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**INNOVATION BASED ON PERSONALITY TRAITS AMONG YOUNG  
JAVANESE PEOPLE IN THE COVID-19 PANDEMIC ERA**

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**Abstract**

The study aims to examine three main personality traits, extroversion, openness, and conscientiousness related with the innovation as one of dimensions in social entrepreneurship among young Javanese people with the setting of current business situation in pandemic Covid-19 era. Other purpose of the study is describing the importance of the innovation as one of the social entrepreneurship intention dimensions in pandemic era. Using quantitative research approach, the data from 100 respondents were measured by multiple linear regression. The results of the study show that the extroversion (X1), openness (X2), and conscientiousness (X3) give effect on the innovation (Y) partially and simultaneously. The contribution of independent variables to innovation are about 60.3%. Based on the data processing, extroversion is the most contributing independent variable to innovation. The implication of the study is to empower the young Javanese people in their entrepreneurship intention to solve the problems in their social life due to the pandemic Covid-19 by creating new ideas, innovation and working harder to survive and help others.

**Keywords:** Innovation, Social Entrepreneurship, Personality Traits, Javanese

**1. Introduction**

The pandemic era of Covid-19 has impacted to entire life of human beings throughout the world. It also affects world economy and especially Indonesia in many business sectors from transportation to education sectors (Susilawati, et al. 2020). Businesses have to change their ways to survive, innovate and sustain. More micro businesses in Indonesia have appeared to start running even in the peak of pandemic. Other study, in other part of Java island found that more than 50% of the business in MSME scales decreased during the pandemic (Milzam, et al. 2020). Socially, East Java province, where most Javanese people live, people give more efforts to their life sustainability while others, obviously, feel so bored of lock-downs or other limitations on their movements and activities.

Javanese people, as other ethnic in Indonesia, have special uniqueness and characteristics to live their life and how they run the businesses. Their struggle to maintain profits and keep the business run during pandemic are interesting to study. While in the normal situation, openness, conscientiousness and extroversion as three of the dimensions in Big Five personality traits are easily recognized in the people's characteristics, this study expands the discussion into different situation, which is called pandemic era. Other importance of the study is to know if the innovation as one of the social entrepreneurship intention dimensions still exists in the pandemic era.

Based on the preliminary data, three of personality traits dimensions, such as openness, conscientiousness and extroversion are mainly seen among the Javanese. The social entrepreneurship intention, theoretically has five dimensions, in this study is focused on innovation because this dimension is the most found among the young Javanese people. Besides, the preliminary data is also supported by the intention of business situation which requires innovation. Furthermore, other previous study also indicated higher relationship value with the entrepreneurship from these three dimensions compared to other two ones, agreeableness and neuroticism (Obschonka & Stuetzer, 2017).

Table 1. Preliminary Survey

Items of Personality Traits	Total Answer Score	Items of Personality Traits	Total Answer Score
Neuroticism	1,206	Social Network	2,233
Agreeableness	1,768	Financial Return	2,565
Extroversion	2,466	Sustainability	2,621
Openness	2,097	Social Vision	3,286
Conscientiousness	2,249	Innovation	3,385

The table shows that extroversion, openness, and conscientiousness are three main personality among Javanese, while the social entrepreneurship intention, this study took one of the five dimensions, Innovation, which has the highest answer score. The preliminary survey was taken from 100 respondents.

However this study doesn't purpose to compare the characteristics before and after pandemic, but tends to examine the basic and common characteristics in three dimension of personality, seen by three main personality traits, extroversion, openness, and conscientiousness to relate with current business situation in pandemic Covid-19 era and also innovation as one of dimension in social entrepreneurship intention. So, this study raised four research problems:

- 1) Does the extroversion influence the innovation among young Javanese people?
- 2) Does the openness influence the innovation among young Javanese people?
- 3) Does the conscientiousness influence the innovation among young Javanese people?
- 4) Do the extroversion, openness, and conscientiousness influence the innovation among young Javanese people?

## 2. Literature Review

### 2.1 Javanese People Characteristics

As the largest ethnic group in Indonesia, Javanese has the culture pillars, such as purity, politeness, wisdom, civilized and calm (Tandelilin, 2020). They also have values of humility, harmony and mysticism. Thus, they tend to be put the Javanese etiquette while communicating with others. Relating to Hofstede theory and the innovation in social entrepreneurship intention,

Javanese is more large power-distance, high-collectivism and weak uncertainty-avoidance (Nadar, 2007). Other study revealed that Javanese culture supports the entrepreneurial traits in terms of determination, persistence, creativity, passion, and also good relationship building (Hermawan, et al., 2018).

### *2.2 Personality Traits*

Five Factor Model (FFM) is commonly used to describe one's personality, known as extraversion, agreeableness, conscientiousness, neuroticism and openness. Thus it is called as Big Five personality (McCrae & John, 1992) as an approach in psychology to describe the human personality.

### *2.3 Openness*

This trait as the dimensions in Big Five Personality traits is defined as the association with aptitude, creativity, intelligence, imagination and artistry to solve the problems which is in social context related to the clarify things based on the information (Nashori, et al., 2019). It also means the person has eagerness to adapt to the new situation.

### *2.4 Conscientiousness*

One of the big five personality traits is conscientiousness which refers to the person's desire to achieve things, competences, hardworking and self-control (Taufik, et al., 2019). This definition shows the possibility of the person to have goal orientation and priority on tasks.

### *2.5 Extroversion*

Extroversion refers to person who is sociable, active, assertive, and expressive (Qanwal & Ghani, 2019). Extrovert person is warm and sociable in relationship. The extroverted person is indicated to give positive impact if related to entrepreneurship and expect high for reward, so it can be assumed that extroversion is very important in social entrepreneurship activities (Irengun & Arikboga, 2015). Person with extroversion shows the positive emotion and energetic to social and material world.

### *2.6 Social Entrepreneurship Intention*

Commonly social entrepreneurship is defined based on the relationship with creation, innovation and usage of the resource combinations in pursuing the opportunities and since there is a word "social", the definition is emphasized in solving social problems and creating social change and development (Irawan, et al., 2019). The previous studies stated some dimensions of social entrepreneurship, such as: social vision, sustainability, social network, innovation, financial return, social mission, social change, action, innovation, accountability, adaptation, learning, social awareness, social business and social responsibility (Koe Hwee Nga & Shamuganathan, 2010; Rey-Marti, et al., 2016; Biggeri, et al., 2018). Thus, the social entrepreneurs have unique personality to cause emotion, thoughts and behaviors which are important factors in social entrepreneurship intentions (Irengun & Arikboga, 2015) and reflected in commitment to solve social problems (Koe Hwee Nga & Shamuganathan, 2010).

### 2.7 Innovation

Innovation has various definition. However, Schumpeter, as the founder of innovation theory underlined that innovation is the impact of technological change and usage of combination of existing production to solve the business problems (Timur & Antanas, 2017). Innovation related to entrepreneurship can be focused on generating new idea and the implementation of the new product, or services. Previous study has included innovation as one of social entrepreneurship dimension (Koe Hwee Nga & Shamuganathan, 2010).

Based on the literature review, this study raised the following hypothesis:

H1: The extroversion influences the innovation among young Javanese people.

H2: The openness influences the innovation among young Javanese people.

H3: The conscientiousness influence the innovation among young Javanese people.

H4: The extroversion, openness, and conscientiousness influence the innovation among young Javanese people.

### 3. Research Methodology

This study was conducted in quantitative research method. The data was taken from 100 respondents who are Javanese people living in Surabaya city, East Java Province, Indonesia. The measurement of total of respondents used the Lame show's formula (Lame show, et al., 1990) once the population is unknown as below:

$$n = \frac{z^2 \cdot 1 - \alpha / 2p \cdot (1 - p)}{d^2}$$

$$n = \frac{1.96^2 \times 0.5 \times (1 - 0.5)}{0.1^2} = 96.04 = 100$$

This study used sampling error (d) at 10%, the Z (confident interval) score is 95% (1.96). The value of p is 0.5 as the estimation maximum. Using the purposive sampling method, because not all the members of population were fit for the study, the respondents were selected by their age range as this study focus on the young Javanese people from 20 to 35 years old, regardless their gender and occupation.

The independent variables used in this study are: Extroversion ( $X_1$ ), Openness ( $X_2$ ), Conscientiousness ( $X_3$ ) and the dependent variable is Innovation (Y). In this study, to know the extroversion ( $X_1$ ), some items in questionnaires are prepared, such as: willingness to win, persistence in working energetically, setting challenging goals, eagerness to attain highest position, crafting opportunities and eagerness to change. Openness ( $X_2$ ), is measured by investigating that respondents are able to work best in open environment, understanding the expectation in different social situation, open-minded person, working well in creating new things, and considered as innovative person. Conscientiousness ( $X_3$ ) is measured from individual's working priority, task details completion, responsibility, strict set of ethical principles and motivation to meet job targets.

The Innovation variable (Y) is measured by the statements whether the respondents are: Proactive to identify social opportunity, able to deliver sustainability through innovative

products, as flexible individual, s pragmatic individual, able to create social value by changing risks into opportunities, able to create better social values than other entrepreneurs, able to produce goods/services for creating social values and as innovative individual. The data collected using questionnaires and then processed by using multiple linear regression to test

**4. Results and Discussion**

*4.1 Respondents Profiles*

The respondents’ profiles are shown in Table 1 to Table 3.

Table 1. Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	76	76.0	76.0	76.0
	Female	24	24.0	24.0	100.0
	Total	100	100.0	100.0	

Based on the study, most respondents are males (76%) and the rest (24%) are females.

Table 2. Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-25 years old	46	46.0	46.0	46.0
	25-35 years old	54	54.0	54.0	100.0
	Total	100	100.0	100.0	

The respondents are divided into two age ranges, 20-25 years old and 25-35 years old. These ranges are considered because this study is intended to young people.

Table 3. Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Students	8	8.0	8.0	8.0
	Private Company	73	73.0	73.0	81.0
	Govt. Officials	3	3.0	3.0	84.0
	Entrepreneurs	16	16.0	16.0	100.0
	Total	100	100.0	100.0	

Among the young Javanese people, as respondents of the study, most of them work in private companies. This is interesting that most of respondents' occupation is employees in private companies. Their intention to social entrepreneurship through innovation is supported by their real experiences while working in companies.

4.2 Data Processing Results

The data was then processed by using rules of multiple linear regression but firstly, the validity and reliability of the data were checked.

Table 4. Validity (Case Processing Summary)

		N	%
Cases	Valid	100	100.0
	Excluded <sup>a</sup>	0	0.0
	Total	100	100.0

a. Listwise deletion based on all variables in the procedure.  
Based on the validity test, 100% of the items are valid. Thus, the process can be continued

Table 5. Reliability Statistics

Cronbach's Alpha	N of Items
.913	24

Cronbach's Alpha shows the value of 0.913. It means that the reliability of the items are high, because it is more than 0.6.

Table 6. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.784 <sup>a</sup>	.615	.603	2.970	.615	51.172	3	96	.000	1.867

- a. Predictors: (Constant), CONSC, EXTRO, OPEN
- b. Dependent Variable: INNOV

The model summary shows some values and indicates the model of regression. Adjusted R<sup>2</sup> shows the contribution of the independent variables to measure the dependent variable. The contribution is strong enough as the value is 0.603 (60.3%). The rest of 39.7% is assumed to be supported by other variables, which can be the rest of big five personality, such as: agreeableness and neuroticism.

Table 7. ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1354.026	3	451.342	51.172	.000 <sup>b</sup>
Residual	846.724	96	8.820		
Total	2200.750	99			

a. Dependent Variable: INNOV

b. Predictors: (Constant), CONSC, EXTRO, OPEN

Table 7 shows the Sig. value 0.000. It means that all independent variables influence the dependent variable simultaneously. It confirms that hypothesis statement “The extroversion, openness, and conscientiousness influence the innovation among Javanese people” (H4) is accepted.

Table 8. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	2.330	2.802		.832	.408		
EXTRO (X <sub>1</sub> )	.522	.126	.372	4.154	.000	.499	2.005
OPEN (X <sub>2</sub> )	.490	.150	.319	3.269	.002	.420	2.381
CONSC (X <sub>3</sub> )	.372	.169	.197	2.200	.030	.502	1.994

a. Dependent Variable: INNOV (Y)

Based on the SPSS output, shown in Table 8, Extroversion variable (X<sub>1</sub>) is the most significant to influence the innovation as one of the social dimension intention. The other independent variables are also significant to give influence to innovation.

The model of multiple linear regression based on the data measurement is:

$$INNOV (Y) = 2.330 + 0.522 EXTRO (X_1) + 0.490 OPEN (X_2) + 0.372 CONSC (X_3)$$

Without extroversion, openness and conscientiousness, young Javanese people still have positive innovation. The independent variables (extroversion, openness and conscientiousness) are related positively to innovation. It means if the value of Extroversion (X<sub>1</sub>) increases by 1, the value of innovation (Y) will increase by 0.522, and when the value of Openness (X<sub>2</sub>) increases by 1, the

value of innovation (Y) will increase by 0.490. The same condition is for the value of Conscientiousness ( $X_3$ ), if it increases by 1, the variable innovation (Y) will increase by 0.372. Based on the results in Table 8, the hypothesis statements (H1, H2, and H3) have been accepted. The extroversion, openness and conscientiousness partially influence the innovation among young Javanese people. Extroversion ( $X_1$ ) is the highest value in Beta coefficient (0.372) and it contributes most to innovation (Y).

In this study, Extroversion ( $X_1$ ) is measured from the willingness to win, persistence in working energetically, setting challenging goals, eagerness to attain highest position, crafting opportunities and eagerness to change. The results confirmed that the personality trait brings advantage to social entrepreneurship intention in terms of innovation as it shows the expectation for reward, emotion, and thoughts to solve social problems (Irengun & Arikboga, 2015; Timur & Antanas, 2017) by creating new ideas. As the extroverts, young Javanese people communicate better with others to dig the ideas, seek the opportunities and try to find support when they need to change to get reward as expected.

Openness ( $X_2$ ) is also affecting the innovation among young Javanese people because it characterized by creativity, intelligence, and imagination to solve the problems in their social environment. Openness will strengthen innovation as the coefficient is positive (0.490) as it is measured from ability to work best in open environment, understanding the expectation in different social situation, open-mindedness, working well in creating new things, and considered as innovative person. So, this variable is significant to influence the innovation among the young Javanese people and related to weak uncertainty-avoidance of Hofstede theory (Nadar, 2007).

Variable of Conscientiousness ( $X_3$ ) which refers to the person's desire to achieve things, competences, hardworking and self-control (Taufik, et al., 2019) is also significant to influence the innovation of young Javanese people. It is measured from individual's working priority, task details completion, responsibility, strict set of ethical principles and motivation to meet job targets.

This result confirms the characters of Javanese people. Tandelilin (2020) stated that Javanese people are polite, civilized, harmonized and keep etiquette as the principles. Javanese people are also described as people with determination, persistence, creativity, passion, and also good relationship building (Hermawan, et al., 2018). The three independent variables simultaneously affect the innovation as the social entrepreneurship intention among young Javanese people which theoretically occurred due to technological change and resources combination to solve problems especially in social environment (Timur & Antanas, 2017; Koe Hwee Nga & Shamuganathan, 2010).

During the pandemic Covid-19, when all business' owners are urged to survive and find the other new ways to sustain and the employees also try to survive by working harder to avoid being laid off due to the business' problems in which they are employed. Extroversion is important to make or create innovation among young Javanese people, as they are literate in using internets, electronic gadgets and other devices to bring some breakthrough in their well-being during pandemic. Being measured by the willingness to win, persistence and eagerness to change, it is confirmed that young Javanese people are capable to survive in the difficult times of Covid-19 outbreaks.

Other study found that during Covid-19 pandemic, the financial literacy is affected by financial attitudes, behavior and literacy (Yuesti, et al., 2020) by which openness as personality is required because openness is measured by the expectation in different social situation and open-mindedness to improve their well-being their decision making in coping with financial problems during pandemic, not only for individuals but also for the business affected by pandemic. Conscientiousness is important for social entrepreneurship intention although it is orientating shorter towards the goal (Butz, et al., 2018) and however, among young Javanese people, this shorter orientation towards the goals to innovate during pandemic is acceptable. By recounting the working priority, enhancing responsibility, and increasing motivation, the young Javanese people will tend to do some innovation in new ways to solve their and their society's economy problems.

Many new businesses are established in micro or small scales. Even the medium and large businesses have to find new ways to survive and keep their employees paid. The innovation is required in the pandemic era as happening now and the innovation needs extroversion, openness and conscientiousness in adapting in current situations, current new technology and resources changes due to lock-downs in some areas and physical contact limitation, thus most merchants, businesses in all scales strive for their abilities to enhance new ways in selling from offline to online and from "dine-in" to "take-away" modes of services. In the normal situation, people will be easier to think of others because less struggle to be fought against. In the pandemic Covid-19 era in which people have to fight for their own best, take care of themselves and look for ways out to free themselves from chaotic life situation, innovation is still the best way among young Javanese people to survive. While doing the best things for their own life, the eagerness to do something socially useful exists among young Javanese people. However as theoretical backgrounds stated, when creating new things, called as innovation, extroversion, openness and conscientiousness as parts of the personality traits of young Javanese people are important to influence the success of innovation while adapting the new normal era.

## **5. Conclusion**

This pandemic, for instance, brings people to have more awareness of having ways-out from the difficulties in their life, and if possible, helping others in solving life problems. Based on the data measurements, all the hypothesis statements are accepted. The extroversion, openness, and conscientiousness give effect on the innovation as the social entrepreneurship intention among Javanese people, either partially or simultaneously. The innovation is very important for sustaining the business and solving the social problems like what happened in the pandemic Covid-19 era, and based on the data measured, the young Javanese people have personality traits which are beneficial to enhance the innovation. However, it is suggested that the further research will use the other dimensions of big five personality traits, such as agreeableness and neuroticism to elaborate the results. It also may be applied to other ethnic groups in Indonesia for comparison study purposes.

## **6. Implication of the Study**

The findings of this study have the implications in empowering the young Javanese people in their intention to solve the problems in their social life due to the pandemic by creating new

ideas, innovation and working harder to survive and help others, while the government may provide better facilities for them to explore and promote their positive personalities towards innovation in the pandemic era.

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