Sugiyono, 2021). A leader is substantial in determining business success and transforming digitally. The findings of Amato et al. (2017), Huang et al. (2014), and Ibarra et al. (2020) concluded that the strong influence of entrepreneur leadership on business success. Besides proving the same thing, this research also complements it with evidence of the role of a leader in encouraging the growth of digital transformation in companies. The role of digital transformation in this age is a necessity. Even though the world economic situation is difficult to predict, leadership remains the central point of change. A leader needs to know and be able to predict which changes are appropriate in a given situation. Developing creativity, innovation, and daring to make decisions in difficult economic times is a must. Leaders who only carry out existing policies without creativity and innovation will bring collapse to their companies. Therefore, in times of complex and uncertain world economy, businesses need leaders who have the characteristics of being able to take opportunities quickly, are visionary, have a flexible strategy, are innovative, are willing to change, and use all resources to change in a direction that benefits the company.

6. Conclusion

This research succeeded in finding that the role of the leader is not only to achieve the targets set by the company but also to transform using digital technology. Using digital technology during uncertain world economic times will

increase the competitiveness of companies. Under these conditions, businesses need leaders who have a strategy, can read and take opportunities quickly, are visionary, are flexible in making decisions, are innovative, and can use all resources to achieve company goals.

Research limitations/implications

The research object focuses on the leadership of small businesses in the culinary sector. In the future, multi-objects are needed, both for medium-sized companies and enterprises classified as large. The number of samples and research locations should be expanded and enlarged in several other big cities.

6.1 Originality/value

This study contributes to complementing the role of leaders in achieving business success or at least explains the role of leaders in digital transformation and its impact on business success. Business people, especially those engaged in the culinary sector, must align their actions with their economic situation. The ability to choose beneficial opportunities, be flexible in deciding, and be creative and innovative needs to be honed and its use optimized

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