



Research Article

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Green Entrepreneurship Motivation Model

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Abstract

The average poverty rate of Yogyakarta Province is surprisingly higher than that of Indonesia. In order to decrease the figure, numerous approaches are taken, among others the empowerment of small business owners, particularly green entrepreneurs. This research aims at determining factors that influence the knowledge about becoming green entrepreneurs and developing green entrepreneurship motivation model to reduce poverty, specifically in Yogyakarta Province. For this study, a questionnaire survey was employed. The population comprises small business owners. With purposive sampling, 240 final respondents were collected. To analyze the data, SEM (Structural Equation Modeling) method was applied. The results suggest that the knowledge about green entrepreneurship is affected by educational institutions and media, which further positively influence the motivation to become green entrepreneurs. Another finding indicates that the role of public figures serves as a factor that influences such a motivation. The entrepreneurial motivation is so far determined largely by economic aspects, i.e. earning income to provide for the family. Therefore, a synergy of public figures, the government, and SMEs are called for to expand the knowledge about green entrepreneurship as well as motivate further to becoming green entrepreneurs.

Keywords: Motivation, green entrepreneurship, poverty, internal-external factors

1. Introduction

In its course of development, Indonesia aspires to alleviate poverty, reduce unemployment, and preserve the environment to promote sustainable development. Small and medium enterprises (SMEs) contribute to 60.5% of the total GDP and 96.9% of the total national labor absorption. Previously, local SMEs were severely impacted during the first two years of Covid-19 pandemic, i.e., in 2020-2021. Based on a survey involving 1,180 respondents of SMEs, 48% of them face difficulties in sourcing raw materials, 77% deal with dropping revenue, 88% endure declining demand, and 97% suffer asset devaluation. However, 84.8% of the struggling SMEs have bounced back to normal operation (Coordinating Ministry for Economic Affairs of the Republic of Indonesia, 2022).

Small businesses are among the primary drivers of economic growth. They perform as the main

actor of the economic activities in various sectors, not to mention the largest provider of jobs, the major player in developing economic activities and community empowerment, and also the creators of new markets and innovations (Kader, 2018; Srijani, 2020). Their presence needs to be maintained seeing the size of the labor absorption and the employed local resources. They have proved to be capable of reducing poverty, promoting income distribution equality, and stimulating economic development. Furthermore, small businesses are at the forefront of poverty alleviation. More than simply a business group, they function as an instrument of social policies or other practices to reduce unemployment or poverty (Halim, 2020; Srhoj et al., 2021).

In 2021, the poverty rate of Yogyakarta Province was 11.91%, higher compared to the national poverty rate which stood at 9.54% (Statistics Indonesia of Yogyakarta Province, 2021). It was worsened by the Covid-19 pandemic. To overcome this situation, small businesses are then empowered. SMEs in Yogyakarta grow at an average of 8.45% per annum with the average annual revenue growth of 1.37% (The Ministry of Finance of the Republic of Indonesia, 2022).

The rapid environmental deterioration these days raises the awareness of green concept as a pro-environmental construct that is paramount to life. This inspires the emergence of green business, or green entrepreneurship. It is a new paradigm in the economy as well as a sustainable development strategy which prioritizes balance between economic, social, and environmental values. Economic value is related to the company's profit and growth sustainability. Social value is connected to the well-being and public welfare. Whereas, environmental value refers to the long-term preserved environment (Le Loarne Lemaire et al., 2022; Tesprasit et al., 2020).

Green entrepreneurship is a magnet for both consumers and investors. From the consumers' point of view, it is preferable for them to choose healthy, quality, and safe products and services that do not pose any harm to the environment (green consumers). Whereas for the investors, profits and corporate sustainability will no longer be meaningful if they don't have any impact on public welfare and environment (Hennemann et al., 2021; Trapp & Kanbach, 2021).

Researches on the influence of green entrepreneurship yield various results. The study on the future business performance of green vs. non-green entrepreneurs on the basis of consumer behavior theory indicates that the former is superior compared to the latter. This finding is presented by taking into account the consumer perception with strong environmental values. There is also a similar finding on the comparison of green and non-green entrepreneurs based on the perception of consumers with weak environmental values (Möller & Herm, 2021). Another study confirms that born-to-be-green concept can attract investors, specifically when the business activities are conducted around green technology/products and positioned in the green sector (Mrkajic et al., 2019). The study in Italy on innovative startups verifies that startups applying green production processes are predicted to be more sustainable compared to non-green startups (Serio et al., 2020). Currently, many companies have implemented environmental marketing strategies, by obtaining environmental certification and green seals. However, this approach is regarded insignificant by the consumers and does not influence their purchasing decision as most consumers do not have adequate comprehension about the importance of green seals (Neto et al., 2020).

Based on the actual situation and past researches, the awareness and role of business actors are called for in the act of preserving the environmental. One way is by encouraging conventional entrepreneurs to convert to green entrepreneurs. The purpose of this research is to formulate the factors and model of motivation in green entrepreneurship.

2. Literature Review

Recently, global awareness of environmental issues has been greater than ever. Many people have gradually shifted their conduct to cope with current environmental situation. For a transition to green economy, the involvement of green entrepreneurs is essential, including SMEs. However, SMEs practicing green entrepreneurship in various countries are either few or still in early stages. Therefore, supports from stakeholders are essential to multiply and advance them (Gorondutse et al.,

2020). There are several factors that inspire green entrepreneurship, namely green values, needs for earning a living, passions, urges to be one's own boss, and the gap in the market or opportunity market (Tjitalaksana, 2014). With more environmental awareness, ecopreneurs seems to have about similar drive as entrepreneurs in general. They just simply differ in financial motivation, which is less than regular entrepreneurs.

In green entrepreneurship, eco-friendly entrepreneurs make decisions by taking into account internal motivation and the opportunity to apply business ethics to project a better public image. In this matter, the obvious challenge is the capital. Moreover, small businesses in rural environments tend to adopt more green business practices than those in the urban setting (Purwandani & Michaud, 2021). Green entrepreneurship is built on values and motivations, namely environmental awareness, mental switch, responsibility for social change, support for local economy, sustainability, and work ethics (Puđak & Bokan, 2020).

Previous researches also describe that entrepreneurship education can grow a commitment to the environment. It becomes the basis for educational institutions to support for green entrepreneurship, environmental motivation, and green behavior. Besides, the support of educational institutions and public figures for green entrepreneurs may influence green venturing although the environmental motivation does not affect green entrepreneurship behavior (Hameed et al., 2021). Green entrepreneurship is motivated by time relativity, relatedness, altruism, and media spreading information about environmental issues (Vatansever & Arun, 2016). Current social and ecological crises are a concern in business nowadays. The government, policy makers, and public play a key role in establishing a sustainable industry by creating an ecosystem that maintains order and control in reducing and preventing the negative environmental and social impacts of businesses (Haldar, 2019). Individuals having intrinsic motivations can support the belief about pro-environment positively and influence the intent to adapt to environmental changes (Di Falco & Sharma, 2018). With a number of key factors and types of incentives, entrepreneurs can be encouraged to invest in and shift to green entrepreneurship. Those factors depend on the significance of institutions and the resources. Type of incentives is purely influenced by institutional context. For green entrepreneurs, investment is merely a means to achieve strategic goals, innovations, and individual competitive advantages. However, there are some of them who exercise green entrepreneurship to pursue what they perceive as ideals (Nikolaou et al., 2018). Future business managers will begin to demonstrate their great potential and interest in developing green skills. It is so although that will need changes to the educational paradigm for the manager candidates of businesses engaging in green entrepreneurship. The training system is proposed to be developed under five main elements: ecological awareness, ecological culture, social values, innovative thinking, and leadership (Kozlova & Volkova, 2019).

Based on the previous studies, there are new trends and concepts rooting in green entrepreneurship, such as green industry life cycle, entrepreneurship knowledge sharing, institutional framework, entrepreneurship financing, and decision making process in green entrepreneurship (Muo & Azeez, 2020). Another finding confirms that entrepreneurs with knowledge in regional environment can have a positive impact on the establishment of new businesses and the use of green technology (Cojoianu et al., 2020). Thus, the following hypotheses were formulated:

1. Educational institutions positively influence the knowledge about green entrepreneurship.
2. Media positively influences the knowledge about green entrepreneurship.
3. Public figures positively influence the knowledge about green entrepreneurship.
4. The government positively influences the knowledge about green entrepreneurship.
5. Green entrepreneurial skills positively influence the motivation in green entrepreneurship.
6. Green knowledge positively influences the motivation in green entrepreneurship.
7. The comprehension of business ethics positively influences the motivation in green entrepreneurship.
8. Market opportunity positively influences the motivation in green entrepreneurship.
9. Green incentives positively influence the motivation in green entrepreneurship.
10. Capital availability positively influences the motivation in green entrepreneurship.

11. Media positively influence the motivation in green entrepreneurship.
12. Public figures positively influence the motivation in green entrepreneurship.

3. Research Methods

The population of this research comprises 300 SMEs in Yogyakarta. Purposive sampling was applied to select samples with specific criteria, i.e., employing 1-4 people and having been operational for 1 year at the least. The qualified respondents were 240 people. The questionnaire used was designed with 5-point Likert scale. Partial Least Square - Structural Equation Modelling (PLS - SEM) method was used for data analysis.

4. Results and Discussion

4.1 Testing the Measurement Model (Outer Model)

For the first step, validity test was carried out to examine convergent validity and discriminant validity. Afterward, reliability test was performed.

4.2 Convergent validity

Convergent validity is used to observe the correlation between indicators in a construct from the loading factor value of each construct indicator. The loading factor value must be greater than 0.60 and significant with the p-value greater than 0.5 (Hair, 2017). Table 1 presents the loading factor value of 36 indicators. All of them are above 0.60. Hence, the indicators meet the conversion validity requirement.

Table 1: Loading Factor value for all variable indicators

Variable	Code Indicator	Loading Factor	Description
Knowledge	lv_Y1	0.650	Validation
Motivation	lv_Y2	0.650	Validation
Edu Ins (X1)	X1.1	0.894	Validation
	X1.2	0.909	Validation
	X1.3	0.875	Validation
Media (X2)	X2.1	0.742	Validation
	X2.2	0.763	Validation
	X2.3	0.719	Validation
	X2.4	0.644	Validation
	X2_(1.A)	0.953	Validation
	X2_(1.B)	0.971	Validation
	X2_(1.C)	0.973	Validation
	X2_(2.A)	0.954	Validation
	X2_(2.B)	0.947	Validation
	X2_(2.C)	0.916	Validation
	X2_(3.A)	0.963	Validation
	X2_(3.B)	0.959	Validation
	X2_(3.C)	0.941	Validation
Pub fig (X3)	X2_(4.A)	0.938	Validation
	X2_(4.B)	0.945	Validation
	X2_(4.C)	0.919	Validation
Gov (X4)	X3.1	0.774	Validation
	X3.2	0.897	Validation
	X3.4	0.805	Validation
Ent skill (X5)	X4.1	0.864	Validation
	X4.2	0.864	Validation
	X5.1	0.904	Validation
	X5.2	0.904	Validation

Variable	Code Indicator	Loading Factor	Description
Bus Eth (X6)	X6.1	0.853	Validation
	X6.2	0.777	Validation
	X6.3	0.915	Validation
	X6.4	0.907	Validation
Mar Opp (X7)	X7.1	0.940	Validation
	X7.2	0.887	Validation
	X7.3	0.954	Validation
	X7.4	0.920	Validation
Green in (X8)	X8.1	0.860	Validation
	X8.2	0.787	Validation
	X8.3	0.796	Validation
	X8.4	0.631	Validation
	X8_(1.A)	0.811	Validation
	X8_(1.B)	0.874	Validation
	X8_(1.C)	0.719	Validation
	X8_(1.D)	0.799	Validation
	X8_(2.A)	0.826	Validation
	X8_(2.B)	0.890	Validation
	X8_(2.C)	0.894	Validation
	X8_(3.A)	0.849	Validation
	X8_(3.B)	0.849	Validation
	X8_(3.C)	0.878	Validation
	X8_(3.D)	0.826	Validation
	Cap avail (X9)	X9.1	0.883
X9.2		0.926	Validation
X9.3		0.918	Validation
X9.4		0.869	Validation
Knowled (X10)	X10.1	0.893	Validation
	X10.2	0.899	Validation
	X10.3	0.764	Validation

4.3 Discriminant validity

The discriminant validity can be tested with the reflective indicator by observing whether Average Variance Extraction (AVE) is greater than 0.60 (Hair, 2017).

Table 2: AVE (Average Variance Extraction) Value of Research Model

Variable Code	AVE	Description
Mtvs GE	0.622	Validation
Entr Sk	0.797	Validation
Knowled	0.616	Validation
Edu Ins	0.933	Validation
Media	0.882	Validation
Public figure	0.911	Validation
Gov	0.873	Validation
Bus Eth	0.684	Validation
Market Opportn	0.817	Validation
Green In	0.748	Validation
Availab Cap	0.856	Validation
Green Co	0.644	Validation
Edu Ins	0.758	Validation
Media	0.724	Validation
Public figure	0.764	Validation
Gov	0.827	Validation
Media	0.730	Validation

4.4 Reliability test

The reliability test was conducted with composite reliability which value must be greater than 0.70 (Hair, 2017).

Table 3: Composite Reliability Value of the Research Model

Variable code	Composite reliability	Description
Mtvs GE	0.793	Reliable
Entr Sk	0.922	Reliable
Knowled	0.809	Reliable
Edu Ins	0.976	Reliable
Media	0.957	Reliable
Public figure	0.969	Reliable
Gov	0.954	Reliable
Bus Eth	0.866	Reliable
Market Opportn	0.900	Reliable
Green In	0.922	Reliable
Availab Cap	0.960	Reliable
Green Co	0.854	Reliable
Edu Ins	0.878	Reliable
Media	0.904	Reliable
Public figure	0.913	Reliable
Gov	0.907	Reliable
Media	0.935	Reliable
Public figure	0.890	Reliable

4.5 Testing the Structural Model (Inner Model)

The evaluation of the research model applied the Q² (prediction relevance) criteria. If Q² is greater than 0, it indicates that the model has prediction relevance. If otherwise, the model lacks prediction relevance. The Q² values of 0.02, 0.15, and 0.35 signifies that the model is respectively weak, moderate, and strong (Hair, 2017). From the result, the Q² for green entrepreneur motivation is 0.397, thus represents strong model category. Whereas, Q² value of knowledge is 0.351, which again falls into strong model category.

Table 4: Q² value

Variable	Q-Squares	Description
GE motivation	0.397	Moderate
Knowledge	0.351	Strong

4.6 Significance Test

Significance test is an examination to observe to what extent an exogenous variable has influenced the endogenous variable (Hair, 2017).

Table 5: Significance Test Result

Exogenous variable	Endogenous variable				
	Knowledge	P-Values	P-Values	GE motivation	P-Values
Edu institutions	0.435	<0.001			
Media	0.172	0.026			

Exogenous variable	Endogenous variable				
	Knowledge	P-Values	P-Values	GE motivation	P-Values
Public figure	-0.023	0.402			
Government	0.125	0.081			
Edu institutions			<0.001		
Media			0.324		
Public figure			0.339		
Government			<0.001		
Entr Skill				-0.062	0.246
Knowledge				-0.113	0.103
Bus Ethic				-0.063	0.242
Market Opp				0.025	0.393
Green Incent				-0.201	0.011
Availability				-0.061	0.249
Media				0.044	0.313
Public figure				0.167	0.030

The interpretations of the significance test are outlined below:

1. The influence of educational institutions on knowledge.
With the path coefficient of 0.435 and p value <0.001, educational institutions have a positive and significant influence on knowledge.
2. The influence of media on knowledge.
With the path coefficient of 0.172 and p value of 0.026, i.e., <0.05, media have a positive and significant influence on knowledge.
3. The influence of public figures on knowledge.
With the path coefficient of -0.023 and p value of 0.402, i.e., >0.05, public figures have no influence on knowledge.
4. The influence of the government on knowledge
With the path coefficient of 0.125 and p value of 0.081 i.e., >0.05, the government has no influence on knowledge.
5. The influence of green entrepreneurship skills on the motivation to become green entrepreneurs.
With the path coefficient of -0.062 and p value of 0.246, i.e., >0.05, green entrepreneurship skills have no influence on the motivation to become green entrepreneurs.
6. The influence of green knowledge on the motivation to become green entrepreneurs.
With the path coefficient of -0.113 and p value of 0.103, i.e., >0.05, green knowledge has no influence on the motivation to become green entrepreneurs.
7. The influence of green business ethics on the motivation to become green entrepreneurs.
With the path coefficient of -0.063 and p value of 0.242, i.e., >0.05, business ethics green entrepreneurship skills have no influence on the motivation to become green entrepreneurs.
8. The influence of market opportunity on the motivation to become green entrepreneurs.
With the path coefficient of 0.025 and p value of 0.393, i.e., >0.05, market opportunity has no influence on the motivation to become green entrepreneurs.
9. The influence of green incentives on the motivation to become green entrepreneurs
With the path coefficient of -0.201 and p value of 0.011, i.e., <0.05, green incentives have a negative and significant influence on the motivation to become green entrepreneurs.
10. The influence of capital availability on the motivation to become green entrepreneurs.
With the path coefficient of -0.061 and p value of 0.249, i.e., >0.05, capital availability has no influence on the motivation to become green entrepreneurs.
11. The influence media on the motivation to become green entrepreneurs.
With the path coefficient of 0.044 and p value of 0.313, i.e., >0.05, media have no influence on the motivation to become green entrepreneurs.

12. The influence of public figures on the motivation to become green entrepreneurs.

With the path coefficient of 0.167 and p value of 0.030, i.e., < 0.05 , public figures have a positive and significant influence on the motivation to become green entrepreneurs.

The increasing demand for eco-friendly products and a more eco-conscious consumer behavior drives a stronger eco-market. In today's world, entrepreneurs need to be more prudent, socially responsible, and aware of their parts in the business. Green entrepreneurship is now maturing with the focus on the production of eco-friendly products (Gupta & Dharwal, 2020). Concluding from the results of the study, hypothesis 1, 2, 12 are supported. Whereas, hypothesis 3, 4, 5, 6, 7, 8, 9, 10, 11 are not supported. This research focuses on input, process, and output that consider environmental aspects for SMEs. The results suggest that educational institutions and media take part in providing knowledge and comprehension about green entrepreneurship along those foci. The finding on the influence of educational institutions correspond to the past study that education and skills acquired from business schools are essential to entrepreneurship programs (Mozahem & Adlouni, 2021). Previous studies also confirm that entrepreneurial education is a means to develop active, informed, responsible, and eco-oriented citizens (Mets et al., 2021).

Another finding presents that public figure and the government lack of contribution to the green entrepreneurship. Also, green entrepreneurial skills and knowledge as well as comprehension about business ethics do not have any influence on the motivation to become green entrepreneurs. These indicate that SMEs are motivated only by profits. To confirm the findings of this research, a focus group discussion was held with the administrator of an association of small businesses in Yogyakarta. They expressed that profits become the motivation of small business owners to provide for the family. The finding of this research does not align with the previous study, which states that knowledge and entrepreneurship skills roots from green entrepreneur orientation (Ameer & Khan, 2022). From the observation on family businesses in China, family business restructuring to pursue business ethics have a greater green innovation than that of other businesses (Cheng et al, 2022). In other words, it signifies the conflicting finding with this research.

The other finding indicates that SME owners lack awareness of market opportunities. They run businesses that are always in demand, low-cost, and available for self consumption. Whereas, previous research finds that the entrepreneurship orientation is positively related to the green management of businesses in emerging markets. From another perspective, green entrepreneurship orientation influences business performance and shows a tendency to capture potential opportunities in the market to become sustainable businesses (Jiang et al., 2018). In addition, high entrepreneurial orientation, high social legitimacy, and state ownership are more effective in facilitating green management of businesses in emerging markets (Li et al., 2021). Green incentives have a negative and significant influence on the presence of green entrepreneurs. This is inconsistent with the previous research confirming that profit-targeting incentives can promote innovation in entrepreneurship and accelerate the implementation of green entrepreneurship for SMEs (Ciabuschi et al., 2020; Potluri & Phani, 2020).

The fact that there is no influence of capital availability on the motivation to become green entrepreneurs signifies that micro business owners tend to invest with their own capital. The next finding exhibits that the community, specifically SME owners, poorly trusts the government in developing SMEs. It appears that the integrity, competence, consistency, loyalty, and transparency of the government are not fully satisfactory for the public. In addition, public figures are expected to take part in supporting and giving insight about the economic value of green entrepreneurship. Therefore, people are more motivated to become eco-friendly entrepreneurs. Another finding suggests that there is no influence of the media on the motivation to become green entrepreneurs. This conforms to the previous research that applied factor analysis to group critical challenges in green entrepreneurship, such as training and development, entrepreneurship orientation, market orientation, customers and innovations, and green supporting supplies. The most dominant ones are training, development, and the role of the government. Accordingly, the government needs to be more actively involved in the adoption and promotion of green entrepreneurship, particularly in

developing countries (Sher et al., 2019).

In general, the findings expose that entrepreneurs require elaborated explanations on the implementation of green input, green process, and green output that can provide them with competitive advantage for their businesses. Green input is applicable with the use of natural and healthy raw materials, such as organic materials. Green process can be performed with processing or production methods that take into consideration the environment and health, e.g. keeping clean the business area and equipments as well as proper waste management. Green output can be manifested, for instance, through the use of eco-friendly packages or green seals. To enrich the knowledge about green entrepreneurship, trainings can be provided for SME owners, with the support from SME organizations or associations, government, and public figures. The topic may focus on green organization (vision, mission, objectives, core values), green marketing (product, price, promotion, distribution), green production and green operation (processing method, layout), green human resource (competence, skills), green technology (equipments, machinery), and green financing (calculation of production cost, profit, or loss). The trainings are expected to present competitive advantage for SMEs that can yield long-term profit. This finding is corroborated by the fact that organizational management is influenced by the aspects of green human resources and green natural administration as well as the involvement of external parties to keep supporting the utilization of natural resources and environmental sustainability within the business (Syahidun & Nawangsari, 2022). Knowledge transfer and external role integration can improve the correlation between green entrepreneurship orientation and environmental and financial performance (Jiang et al., 2018). This is confirmed by the past research which states that economic-literate entrepreneurs need to be supplemented with education and training to be able to manage their entrepreneurial functions and be competent in analyzing economic changes. Besides, digital literacy needs to be improved especially about market growth and promotion in the e-commerce era (Suparno et al., 2022). In regards with green products, early studies have shown that millennials today begin to consider the importance of preserving the environment and are willing to purchase eco-friendly products even at higher price. In addition, green product management can be applied to formulate green marketing strategy effectively (Anggraeni & Susilowati, 2022).

5. Conclusions

Internal factors consist of skills and knowledge of SME owners, and the comprehension of business ethics. External factors consist of educational institutions, market opportunities, capital availability, public figures, government, green incentives, capital availability, and media. Educational institution and media become the primary factors that influence the knowledge of the SME owners about green entrepreneurship. Whereas, the motivation to become green entrepreneurs is influenced by the support and role of public figures. Current motivation of SME owners is to earn income to provide for themselves, thus less aware of eco-friendly aspects, especially on the input (raw materials), process (production), and output (products). To build motivation to become green entrepreneurs, the support from and cooperation between public figures, the government, and organization of SMEs are called for. They will perform as an agent of change and provide intensive distribution/training of insight and knowledge about the importance of green entrepreneurship.

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