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Inculcating entrepreneurial values in creating business sustainability through business independence in batik craftsmen

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This research aimed to determine the effect of inculcating entrepreneurial values on business independence and sustainability among 216 batik craftsmen. It also aimed to examine the effect of business independence on business sustainability. Additionally, it intended to determine the impact of entrepreneurial values on business sustainability through business independence. The education of entrepreneurial values that are integrated into business independence is theoretically possible to be one of the strengthening factors for business continuity. Sixty-eight samples were selected from the population of batik craft entrepreneurs. The sampling technique uses proportional random sampling. Data were collected using a questionnaire and analyzed with Path Analysis. Entrepreneurial values positively and significantly affect business independence and sustainability. Business independence positively and significantly affects business sustainability. Similarly, entrepreneurial values positively and significantly affect business sustainability through business independence. This research shows that the inculcation of entrepreneurial values has a positive and significant effect both directly and through the mediating variables of business independence. It is proven that the inculcation of entrepreneurial values through business independence has a more significant influence than a direct relationship with business continuity. This research offers insight into the importance of inculcating entrepreneurial values on business sustainability directly and through business independence.

KEYWORDS

entrepreneurial values, business independence, business sustainability, entrepreneurship, batik craftsmen

1. Introduction

Entrepreneurship development is key for people to support national progress. According to Wang and Chugh (2013), entrepreneurial learning is assumed to be the necessary action when exploring and utilizing opportunities in creating new businesses or managing existing companies. Entrepreneurs under this assumption are expected to reduce unemployment. Furthermore, they are expected to increase the number of entrepreneurs, create jobs, and alleviate poverty and economic downturn (Kyndt and Baert, 2015). These entrepreneurs should also transform the economy and national trade from importing to exporting, creating an independent and dignified nation (Shih and Huang, 2017).

Indonesians are faced with many problems, specifically poverty, unemployed, and a large gap between low and high education (Essel et al., 2020). Although many foreign entrepreneurs invest in the country, this does not significantly increase people's income and reduce unemployment (Erlando et al., 2020). This is because few small businesses in the community are managed by themselves. People prefer being civil servants or employees to opening a business. Business necessitates learning to help entrepreneurs innovate and succeed in running their businesses (Khurana et al., 2022). Therefore, entrepreneurial values should be educated to the younger generation as the holders of the Indonesian nation's future. The young people could become entrepreneurs and create jobs, contributing to reducing unemployment.

The basis for realizing a small business is an entrepreneurial spirit. This is a personality internalized through entrepreneurial values for people conducting business activities (van der Vaart et al., 2019). The spirit includes a personality with creative action, a love for business, strength amid challenges, confidence, and self-determined or a locus of control. Moreover, the individual can manage risk, sees change as an opportunity, tolerates many choices, and has initiative and a need for achievement. Entrepreneurs are perfectionists, broad-minded, consider time valuable, have a strong motivation, and their character is internalized as values believed to be true. The desire for entrepreneurship arises because of a penchant for business, personal dreams, and the preference for independence (Cardon et al., 2017). Entrepreneurial values increase knowledge and skills, affect the formation of attitudes, and result in business independence and sustainability. Some of these entrepreneurial characteristics can be accommodated in a comprehensive value that can define certain attitudes of an entrepreneur.

The COVID-19 pandemic is also an important problem for anyone to solve. During a pandemic, many businesses experience losses or find it difficult to survive. COVID-19 provides a new experience for entrepreneurs facing situations bravely and maintaining business sustainability (Afshan et al., 2022). In this case, business sustainability is inseparable from the role of business owners in inculcating entrepreneurial values. Business owners with entrepreneurial values are mentally strong and make more efforts for development.

Batik is worn by royal nobles during official activities or events and by almost all levels of society in various events. Its development is greatly supported by increasingly sophisticated technology. Batik was previously made traditionally with canting, but large quantities are now produced using printing machines in a short time. The batik industry in Indonesia emerged since the existence of the Nusantara batik tradition. Craftsmen should improve the quality of batik motifs to ensure the products attract consumers. Therefore, innovation and marketing strategies are important for developing Indonesian batik motifs.

Malang is a city with Malangan, a batik potential that needs consideration and development. Batik becomes a culture passed down through generations by ancestors and designated by UNESCO as Indonesia's original culture. Every city has a batik according to its characteristics, including Malang. The various Malang batik developed by craftsmen includes Celaket Handmade

Batik, Buring Organic Batik, Soendari Batik, Polowijen Batik, and Wisnu Batik.

Malang batik is usually called Malangan because all the icons inspire the motifs in Malang. These motifs include the lion, which is identical to Malang City, the Malang monument, Kendedes as a characteristic of Polowijen Batik, apples, and Malangan masks. Although Malangan batik is not as popular as batik in other areas of Java. The color character is also diverse, such as the bright-colored Celaket Batik and Buring Organic Batik, which uses natural dyes such as aged teak and mahogany bark.

The uniqueness of Malangan Batik gives consumers many choices in buying the products. Consumers visit the Batik Celaket Boutique or Buring Organic Batik Boutique to buy products with bright or natural colors, respectively. Also, they visit the Batik Soendari Gallery to learn batik-making. This makes batik in Malang City survive the current pandemic.

Malangan Batik refers to artwork with a typical Malang motif used to make products such as Druju, Celaket, and Singosari. Malangan Batik comprises basic components (*isen-isen*), main motifs, and decorative or supporting motifs. Batik in Malang has many characters depending on the origin and is generally inspired before the 1900s. Druju Batik has a characteristic color identical to dark black. Its nature is contrast combined with bright primary and secondary colors, such as red, blue, yellow, orange, indigo, and green. This differs from Celaket Batik, which is generally bright and cheerful. The Malangan Batik character is understood by observing samples representing motifs and colors from production areas, such as Singosari, Celaket, and Druju.

The COVID-19 pandemic has an unpredictable scale and duration, with widespread effects on business actors (Giunipero et al., 2022). Although Malangan Batik is not very popular, the business could survive during the pandemic. This requires independent efforts from entrepreneurs for business sustainability. In this case, independence efforts are also influenced by the entrepreneurial values of business owners.

Entrepreneurial values applied to every industry bring economic benefits to the actors (Onstenk, 2003; Ramachandran et al., 2006; Hunter, 2007; Gird and Bagraim, 2008; Chen, 2010). However, the pandemic has prevented many people from traveling and going on vacation to shop for goods, such as batik (Dias et al., 2021; Lee, 2022). This is a challenge for business actors, specifically Malangan batik craftsmen in Malang City, which is famous for its tourist destinations. The city is experiencing fewer visitors because various government policies prohibit people from traveling (Sahoo and Ashwani, 2020). This becomes a question of the existence of craftsmen and entrepreneurs in the socio-cultural field. There is an increase in the introduction of batik is needed in maintaining the batik craft business.

Several research examined business sustainability development in scientific works. Svensson et al. (2010) stated that the four main aspects of building a sustainable business are the foundation, communication, guidance or vision, and expected results. This implies implementing management processes in building business sustainability. Schoenherr (2012) stated that business sustainability is built by environmental, social, and economic aspects. These results were developed by Kopitov (2013), which examined business sustainability based on policies as the main aspect.

Through several previous studies, the aspects that determine business continuity can be categorized into internal and external aspects. The research found that a business transforming from conventional to modern affects its sustainability (Dentchev et al., 2018). As a result, business sustainability leads to production, distribution, and product creation processes (Bocken et al., 2019). Consumer loyalty also supports business sustainability (Tiwari et al., 2021). Cardeal et al. (2022) combined multiple resources in a sustainable business model. However, Verjel and Schmid (2015) found different results when business sustainability is associated with globalization. A business is sustainable when it provides strong or flexible innovation and adaptability. According to Morioka et al. (2016), innovation creates and significantly affects interested parties. The development of aspects that determine business sustainability also continues to change. Prendeville and Bocken (2017) examined the business's goals, processes, and functions. The results showed that business outcomes are the main factors in developing sustainability. This causes an important aspect of business continuity to be the characteristics and capabilities of qualified human resources and their management. Human resources can be developed through the internalization of entrepreneurial values and management can be defined as strong business independence. In this case, other factors are neglected, specifically the business actors' input. Therefore, this research aimed to determine the effect of business actors' inputs on business sustainability, such as entrepreneurial values and independence.

This research provides knowledge regarding the effect of entrepreneurial values in creating business sustainability through business independence for batik craftsmen specifically in the batik entrepreneur industry. The results are expected to provide meaningful input for craftsmen to improve their product quality for business development. Moreover, this research could increase knowledge about the business sustainability of Batik Malangan. Therefore, it aimed to determine the effect of entrepreneurial values in creating business sustainability through business independence for batik craftsmen in Malang City.

The entrepreneurial values of batik business owners in Malang City possible could make their businesses survive the COVID-19 pandemic based on the theoretical discussion above. Therefore, this research was interested in determining entrepreneurial values' effect on business sustainability moderated by business independence.

2. Literature review

Entrepreneurial values are prerequisites for entrepreneurial behavior. They include creativity, risk-taking, innovation, achievement-oriented, ambition, and independence. Values in running a business contain a consideration that develops one's personal or social ideas. These values are the basis for understanding attitudes and motivations and could influence perceptions of behavior in running a business. Therefore, they are important to have the ability in managing organizational behavior (Robbins and Judge, 2007). The owner of small and medium-sized companies should have inherent personality values

as the company's leader. The values adopted in running a business are generally entrepreneurial.

A business actor's entrepreneurial values are internalized through competence. Volery et al. (2015) stated that competence combines abilities such as knowledge, skills, and attitudes. Through these abilities, competence is changed, processed, learned, and achieved within a certain time to form holistic and specific self-actualization. This is the beginning of forming entrepreneurial values for a business actor. Moreover, entrepreneurial values are formed through external factors, such as regional cultural values (Xia and Liu, 2021). Differences in entrepreneurial values can be influenced by several things such as socio-culture and the culture of residence (Bosma and Schutjens, 2011). This has implications for entrepreneurial patterns that are sensitive to the sociocultural conditions of certain communities. The relationship between cultural values is close to innovation that could be explored by business actors. Turbulence and cultural problems limit entrepreneurs from developing innovative products to transcend cultural values. Additionally, attitudes and skills could manifest entrepreneurial values (Calza et al., 2020; Otike and Bar, 2022). This is supported by Kyndt and Baert (2015), which stated that entrepreneurial competence is measured and predicted within 3–5 years for business actors based on habits, experiences, and decision-making processes that show consistent activity. The values comprise experience, assertiveness, future planning, building relationships, and experience. Therefore, entrepreneurial values are formed to extend business sustainability and development in the future (Mohd et al., 2014; Lewis and Cardon, 2020).

Al-Mubarak and Busler (2010) stated that business sustainability is a condition with ways to maintain, develop, and protect resources, as well as fulfill the needs of a business (industry). The methods used are sourced from people's experiences and economic conditions. This means that business sustainability is a consistency of business conditions. It is also a business continuity process, including growth, development, and strategies. This process helps maintain business development, resulting in sustainability and resilience.

Business sustainability is important in ensuring that businesses continue existing and provide benefits. Several strategies could be applied to sustain businesses, specifically during the COVID-19 pandemic. According to Serrano and Kazda (2020), the aspects considered to ensure business sustainability include welfare by protecting employees, communication, operations, and finance. These aspects could be analyzed specifically and systematically to produce the right policies for business sustainability. Based on the existing problems, this research found many theories on the development of business sustainability. For instance, business sustainability management benefits small and medium enterprises (Kato and Charoenrat, 2018; Xing et al., 2019). This concept could help in planning businesses amid disasters. Sustainability could also be a solution to protect businesses and enable them to compete amid advances in technology, the internet, big data, information technology, and other changes that create new business models (Fani and Subriadi, 2019; Niemimaa et al., 2019; Roush et al., 2021).

Independence is a necessary effort to compete with other businesses. It is the ability to decide and determine one's action. In this case, individuals need confidence and the ability to be

responsible for their actions (Rauch and Frese, 2007; Wagener et al., 2010; Kyndt and Baert, 2015). According to Goetz and Freshwater (2001), independence is also a condition where a person does not rely on authority or require full direction from others. Independent people refuse to have other people interfere in their business. Sine et al. (2005) stated that independence is the ability to behave, feel, and make decisions based on one's will. People are declared independent when they fulfill the character of independence seen through a sense of responsibility, meeting minimal basic needs, a high work ethic, discipline, and bravery. The investment of entrepreneurial values is an initial capital and an important foundation factor in business development so that consistent characteristics of business continuity can be formed and maintained. Entrepreneurial values can practically be implemented directly to business continuity or indirectly through a mediating variable, namely business independence. The entrepreneurial value will become a habit that forms a special attitude which is an indicator of business independence. Through this special attitude, business independence becomes a catalyst for entrepreneurial values and can be treated and formed in experimental studies in cultivating the characteristics of business continuity.

This research formulated the following hypotheses:

- H1: Inculcating entrepreneurial values positively and significantly affects business independence for batik craftsmen in Malang City.
- H2: Inculcating entrepreneurial values affects business sustainability for batik craftsmen in Malang City.

Inculcating entrepreneurial values for home and creative industries in delivering knowledge and skills to business actors (Holmgren and From, 2005; Cohen and Muñoz, 2015; Tsvetkova, 2015; Vega-Gómez et al., 2020). This is because homeowners and creative industries on a small scale do not yet have qualified management and entrepreneurial skills in managing their businesses. There are several factors such as educational background, social and economic conditions, and social environment. Sufficient knowledge and skills are needed to advance home and creative industry businesses. Entrepreneurship seminars, training, and socialization help improve the soft skills of Micro, Small, and Medium Enterprises (MSMEs), beginner entrepreneurs, and people who want to develop their businesses.

The sustainability of a business is supported by several reinforcing factors to survive (Ligthelm, 2016). These include regularly compiling and updating a business plan, periodic analysis of competitors, ease of venturing into a new business, and the ability to calculate risk. According to Hudson et al. (2001), business sustainability in MSMEs is seen in the company's innovation, managing employees and customers, and returning the initial capital. This shows that the company is development-oriented and utilizes opportunities for continuous innovation.

Business independence is inseparable from the contradiction between the concept and the actual technicality. Theoretically, businesses should fulfill needs by relying on the company's capabilities. However, the technical staff requires assistance from other parties in fulfilling these needs. These concepts become two different theories when the boundaries are set more specifically.

The independence in this research is the ability to manage a business single-handedly by exploring available resources, including networks, humans, capital, and nature (Sülzle, 2009). Establishing business independence requires the knowledge of potential risks. According to Naill and Sharp (1991), it is important to anticipate the demand, construction, operational, and regulatory risks. Therefore, business independence is realized by a person with a strong risk-taking attitude (Willebrands et al., 2012).

Business independence formed for small actors is an attitude and condition with an entrepreneurial spirit to fulfill needs by relying on their abilities and strengths (Article 1 paragraph 8 of the Minister of Cooperatives and Small and Medium Enterprises Regulation Number 02/Per/M.KUKM/I/ 2008). Developing a strong and independent small business aims to facilitate, expedite, and expand small businesses access to productive resources. This enables business actors to utilize the opportunities and potential of local resources and adjust according to efficiency demands (Bridgstock, 2012). The small business development system is built through affordable, increasingly widespread, quality services. This increases access to markets and productive resources such as humans, capital, markets, technology, and information and increases the intermediation of financial institutions. In Indonesia, most small entrepreneurs run businesses because of opportunities and a safe and large market share. As a result, small businesses have a greater chance of survival and development because they are independent in running their business (Tsang and Blevins, 2015).

This research formulated the following hypotheses:

- H3: Business independence positively and significantly affects the business sustainability of batik craftsmen in Malang City.
- H4: Inculcating entrepreneurial values positively and significantly affects business sustainability through the business independence of batik craftsmen in Malang City.

The operational definition can be seen in Table 1 below.

Table 1 describes the operational definition of each variable. The measurement of each variable has developed according to empirical conditions in the research field and each variable is defined in various indicators according to the specific explanation in Table 1.

3. Research method

This research used a quantitative approach with a path analysis model. The quantitative approach was selected to develop a mathematical model using theories from literature research. The approach was also used to build hypotheses related to the case research. Furthermore, this research measured the fundamental relationship between empirical observations and quantitative data. The measurements helped determine the relationship between variables in a population, including the research design. The path analysis tests the overall model and individual parameters, models intermediary variables, and estimates using equations showing possible causal relationships on all variables in the model. Additionally, the analysis decomposes

TABLE 1 Variable operational definition.

Variable	Indicator	References
Business continuity	Innovation	Hudson et al., 2001
	Employee management	
	Customer management	
	Return to the initial capital	
Business independence	Able to fulfill itself	Sukirman, 2017
	Not easily give up	
	Brave to take a decision	
	Brave to compete	
	Accept a competitor's advantage	
Embedding entrepreneurial values	Creativity	Boohene et al., 2008
	Risk-taking	
	Innovation	
	Achievement oriented	
	Ambition	
	Independence	

TABLE 2 Determination of the number of samples.

No.	Batik craftsmen	Number of craftsmen	Samples
1	Buring batik	50	$n = \frac{50}{1+216 \cdot (0,1)^2}$
			$n = \frac{50}{1+216 \cdot 0,01}$
			$n = \frac{50}{3,16}$
			$n = \frac{50}{3,16} = 15, 8 \text{ or } 16$
2	Celaket batik	100	$n = \frac{100}{3,16} = 31$
2	Sundari Batik	35	$n = \frac{35}{3,16} = 11$
4	Lintang batik	16	$n = \frac{16}{3,16} = 5$
5	Wisnu batik	5	$n = \frac{5}{3,16} = 2$
6	Polowijen batik	10	$n = \frac{10}{3,16} = 3$
Total		216	68

correlations into causal direct and indirect relationships and non-causal associations, such as spurious components. Business sustainability, inculcating entrepreneurial values, and business independence were used as dependent (Y), independent (X₁), and meditating (Z) variables, respectively.

The research population comprised 216 batik craftsmen in Malang City, Indonesia. This city was selected because Malangan batik is widely known and has great potential for development. Samples were determined using proportional random sampling with the Slovin formula. Proportional random sampling allowed all members to be sampled according to their proportions. The Slovin formula used to obtain the number of samples in the survey to

TABLE 3 Demographic characteristics of respondents.

Demographic information	Frequency	Percentage
Gender		
Male	6	8.8%
Female	62	91.2%
Total	68	100%
Age		
<30 years	25	36.8%
>30 years	43	63.2%
Total	68	100%
Education		
Senior/vocational high	64	94.1%
School	4	5.9%
Diploma/undergraduate	68	100%
Total		

Source: Data processed by researchers.

TABLE 4 One-sample Kolmogorov-Smirnov test.

		X1	Z	Y
N		68	68	68
Normal parameters	Mean	35.43	29.60	18.18
	Std. deviation	5.497	4.261	3.481
Most extreme differences	Absolute	0.101	0.076	0.097
	Positive	0.101	0.066	0.064
	Negative	-0.051	-0.076	-0.097
Test statistic		0.101	0.076	0.097
Asymp. Sig. (2-tailed)		0.082	0.200	0.181

Source: Data processed by researchers.

TABLE 5 Multicollinearity test results.

Model		Tolerance	VIF
Coefficients			
1	(Constant)		
	X1	0.664	1.506
	Z	0.664	1.506

Source: Data processed by researchers.

estimate the population proportion and help calculate the variance is presented as follows:

$$n = \frac{N}{1+N1e^2}$$

Where n = number of samples
 N = total population of each area
 $N1$ = total overall population
 e = error limit

Table 2 shows the sample distribution:

This research used primary data obtained by distributing questionnaires to 68 respondents. Business sustainability,

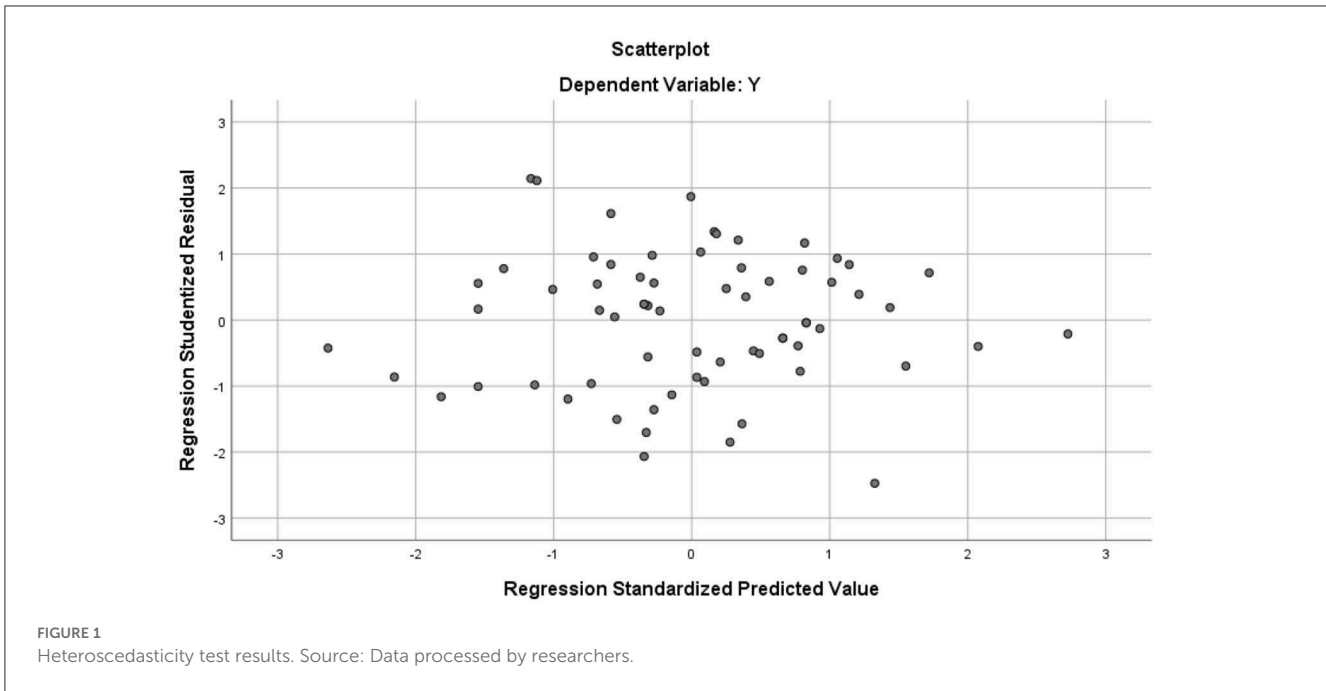


TABLE 6 Regression analysis results of the effect of X1 on Z.

Model		Unstandardized coefficients		Standardized coefficients	t	Sig
		B	Std. Error	Beta		
1	(Constant)	11.375	3.047		3.733	0.000
	Inculcating entrepreneurial values	0.188	0.82	0.271	2.289	0.025

Source: Data processed by researchers (2020).

inculcating entrepreneurial values, and business independence were used as dependent (Y), independent (X₁), and meditating (Z) variables, respectively. Data were collected by distributing questionnaires to selected respondents offline during the COVID-19 pandemic on making the survey. The data collection process paid attention to health protocols and the time duration of meeting respondents. The offline method was used to convey information clearly to respondents.

This research adopted [Boohene et al. \(2008\)](#) to measure entrepreneurial values with six indicators, including creativity, risk-taking, innovation, achievement-oriented, ambition, and independence. The statement to measure entrepreneurial values was developed by adopting the existing indicators. Moreover, the questions to measure entrepreneurial values included that an attractive color combination is given on batik products to attract buyers, take risks for the business to continue running, innovation on motifs, maintain good quality, batik business would be developed again, and the business is self-managed. This statement is a development of the indicators previously mentioned. The statement is then submitted to the respondent to fill in according to the actual conditions. These conditions certainly adjust to the circumstances of each business and have unique variations in assessing entrepreneurial value.

This research adopted [Hudson et al. \(2001\)](#) to measure business sustainability with three indicators: the company's innovating

success, managing employees and customers, and returning the initial capital. The statement to measure business sustainability was developed by adopting existing indicators. Furthermore, the questions to measure business sustainability included renewing batik motifs makes customers, new employees being trained in producing batik and dealing with customers, and short, medium, and long-term initial capital turnover.

This research to measure business independence with five indicators, including fulfilling themselves, not giving up easily, making decisions, competing, and accepting competitors' advantages. The statement to measure business independence was developed by adopting existing indicators. Business independence was measured using questions such as the sales results fulfill needs, an unyielding, persistent, and tenacious work attitude, making decisions even when risky, competing in batik business even with many competitors, and advantageous and unique motifs.

This quantitative research used Path. Path analysis is a quantitative data analysis technique that allows the description of causal patterns between one variable and another. One of the advantages of this analysis is that it can determine the direct or indirect relationship between the variables being analyzed. Analysis to process and interpret data descriptively. The data were also analyzed as prerequisites, and hypothesis tests were conducted to determine the relationship between variables. Path analysis was used to determine the structural relationship between exogenous and endogenous variables. This is intended to determine the

TABLE 7 Results of regression analysis of the effect of X_1 and Z on Y.

Model		Unstandardized coefficients		Standardized coefficients	t	Sig
		B	Std. Error	Beta		
1	(Constant)	10.886	4.022		2.706	0.000
	Inculcating entrepreneurial values	0.315	0.102	0.338	3.079	0.003
	Business independence	0.431	0.148	0.320	2.918	0.005

Source: Data processed (2020).

TABLE 8 Summary of effect analysis results between variables.

Effect of variable	Causal influence		Total	Sig	Conclusion
	Direct	Indirect			
X_1 -Z	0.271	-	0.271	0.025	H0 rejected
X_1 -Y	0.338	0.087	0.425	0.003	H0 rejected
Z-Y	0.320	-	0.320	0.005	H0 rejected

Source: Data processed (2020).

4. Result and discussion

4.1. Result

4.1.1. Demographic respondents

Most of the respondents are women aged over 30 years because many batik business owners are women and can make batik crafts, especially mothers, while men accounted for about 8.8%, as shown in Table 3.

4.1.2. Classic assumption test results

4.1.2.1. Normality test results

The Kolmogorov Smirnov test was used with SPSS 26 for Windows to determine the data normality.

4.1.2.2. Normality test table

Table 4 shows that the Asymp.Sig values for entrepreneurial (X_1), Business independence (Z), and business sustainability (Y) are 0.082, 0.200, and 0.181, respectively, and those three are > 0.05 , meaning the variables are normally distributed.

4.1.2.3. Multicollinearity test results

A multicollinearity test was conducted to show that the independent variables do not relate positively. The results are shown in Table 5.

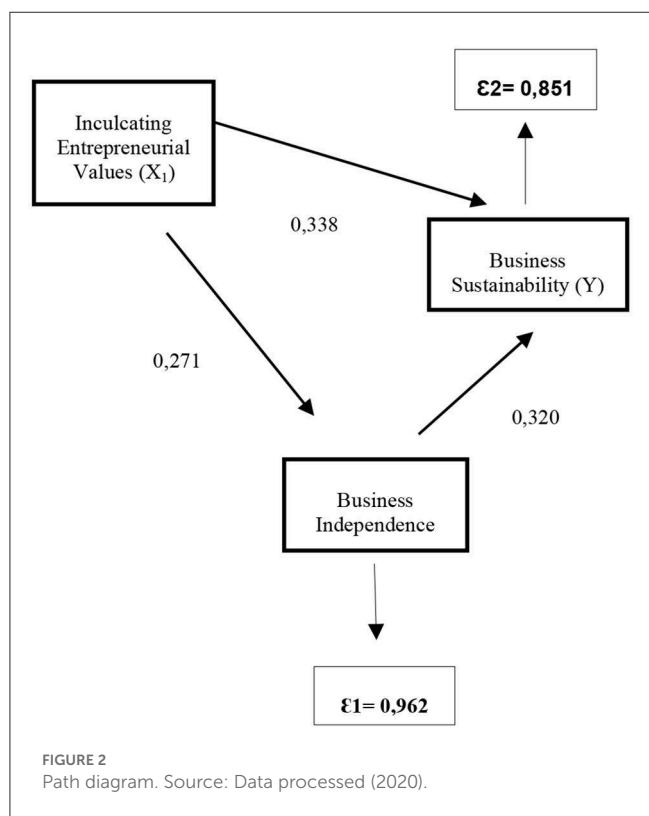
Table 5 shows that the tolerance value for entrepreneurial values (X_1) and business independence (Z) is $0.664 < 0.10$. The VIF value for independent and mediating variables is $1.506 < 10.0$. Therefore, there is no multicollinearity because the tolerance of the independent and mediating variables is > 0.10 , and the VIF is < 10.0 .

4.1.2.4. Heteroscedasticity test results

A heteroscedasticity test determines the effect of the dependent variable on the confounding variable. It shows whether the path analysis model has inequality of variance from the residuals of one observation to another. Figure 1 shows the heteroscedasticity test results.

Figure 1 shows that the data points spread around the number 0 without forming a wavy pattern, implying no heteroscedasticity.

The data were processed using the SPSS 26 program, while the validity test was conducted to show whether the questionnaire was valid. Questionnaire items are valid when $r_{count} \geq r_{table}$. The calculation for the entrepreneurial values, business independence, and business sustainability variables showed that the r_{count} value is ≥ 0.361 . Furthermore, a reliability test was conducted using



magnitude of the direct, indirect, and total effect of endogenous variables on exogenous variables. The path analysis stages included testing classical assumptions on each data with SPSS, writing the structural relationships between variables, and calculating path coefficients. The final stages were testing the significance of the path coefficient and making a path diagram for the direct effect of X_1 on Y through Z.

Cronbach's alpha coefficient value. The results showed that all variables were more than 0.06, meaning they were reliable.

The linearity, normality, heteroscedasticity, and multicollinearity tests indicated that all data were feasible for analysis. Path analysis tested the direct and indirect effects of the variables in hypothesis testing. Table 6 shows the data analysis results.

The regression equation from the analysis is presented as follows:

$$Z = 11.375 + 0.271x_1$$

The equation shows that:

- The constant (a) = 11.375, which means when the cultivation of entrepreneurial values (X1) is constant, business independence (Z) is 11.375.
- The X₁ regression coefficient of 0.271 indicates that when the cultivation of entrepreneurial values increases by one unit, the increase is 0.271.

From the regression analysis results in Table 7, the regression equation is presented as follows:

$$Y = 10,866 + 0.338x_1 + 0.320y$$

The equation shows that:

- Constant (a) = 10,886, stating that when the cultivation of entrepreneurial values and business independence (Z) is constant, business sustainability (Y) is 10,886.
- The X1 regression coefficient of 0.338 indicates that when the cultivation of entrepreneurial values (X1) is one unit while business independence (Z) is constant, business sustainability (Y) is 0.338.
- The regression coefficient Z of 0.320 implies that when business independence increases by one unit while entrepreneurial values (X1) are constant, business sustainability (Y) is 0.320.

The analysis shows that the hypothesis test results are as follows:

H1 Inculcating entrepreneurial values positively and significantly affects business independence for batik craftsmen in Malang City.

Table 3 shows that tcount 2.289 > ttable 1.99 and sig. 0.025 < 0.05, meaning H0 is rejected. This implies that entrepreneurial values positively and significantly affect business independence for batik craftsmen in Malang City.

H2 Inculcating entrepreneurial values affect business sustainability for batik craftsmen in Malang City.

Table 4 shows that tcount 3,079 > ttable 1.99 and sig. 0.003 < 0.05, meaning H0 is rejected. Therefore, entrepreneurial values positively and significantly affect business sustainability for batik craftsmen in Malang City.

H3 Business independence positively and significantly affects the business sustainability of batik craftsmen in Malang City.

Table 4 shows that tcount 2,918 > ttable 1.99 and sig. 0.005 < 0.05, meaning H0 is rejected. This indicates that business independence positively and significantly affects sustainability for craftsmen in Malang City.

H4 Inculcating entrepreneurial values positively and significantly affects business sustainability through the independence of batik craftsmen in Malang City.

Table 5 shows that the direct effect coefficient of X1 on Y is 0.261, while the indirect effect through Z is 0.280, meaning the total effect coefficient is 0.541. This implies that entrepreneurial values have a stronger effect on business sustainability than the entrepreneurial self-sufficiency of batik craftsmen in Malang City. Therefore, business sustainability could be improved by increasing entrepreneurial values and business independence.

Table 8 shows the causal effect decomposition model between variables based on the path analysis and hypothesis test results.

The results in Table 8 show that entrepreneurial values (X1) positively and significantly affect business independence (Z) by 0.271. Inculcating entrepreneurial values (X1) positively and significantly affects business sustainability (Y) by 0.338. Business independence (Z) has a positive and significant effect on business sustainability (Y) by 0.320. Additionally, entrepreneurial values (X1) affect business sustainability (Y) through business independence (Z) by 0.087.

A path model of the influence could be drawn using path analysis, where the error effect is determined as follows:

$$P_{\epsilon 1} = \sqrt{1 - R_1^2} = \sqrt{1 - 0.074} = 0.962$$

$$P_{\epsilon 2} = \sqrt{1 - R_2^2} = \sqrt{1 - 0.275} = 0.851$$

After knowing the influence path and the error effect, the model validity was determined as follows:

$$R_m^2 = 1 - \rho_{\epsilon 1}^2 \rho_{\epsilon 2}^2 \quad (1)$$

The interpretation of R_m^2 is similar to the coefficient of determination (R^2) in the regression analysis. This research obtained the coefficient of total determination as follows:

$$R_m^2 = 1 - (0.962)^2 (0.851)^2 = 0.331$$

Based on Figure 2, a determinant coefficient of 33.1% means that the variation of X1 and Z only explains the variation of Y by 33.1%. The remaining 66.9% is explained by other variables outside the model and errors. Based on the path analysis, a trajectory diagram for the direct effect of X1 on Y through Z was made as following (Figure 2).

4.2. Discussion

4.2.1. Inculcating entrepreneurial values positively and significantly affects business independence for batik craftsmen in Malang City

The analysis showed that entrepreneurial values (X1) positively and significantly affect business independence (Z) by 0.271, meaning the first hypothesis is accepted. Stronger entrepreneurial values increase the business independence of the batik craftsmen. This supports Djodjoko and Tawas (2014), which found that entrepreneurial values positively and significantly affect business independence. A higher value for small business actors increases small business independence. This is due to the application of enthusiasm and entrepreneurship values and behavior that help

realize the independence needed to anticipate small business difficulties (Hendarwan, 2018). All businesses experience difficulties and challenges according to their characteristics (Smith, 2005; Schaltegger et al., 2016). These problems are a risky challenge that batik craftsmen must face as part of their responsibilities because they must make decisions and take action independently.

Ramadani et al. (2022) found a positive and significant relationship between entrepreneurship education and entrepreneurial intentions. Wang et al. (2019) stated that people are motivated to become entrepreneurs after having sufficient business management skills and being mentally prepared. Additionally, Karyaningsih et al. (2020) showed that entrepreneurial mindset, knowledge, and intentions are developed through sufficient capital from education. These motivations include profit, freedom, personal dreams, and independence (Li et al., 2020). Therefore, entrepreneurs determine the profit, are free to manage time without pressure, realize personal dreams of the desired standard of living, and achieve independence with their business. This is in line with Wang et al. (2019), which stated that supporting business independence increases entrepreneurial motivation. High motivation gives an entrepreneur a strong natural self to increase commitment. Motivation is determined by internalized values (Al-Jubari, 2019). Therefore, individuals struggling to be independent interact with other similar people. They also engage in processes and roles that strengthen and maintain their belief in independence (Kirkley, 2016).

Al-Jubari (2019) found that entrepreneurs emphasize more on responsibility, tolerance, respect, independence, determination, perseverance, and imagination. Therefore, the value of entrepreneurship is vital in managing the company's independence (Henderson, 2019). Entrepreneurial values shape the character and become part of the personality of business actors. These characters and personalities form independence for business actors (Astuti and Sukardi, 2013). As business actors, batik craftsmen also inculcate these values in their processes, becoming inherent characters that form attitudes. These attitudes create business independence and help in facing challenges, securing opportunities, and making decisions. Therefore, establishing business independence requires inculcating entrepreneurial values (Orobia et al., 2020).

4.2.2. Cultivating entrepreneurial values affects business sustainability for batik craftsmen in Malang City

The results indicate that inculcating entrepreneurial values (X1) positively and significantly affects business sustainability (Y) for Batik Craftsmen in Malang City by 0.338, meaning the second hypothesis is accepted. When batik craftsmen have high creativity, they become innovative, influencing the sustainability of their business. This supports Tantawy et al. (2021), which stated that cultivating an entrepreneurial spirit develops potential and creativity in business. The finding is in line with Ürü et al. (2011), Glavas and Mathews (2014), Lopera and Marchand (2018), Marisa (2019), and Dhahri et al. (2021). The research found that successful entrepreneurs hardly give up and take risks and utilize opportunities to survive threats and challenges by making

changes in their businesses. Strong entrepreneurial characteristics motivate running a business, ensuring it develops and becomes sustainable. This is in line with Klein Woolthuis (2010), which stated that ethical principles and values are important in taking actions supporting business sustainability. The ethical values could be personality and business ethics. According to Georgescu (2012), large and established companies describe the ethics that should be developed and practiced by their owners and employees. This aims to inculcate the value and update its development to become a habit.

Ethical principles, personal values, and competitive intelligence are essential for business sustainability. According to Baron (2008) and Shepherd et al. (2009), certain entrepreneurial characteristics help entrepreneurs take innovative actions that advance their initial position. These traits also enable entrepreneurs to utilize new opportunities and support decision-making processes. Therefore, internalized values and ethics form an action that leads to sustainability (Tur-Porcar et al., 2018). It shows that positive entrepreneurial values drive batik craftsmen to maintain, promote, and develop their businesses. This supports Ligthelm (2016), which stated that the human factor determines whether a business would survive and thrive. Therefore, business sustainability and success are based on values, ethics, clear actions, and competitive intelligence from batik craftsmen to achieve the desired results.

Entrepreneurial values shape entrepreneurship character and actions, impacting business sustainability. These results support Klapper and Upham (2015), which stated that agendas, practices, and discourses on a commitment to value and quality are more effective in advancing sustainability. It implies the importance of business actors, including batik craftsmen, to inculcate entrepreneurial values during the business process. Entrepreneurs face various marketing challenges, problems, and business opportunities that require exploring values, skills, and behavior (Sadiku-Dushi et al., 2019).

The certainty of an easy entrepreneurship climate also supports business sustainability (André, 2016). Local government regulations should ensure business actors have adequate security, market-relevant taxes, and guaranteed access to the public through promotions. This investment climate would benefit entrepreneurs and generate revenue for local governments, such as taxes or user fees (Ma et al., 2008).

4.2.3. Business independence positively and significantly impacts the business sustainability of batik craftsmen in Malang City

The results indicate that business independence (Z) positively and significantly affects business sustainability (Y) by 0.320, meaning the third hypothesis is accepted. The independence formed for small business actors is the entrepreneurship spirit to meet needs by relying on their abilities and strengths. Furthermore, developing a strong and independent business aims to facilitate, expedite, and expand access to productive resources, supporting business sustainability. This is in line with Abubakar and Palisuri (2018), which found that independence significantly affects the sustainability of the

traditional culinary industry in Rappang Village, Panca Rijang Sub-District. Hendarwan (2018) also found that the independence of small businesses requires protection from management. This helps businesses increase productivity and realize synergistic growth, ensuring the company's survival. Additionally, Manninen and Huiskonen (2022) showed that the main key to business sustainability is independence in supplying raw materials.

Previous research showed that the entrepreneurial role requires independence. Other research found that entrepreneurs have higher independence than other individuals (Shane, 2003). Entrepreneurial independence includes taking responsibility for one's judgment by not necessarily following the statements of others (González-Rodríguez et al., 2015; Maulana, 2016). Moreover, freedom is created from the feeling of being in control and the confidence of being independent. Freedom allows individuals to be creative and pursue activities that contribute to business growth and goal achievement (Kirkley, 2016). In line with this, the independence of batik craftsmen is the freedom to take responsibility for their business' survival and development.

Power does not determine stakeholder relevance during business sustainability. Conversely, entrepreneurs with achievement needs must strive to achieve independence. It implies that batik craftsmen must become independent entrepreneurs to achieve their goals and sustain their businesses. This is because independent business actors are not reliant on others and directly innovate and make decisions (Goetz and Freshwater, 2001; Parsa et al., 2005; Sine et al., 2005; Ramachandran et al., 2006; Tsang and Blevins, 2015; Alon et al., 2016). Independence in developing ideas, promoting innovation, and promoting entrepreneurs to adopt new technologies is important in achieving business sustainability (Sarma et al., 2013; Youssef et al., 2018). An example of independence is using social media for promotion and sales to develop and maintain businesses.

4.2.4. Inculcating entrepreneurial values positively and significantly affects business sustainability through the business independence of batik craftsmen in Malang City

The results showed that one path indirectly affects business sustainability (Y). Entrepreneurial values positively and significantly affect business sustainability through business independence, meaning the fourth hypothesis is accepted. The direct effect coefficient of X1 to Y is 0.338, while the indirect effect coefficient of X1 to Y through Z is 0.087, giving a total effect coefficient of 0.425. This means that the effect of inculcating entrepreneurial values on business sustainability is indirect through business independence. Therefore, business sustainability could be achieved by increasing entrepreneurial values and business independence. This supports which stated that entrepreneurial values should be reconsidered by building self-confidence, optimism, commitment, discipline, and responsibility in running a business. Reconsidering entrepreneurial values would help small business actors develop

independence and achieve sustainability. In line with this, Klingler-Vidra et al. (2021) stated that business performance increases with perseverance, independence, responsiveness to opportunities, courage to take risks, and innovative behavior. The increased performance also affects the company's innovation in maintaining business sustainability. Furthermore, Mai et al. (2022) stated that business innovation is formed from organizational leadership attitudes and learning. This means that habitual entrepreneurial values form business independence through development. This increases innovation as a form of business sustainability.

The relationships between these variables are not formed until the development of the next variable. According to Jena (2020), entrepreneurial attitudes are formed through education that collaborates habits, as well as cognitive and affective abilities. These abilities are influenced by gender and family background that determine a person's position in a certain category. Motivation creates an independent business (Ramachandran et al., 2006). In this case, the entrepreneur's attitude ensures the business is not easily swayed by external threats and internal weaknesses.

Entrepreneurs seek information on the business climate to ensure sustainability. Social and political conditions influence the entrepreneurial climate in an area (Ramachandran et al., 2006; Berglund and Wigren-Kristoferson, 2012). Successful entrepreneurs draw conclusions based on various information sources and recommendations. Furthermore, they take decisions even when not everyone agrees with them, and the results are unpredictable (Kyndt and Baert, 2015). The entrepreneurial spirit positively and significantly affect the company's independence. This shows that independent entrepreneurs believe in their abilities and take responsibility for their actions. Moreover, business independence could also increase performance productivity, resulting in synergistic business growth and sustainability (Gibb and Buchanan, 2006). The performance also needs government support through local agencies to create a conducive climate for business development. Hendarwan (2018) stated that the independence of small businesses requires protection from management. This requires participation from local governments, universities, and stakeholders to realize regional business management regulations that protect small business actors.

5. Conclusion

Inculcating entrepreneurial values positively and significantly affects business independence. The stronger entrepreneurial values of batik craftsmen in Malang City increase their business independence. Moreover, entrepreneurial values and business independence positively and significantly affect business sustainability. Entrepreneurial values positively and significantly affect business sustainability through business independence.

This research is expected to provide benefits to the parties concerned. First, it could be used to evaluate motivations, opportunities, problems, and processes that support business sustainability. It also identified the obstacles faced by batik craftsmen in Malang City. The results could be a reference for improving batik craftsmen's performance in the future.

Second, they could be a comparison to identify the strengths and weaknesses useful for business improvement and development. Third, they could increase academic knowledge and complete the literature on inculcating entrepreneurial values in creating sustainability through business independence for batik craftsmen.

Batik business owners should inculcate an entrepreneurial spirit in their employees to create tenacious, tough, and unyielding work for the independent business in all conditions. They should also continue innovating in making batik designs and colors to ensure the batik business survives the pandemic without leaving the Malangan Batik icon. Additionally, business owners should utilize social media for promotion and collaborate with marketplaces to perform digital marketing.

This research was conducted at the beginning of the COVID-19 pandemic in Indonesia during the implementation of community activity restrictions (PPKM). The short period limited interaction with respondents and field activities. Therefore, future research could focus on other parties such as agents or distributors as business partners. They could also interact freely with informants in the field as the COVID-19 pandemic subsides. This research has empirically tested quantitative data in general regarding business continuity so that further research can be done with experimental research regarding business continuity models. In addition, model development research based on business continuity can also be an alternative for further research based on the results of this study. The follow-up research mentioned above is expected to be a solution for regional businesses in surviving and developing amid increasingly competitive business competition.

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Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Author contributions

WR (30%), NH (15%), AW (12.5%), and LQ (15%): conceptualization and literature writing. DR (15%), BN (12.5%), WR, and NH: methodology, calculations, and discussion. All authors contributed to the article and approved the submitted version.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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