Community Resilience Analysis on Displaced Residents now Living in Rusunawa Marunda

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Abstract: Increasing urbanization rates have made Jakarta the second biggest urbanized area in the world. Some impacts of the high urbanization rate are the emergence of slums, social and economic gaps, unemployment, crime, and pollution. The government of Jakarta has tried to straighten up the areas belonging to the government that the community converts into homes and economic centers. The people were relocated to Rusunawa provided by the government, one of which is Rusunawa Marunda in North Jakarta. However, after the relocation and displacement, other problems emerged because the people lost their job and needed to adapt to their new environment. This study aimed to examine the community resilience of displaced residents living in Rusunawa Marunda. Community resilience represents the ability of the community to lessen, adapt, and recover from an unfortunate event or shock. Data were collected using questionnaires, interviews, and observations. Data were analyzed using Structural Equation Modelling based on Partial Least Square. Our findings confirmed that the community resilience of the displaced residents living in Rusunawa Marunda was formed by the ecological, social, cultural, and physical aspects. However, the economy, human resources, politics, and technology did not create the community resilience of displaced residents living in Rusunawa Marunda.

1 INTRODUCTION

As the capital city of Indonesia, Jakarta has become the center of economic and political activities; this has made Jakarta the second largest urbanized area in the world after Tokyo-Yokohama (Demographia, 2019). The urbanization rate of an urban area like Jakarta has brought positive changes, including improvement in public transportation, infrastructure development (roads, bridges, and others), economic activities, public welfare, facilities, public services, and quality human resources.

However, there are also some setbacks from the urbanization rate. Vulnerability in megacities starts from an unplanned urbanization process, resulting in a loss of governability (Kraas and Mertins, 2014). In addition, unplanned urbanization leads to negative impacts, including the emergence of slums, social and economic inequality, unemployment, crime, conversion of public land, water and air pollution, and increased risk of natural disasters (Pravitasari, 2018).

Since 2013, the government of Jakarta has tried to straighten up the areas belonging to the government that the community has converted into homes and economic centers illegally. The government has moved these people to *rumah susun sederhana sewa* (Rusunawa)[3]. The reasons for relocation include city planning, the government's limited capacity to provide funding for decent housing, and modernization (Wilhem, 2011).

The people living on the government's land illegally are often reluctant to be relocated because they say they have lived in the area for so long. Other reasons for refusing the relocation include not having

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[3] Simple apartments—they usually come in multi-storey buildings built by the government in a residential area and rented out to underprivileged families with monthly payments.

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the money needed to rent decent houses or Rusunawa and being afraid of losing their current jobs or livelihood. They also say that getting home ownership credit is complicated. The following reason is their need for a rather big house because they have a big family of more than four people. They also need additional rooms in their home to do their job as carpenters, farmers, or traders or to live near their business sites. The other reasons include inadequate public and social infrastructure and facilities in Rusunawa, the weak position as tenants of Rusunawa, especially dealing with Sales and Purchase Agreements (SPA) of Rusunawa units, and many other reasons (megapolitan.kompas.com, 2015).

Nevertheless, the government of Jakarta continues the relocation process despite the unwillingness of those people living on the government's land illegally and turning the land into slums. The government relocates the people into some Rusunawa buildings, including Rusunawa Marunda in North Jakarta.

Community resilience is crucial. The government must carefully plan how these displaced residents adapt to the new environment, recover from the displacement, and move on with their lives to face challenges (sustainability) (Zautra et al., 2009). This study aimed to examine the community resilience of displaced residents living in Rusunawa Marunda from many perspectives, including the economic, social, cultural, human resource, ecological, physical, political, and technological

2 LITERATURE REVIEW

Community refers to people who live within particular geographic boundaries, are involved in social interactions, have one or more psychological ties, and are bound by a place to live (Christenson et al., 1989). Resilience is a learning process to live in changes and uncertainties, maintain diversity for reorganization and renewal, combine various knowledge, and create opportunities for self-organization (Berkes et al., 2003). Resilience theory is a multifacet study that is being developed continuously from many fields of study. In essence, resilience theory discusses the strength people and systems show to tackle difficulties.

The United State Agency for International Development (USAID, 2013) defines resilience as the ability of people, households, communities, countries, and systems to lessen, adapt, and recover from an unfortunate event or shock. Community

resilience presents as a unified interrelated capacity to absorb, anticipate, and adapt to various types of shocks and stresses (Aditya et al., 2015). The capacity aims to reduce vulnerability or a condition determined by physical, social, economic, and environmental factors or processes (Longstaff, 2010; Ajita and Howard, 2016; Barrow Cadbury Trust, 2012) that can put a community in danger. In addition, community resilience can also be formed through technological aspects. Mankiew (2006) explains that technology is an essential factor that can function to multiply or accumulate production output from the capital and human resources so that the economy experiences doubled growth. The United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP, 2016) states that technology Information Communication (ICT) has an important role and is an integrated part of almost every aspect of life. Several studies confirm that community resilience can be formed through access to political authorities for people to voice their aspirations (Longstaff, 2010; Atreya and Kunreuther, 2016) and to identify the potential in their community with the knowledge and skills they have (Barrow Cadbury Trust, 2012).

Runtunuwu (2018) identifies eight (8) aspects to understanding community resilience for Rusunawa residents: ecological, social, cultural, physical, economic, human resource, political, and

3 RESEARCH METHOD

The present quantitative study emphasized quantification in data collection and analysis with a deductive approach. However, the quantitative design might not be able to capture the structural and cognitive aspects of Rusunawa residents deeply; this could be anticipated by providing open-ended questions in a questionnaire so that residents could freely express their thoughts as information. Thus, the qualitative approach was employed to gather more comprehensive data from respondents.

3.1 Data

The population of the present study was residents of Rusunawa Marunda. Therefore, the selection criterion for respondents was the household head or the housewife living in the Rusunawa unit that was part of the relocation program by the government of Jakarta. Data were collected through interviews and observations.

3.2 Data Analysis

We used Structural Equation Modelling; SEM enabled us to observe the overall relationship between indicators and variables and the relationship between variables.

SEM is a multivariate analysis technique that combines aspects of factor analysis and multiple regression analysis to allow researchers to examine a series of dependent relationships between measured variables and latent constructs (Hair et al., 2016). Latent constructs cannot be measured directly but can be determined through one or more indicators, called measured variables, observed variables, or manifest variables (Hair et al., 2016).

We used SEM to prove the hypothesis in this study based on component or variance, commonly known as Partial Least Square (PLS). The SEM-PLS method is based on a causal relationship, where changes in one variable affect other variables.

4 RESULT AND DISCUSSION

4.1 Outer Model Evaluation

The analysis of the measurement model (outer model) was done at a 5% significance level. The results are shown in Figure 1.
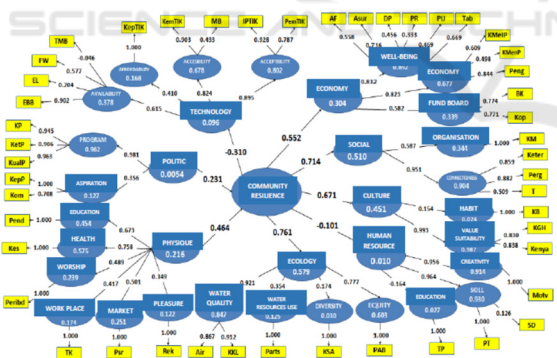

Figure 1: The Initial Path Coefficients of Community Resilience.

4.2 Inner Model Evaluation

After analyzing the measurement model (outer model), the structural model analysis (inner model) was carried out in the initial test with a 5% significance level. Finally, the Goodness of Fit (GoF) is used to evaluate the measurement and structural models and provides a simple measure of the overall

model prediction. The GoF value was 0.554, which is included in the *large* category.

After that, hypothesis testing was carried out by looking at the PLS results of the path coefficient section, as shown in Table 1.

Table 1: The Initial Path Coefficients of Community Resilience.

Variable	Original Sample (O)	t-Statistics	H_0	Conclusion
Economic aspect on community resilience	0.552	1.631	Accepted	Not significant
Social aspect on community resilience	0.714	5.972	Rejected	Significant
Cultural aspect on community resilience	0.671	5.238	Rejected	Significant
Human resource aspect on community resilience	-0.101	0.547	Accepted	Not significant
Ecological aspect on community resilience	0.761	5.639	Rejected	Significant
Physical aspect on community resilience	0.464	3.284	Rejected	Significant
Political aspect on community resilience	0.231	0.892	Accepted	Not significant
Technological aspect on community resilience	-0.310	1.185	Accepted	Not significant

Next, several other models were tested to meet all the criteria for a match between the model and the research data. Finally, we modified the model by removing invalid indicators and dimensions with no significant effect on community resilience, namely economic, human resource, political, and technological aspects, as shown in Figure 2.
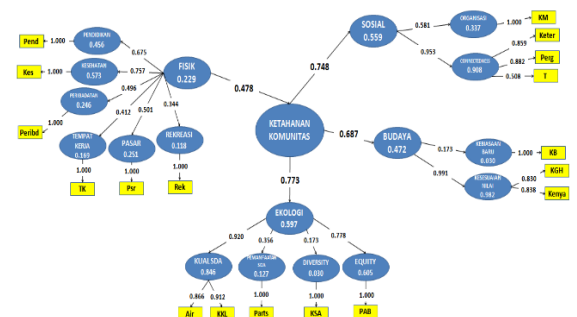

Figure 2: The Final Path Coefficients of Community Resilience.

The Goodness of Fit (GoF) is used to evaluate the measurement and structural models and provides a simple measure of the overall model prediction. The GoF value was 0.557, which is included in the *large* category.

After that, hypothesis testing was carried out by looking at the PLS results of the path coefficient section, as shown in Table 2.

Table 2: The Final Path Coefficients of Community Resilience.

Variable	Original Sample (O)	t-Statistics	H_0	Conclusion
Social aspect on community resilience	0.748	5.671	Rejected	Significant
Cultural aspect on community resilience	0.687	5.265	Rejected	Significant
Ecological aspect on community resilience	0.773	8.341	Rejected	Significant
Physical aspect on community resilience	0.478	3.299	Rejected	Significant

Table 2 confirms the following. First, the social aspect significantly affects community resilience with a t-statistic of 5.671, which is bigger than 1.96 (5.671 > 1.96). Second, the cultural aspect significantly affects community resilience with a t-statistic of 5.265, which is bigger than 1.96 (5.265 > 1.96). Third, the ecological aspect significantly affects community resilience with a t-statistic of 8.341, which is bigger than 1.96 (8.341 > 1.96). Finally, the physical aspect significantly affects community resilience with a t-statistic of 3.299, which is bigger than 1.96 (3.299 > 1.96).

Our findings confirmed that the most dominant aspect that formed community resilience of displaced residents living in Rusunawa Marunda was the ecological aspect (R-square of 0.597 or 59.7%). It was followed by the social aspect (R-square of 0.559 or 55.9%), the cultural aspect (R-square of 0.472 or 47.2%), and the physical aspect (R-square of 0.229 or 22.9%).
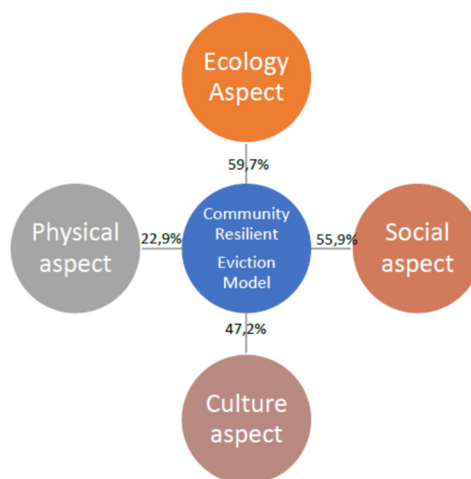

Figure 3: The Dominant Aspects that Formed Community Resilience of Displaced residents Living in Rusunawa Marunda.

We ended up with only four (4) out of eight (8) aspects that formed the community resilience of displaced residents living in Rusunawa Marunda. This finding rejected the initial assumptions of the initial model that used eight (8) aspects as the hypothesis (economic, social, cultural, human resources, ecology, physical, political, and technological aspects). Furthermore, our findings contradict previous studies because they used different traumatic events from our study that used relocation of people living on the government's land (open green space) illegally. For example, Longstaff (2010) examined the effect of disaster and terrorism events on community resilience. Ajita and Howard (2016), Roger (2016), Barrow Cadbury Trust (2012), and British Red Cross (2013) examined the effect of disaster events. In addition, Schwind et al. (2009) examined the effect of economic crisis.

The relocation has been a political will positioning the now-residents of Rusunawa Marunda as the subject of development; thus, the respondents felt that the political aspect was the primary cause for their traumatic experience of being relocated. The effect of the relocation as a traumatic event was that the people felt that the government intentionally and consciously changed the people's fate. Thus, the displaced residents now living in Rusunawa Marunda see any assistance or programs the government offers to help them adapt and continue their lives meaningless and could not give them the same life they used to have. To sum up, the displaced residents now living in Rusunawa Marunda did not consider the political aspect crucial in forming community

resilience, which contradicts the results of previous studies.

The displaced residents now living in Rusunawa Marunda also did not see the economic aspect as necessary for their resilience. It happened because they had lower income than they used to before relocation. In addition, although they paid less to live in Rusunawa than they used to, the people believed they spent more on daily needs than before. This happened because the relocation had forced them to leave their previous business behind, such as selling goods and working in entertainment centers, making them lose their livelihoods. Since these people only had the skill of sellers or trades in economic centers, the technological and human resource aspects were not needed in forming resilience in their new place because Rusunawa Marunda is not a center of economic or entertainment activities. In addition, they spent less in their previous home because they lived illegally without paying rent—they also got the water service and electricity illegally.

Natural resource quality, equity, natural resource utilization, and diversity dominate ecological aspects. The displaced residents now living in Rusunawa Marunda perceived that water quality and service, environment, and household waste disposal and sanitation are better than in their previous residential under the roads and/or near river banks.

Connectedness is the dominant indicator in shaping the social aspect than the organizational indicator. For example, although housing placement is done randomly, respondents from the relocation area found it comfortable hanging out with their neighbors because they were well received. For organizational indicators, the involvement of the majority of residents in social organizations was because they found the organizations fulfilled their needs, such as religious services, community services, sports, social gatherings, skill development, and waste banks. Barrow Cadbury Trust (2012) mentions that connectedness can shape community resilience.

In the cultural aspect, value conformity and comfort were more dominant than new habits. Respondents felt calmer and more comfortable because they lived in a decent house and could better follow the growth of their children. Children could actively play in a good place. Residents were involved in various social activities.

The physical aspect in sequential was formed by health, education, market, worship, work and recreation facilities. According to respondents, Rusunawa Marunda provided complete and affordable physical facilities. In addition, a play area for children helped the displaced residents, especially parents, feel secure knowing that their children played in a safe place, especially those previously living in the Kalijodo area.

5 CONCLUSIONS

This study analyzes the community resilience of the displaced residents now living in Rusunawa Marunda. Our findings confirmed only four (4) out of eight (8) aspects forming the community resilience of these displaced residents in Rusunawa Marunda. Our finding differed from previous studies because we used different traumatic events, namely relocation of people living illegally on the government's land (open green space). Previous studies examined the effect of disaster and terrorism (Longstaff, 2010; Howard, 2016; Roger, 2016; Barrow Cadbury Trust, 2012; British Red Cross, 2012) or economic crisis on community resilience (Schwind et al., 2009).

The community resilience of the displaced residents now living in Rusunawa Marunda was formed by the ecological aspect, especially water quality and service, environment, and household waste disposal and sanitation that were better than in their previous residential under the roads and/or near river banks. The social, cultural, and physical aspects were the dominant aspects after the ecological aspect for community resilience.

The political aspect, such as aspiration and government assistance, was not perceived as an essential or dominant aspect of forming community resilience of these displaced residents. The economic, technological, and human resource aspects were also not seen as crucial in forming community resilience in Rusunwa Marunda. They had to pay more expense living in Rusunawa for rent, electricity, and water—all things they could get illegally before moving to Rusunawa. However, they made less money because they no longer lived in the economic and entertainment centers where they could work freely—Rusunawa is a housing complex, not an economic center. Many people who used to work without specific skills were forced to leave such unskilled jobs when moving to Rusunawa Marunda—they could neither use their capacity nor the technology available to improve their capacity.

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