

The Effect of Entrepreneurship Characteristics and Personal Characteristics on the Growth of Sustainable Waste Bank Management Business (Case: Waste Management Entrepreneur in Sawangan Depok, West Java Province)

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Abstract. Waste banks are one of the solutions to reduce waste in Indonesia. The role of waste bank managers is not the same as scavengers, they are expected to have entrepreneurial characteristics and personal characteristics. This study is aimed to identify and to analyze some factors of entrepreneurial activities contribute in the growth of sustainable waste banks. This study is held in Sawangan Depok. The first research phase of primary data was collected through a questionnaire to 111 active waste bank managers using census techniques, and the data were analyzed with Structural Equation Modeling (SEM). The result shows that the entrepreneurial activities are most influenced by entrepreneurial characteristics $\gamma=0.70$). Entrepreneurial characteristics of the 'waste bank manager' are formed by motivation ($\lambda= 0.40$), risk ($\lambda= 0.49$), and innovation ($\lambda= 1.00$). It implies that the higher innovation held by 'waste bank manager', the higher possibility held to growth of sustainable waste banks.

Keywords: entrepreneurial activity, entrepreneurial characteristics, personal characteristics, waste bank.

1 Introduction

Garbage is a product of human activity that is not used anymore. Waste management can be done by the implementation of Reduce (reduce), Reuse, and Recycle. One of the solutions of waste management is the establishment of garbage bank. The waste Bank according to Unilever is a system of dry waste management collectively that encourages people to participate actively in it. The active role of the community is expected here, so the trash bank is not only as a sorting and garbage collector but as a Recycle so it can produce a product of economic value.

The activities of the managers of garbage banks in Sawangan Depok have economic value, it is seen from the many garbage that began to be processed. Plastic waste, cardboard, paper, bottles used by making craft bag, woven paper, and other knacks. But whether their activities are based on entrepreneurial character and personal character. It is interesting to research, because the characteristics of entrepreneurship and personal play a key role in the sustainability of waste bank business in Indonesia. If this is not based on these two characters, the Trash Bank manager role will be the same as the collector or scavenger. From the explanation above,

the authors are very interested to do research on "influence of entrepreneurship characteristics and Personal characteristics towards the growth of sustainable waste Bank management (case: The entrepreneurial waste processing in Sawangan Depok, West Java province)".

2 Literature Review

2.1 Characteristics of Entrepreneurship

Characteristics contain a sense of positive qualities that a person has, a person's reputation and an eccentric personality that makes it interesting and attractive (Sumantri 2013). Li (2009) distinguishes the individual characteristics of its business into three categories and calls it entrepreneurial characteristics: (1) demographic characteristics, such as gender, age, ethnicity, and parental background that are generally associated with the success or absence of a company; (2) Psychological characteristics and entrepreneurial behavior, such as achievement motivation, self control, courage to face risk, creativity, and innovation, which affects decision making to start-up, sustainability and success of the business; (3) Human capital factors, such as education level, working experience, business opening experience, skill and technical training, and entrepreneurial network or social relations, which influence entrepreneurial ability in accessing information and business capital for successful business.

The characteristics of the entrepreneurship used in this research are the psychological characteristics of the motivation, risk and innovation owned by the managers of the trash Bank in running his business, because what will be seen is an entrepreneurial soul character possessed by entrepreneurial actors that affect the sustainability of an effort.

2.2 Personal Characteristics

The observation of personal characteristics is an important aspect to do because of personal characteristics concerning the individual traits of individuals. The personal characteristics used in first research are age, experience, education, training and family roles (Sumantri 2013; Li 2009; Puspitasari 2013; and Brush et al. 2010).

2.3 Entrepreneurial Activity

Entrepreneurial activity Casson et al. (2006) also said companies that are able to survive 18 to 24 months will grow and the remaining 80 percent will be out voluntarily. Failure caused a lack of ability in competing and inefficient production processes. Therefore it can be deduced entrepreneurial activity visible from dayasaing and production power.

2.4 Business Growth

The growth and development stage of the business was taken from the research model Bygrave and Zacharakis (2010) namely business growth based on the scale of effort (size) and the level of income (profitability) from time to time.

3 Research Methods

This research is a quantitative descriptive study, analysis of primary data collected through questionnaires to managers of active waste banks with census techniques. Data sources are obtained from observations of space, interviews and documentation to the managers of the Trash bank in Sawangan Depok province of West Java. The data has been collected first by using the MS Excel 2013 program. The processed results are then input and analyzed by the SEM (Structural Equation Modelling) method using the help of the LISREL 8.30 program. The SEM Model in the study consisted of: two exogenous latent variables i.e. entrepreneurial characteristics (X1) and personal characteristics (X2); Two endogenous latent variables i.e. activity (Y1) and Business Growth (Y2); and 12 manifest variables. The details of the latent and manifest variables can be seen in table 1. This SEM analysis will later see the influence of X1 and X2 relationships to Y1, as well as the Y1 effect to Y2. The measuring scale uses a scale of five divided Likert scales/scores. The higher the score, the more positive the valuation of an object, the other way around.

Table 1. The latent variables and the model (indicator) structural equation

Latent Variable	Manifest Variable (indicator)
Exogenous	
Characteristics of Entrepreneurship (X1)	1. Entrepreneurial motivation (X 1.1)
	2. Courage to take risks (X 1.2)
	3. Innovation Ability (X 1.3)
Personal Characteristics (X2)	4. Age Maturity (X 2.1)
	5. Experience of striving (X 2.2)
	6. Formal education owned (X 2.3)
	7. Training ever followed (X 2.4)
	8. Encouragement and support of the family (X 2.5)
Endogenous	
Entrepreneurial Aktivita (Y1)	9. Competitiveness (Y 1.1)
Business Growth (Y2)	10. Power Production (Y 1.2)
	11. Business Scale (Y 2.1)
	12. Income Level (Y 2.2)

4 Results and Discussion

SEM analysis is conducted to see the relationship of entrepreneurial activity and growth of the managers of the garbage Bank and the dominant factors that form it. SEM analysis is done with a one step approach approach that is a component of measuring and structural models in the estimation simultaneously in a single analysis. The result of SEM analysis of preliminary models suggests that there is an offending estimates that has estimated values that exceed the acceptable limit. This is seen from a negative variant error and has a T value smaller than 1.96, so the process of respecification is done. The respecification is done by utilizing the suggestions in the modification index that add errors covariances between two errors variances (Wijanto 2008). Diagram of the estimate path on the model after the respecification process is seen in Figure 1.

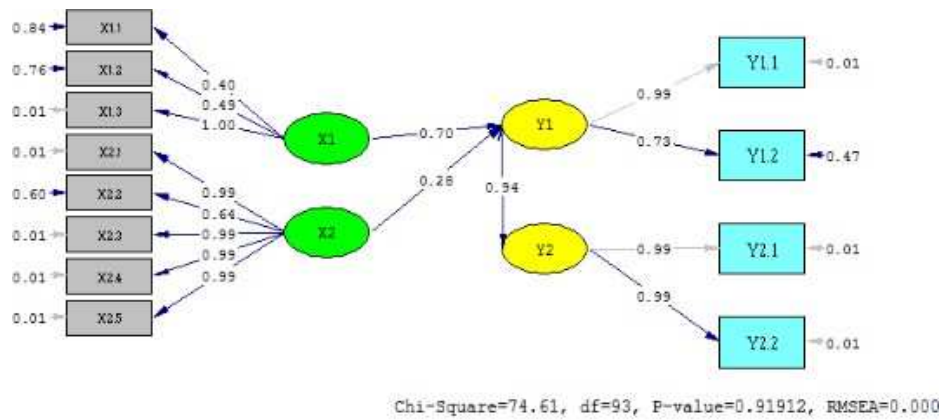


Fig.1. Diagram Path of Estimated Respesification Result Model

The validity of the model after Respesification is also good. A variable is said to have a good validity of the latent variables if the T-value value is ≥ 1.96 on the real-level $\alpha = 0.05$ and the standardized loading value factor ≥ 0.3 (Igbaria et al. 1997 in Wijanto 2008). The validity of the T-value in Figure 2 also indicates that variables on the model are capable of measuring what should be measured or the model capable of explaining the relationships between variables.

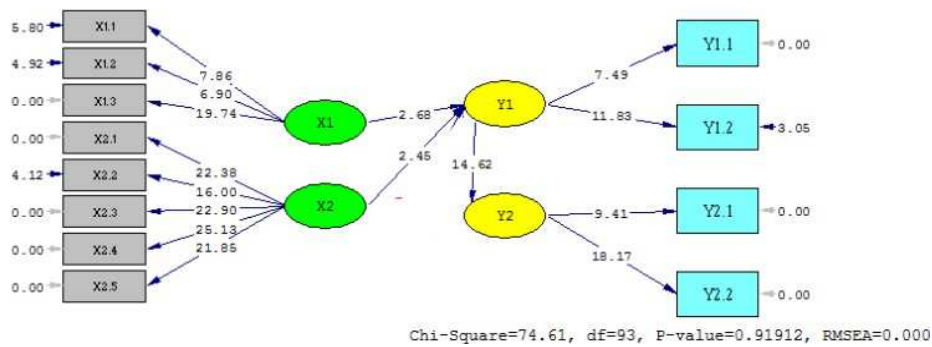


Fig.2. Model T-Value Path Diagram

The result of an estimate on the model after the Respesification process indicates that the criteria of a good fit model (table 2) category means that the model has been both in describing the data and the actual condition so that it can be adapted to the theory it is based on.

Table 2. Result Model Match Test Results

Goodness-of-Fit	Cutt-off-Value	Results	Match
Significance Probability(P-value)	≥ 0.05	0.92	Good Fit
RMR(Root Mean Square Residual)	≤ 0.05 or ≤ 0.1	0.075	Good Fit
RMSEA(Root Mean square Error of Approximation)	≤ 0.08	0.00	Good Fit
GFI(Goodness of Fit)	≥ 0.90	0.99	Good Fit

Goodness-of-Fit	Cutt-off-Value	Results	Match
AG FI(Adjusted Goodness of Fit Index)	≥ 0.90	0.98	Good Fit
CFI (Comparative Fit Index)	≥ 0.90	1.00	Good Fit
NFI (Normed Fit Index)	≥ 0.90	0.98	Good Fit

The results of the reliability test to the model that has been imified resulting in the reliability of a construction or construct reliability (CR) and extract variant or variance extracted (VE) are mostly good (table 3). This indicates that the indicator variables have a high consistency in measuring the construction of the latencies.

Table 3. Reliability Test Result Measurement Model

	$(\sum \text{std Load})^2$	$\sum e_j$	CR	$\sum(\text{std Load})^2$	VE	Materials
Characteristics of Entrepreneurship	3.57	1.61	$0.69 < 0.70$	1.40	$0.47 < 0.05$	Good Fit
Personal Characteristics	21.16	0.64	$0.97 \geq 0.70$	4.33	$0.87 \geq 0.05$	Good
Entrepreneurial Aktivita	2.96	0.48	$0.86 \geq 0.70$	1.51	$0.76 \geq 0.05$	Good
Business Growth	3.92	0.02	$0.99 \geq 0.70$	1.96	$0.99 \geq 0.05$	Good

4.1 The effect of entrepreneurship characteristics and Personal characteristics on the entrepreneurial activity of the waste Bank

Based on the model in Figure 1 It is known that the factors affecting the business activity of the managers of the garbage Bank are the characteristics of entrepreneurship ($\gamma = 0.70$) and personal characteristics ($\gamma = 0.28$). The characteristics of entrepreneurship are stronger influencing the activity of business growth than personal characteristics. This shows to increase the entrepreneurial activity of the managers of the garbage bank, and the characteristics of entrepreneurship must continue to be built, honed and developed. More detailed analysis of each of these factors is as follows:

a) Entrepreneurial characteristics

Business activity on the entrepreneurial management of the Bank is significantly influenced by entrepreneurial characteristics (t-value = 2.68). The higher the entrepreneurial characteristics that the managers of the trash bank have, tend to increase their activities. The entrepreneurial characteristics that affect business activity on the entrepreneurial Bank Manager's entrepreneurship are formed by motivation (loading factor = 0.40), risk (loading factor = 0.49) and innovation (loading factor = 1.00). The entrepreneurial characteristics that affect business activity on the entrepreneurial Bank's management entrepreneurship are relatively stronger formed by the contribution of innovation. It is supported by Drucker (1985), which says entrepreneurs are very concerned with innovation.

b) Personal characteristics

Another factor that affects the business activity on the entrepreneurial management of the trash Bank is the personal characteristic (t-value = 2.45). The higher the personal characteristics owned by entrepreneurial bank managers tend to increase the activity of their entrepreneurs. The personal characteristics that affect the business activity on entrepreneurial

managers of the waste Bank are formed and are described most by age maturity (loading factor 0.99), formal education (loading factor 0.99), training (loading factor 0.99) and role of family (loading factor 0.99). Maturity of age is important in determining one's attitude and choice. Age-maturity is not a quantitative thing, it does not mean the older the age. The decision to become an entrepreneur is what else the trash bank entrepreneurs, need a mature thinking, policy of thinking and maturity in attitude and responsibility to the environment.

Formal education is important in supporting entrepreneurial knowledge, accessing information and business capital for the success of its business. Puspitasari's research results (2013) also found the importance of education in entrepreneurial activity. Training is also the biggest variable that reflects personal characteristics. The research of Noersasongko (2005) also found entrepreneurs who attended many more successful training than the entrepreneurs who lacked or did not get training. This signifies that training will impact the individual character of each person to be more advanced.

Family roles or support are also the largest indicator variables reflecting personal characteristics. Brush et al. (2010) Also emphasizes individual elements as a family- sourced entrepreneur. Entrepreneurial activity is influenced by family urges such as spouses, children and parents. The increased role of family members is therefore an important requirement for increased entrepreneurial activity.

4.2 Impact of the entrepreneurial activity of the garbage Bank's management of waste Bank business growth

The results of SEM analysis of the model showed that the latent variable of entrepreneurial activity affects the latent variables of business growth (Fig. 1). The correlation coefficient between entrepreneurship activity and business growth (β) is 0.94 (t-value = 14.62). This means that business activity on an entrepreneurial management of strong garbage banks affects the growth of the Waste bank manager business. By default, if the higher entrepreneurship activity indicates the growth of the waste manager's business is higher and indirectly the garbage problem also tends to be resolved.

As an entrepreneur who applies entrepreneurial principles in managing their business, the garbage bank entrepreneur in Sawangan Depok has the potential to serve as a pilot garbage bank with entrepreneurial character to overcome increasingly complicated garbage problems.

5 Conclusions and Suggestions

5.1 Conclusion

The results of SEM analysis show that entrepreneurial activity is most influenced by entrepreneurial characteristics ($\gamma = 0.70$). Entrepreneurial characteristics of entrepreneurship is well formed by motivation ($\lambda = 0.40$), courage to face risk ($\lambda = 0.49$), and innovation ($\lambda = 1.00$). Thus, the managers of trash bank in Sawangan Depok with entrepreneurial character. This entrepreneurial activity is proven to grow the sustainable waste Bank management business, not just the collector ($\beta = 0.94$) from the business scale and the income level.

5.2 Suggestions

The implication of the program enhances innovation and entrepreneurial training to the

managers of waste banks is a priority program of Government and stakeholders to increase the number of garbage banks that have entrepreneurial character so as to grow the business of sustainable Waste Bank and as a solution in overcoming waste problems.

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