



Research Paper

## Effects of Surrounding Community Concern, Community Understanding of Landfill, Environmental Awareness Behavior, and Government Role on Community Diseases Condition and Negative Impacts of Landfill Presence

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**ABSTRACT:-** The development realization is closely related to land provision process which is surely closely related to human activities and their environment. The development of a city will always closely related to land provision; whether in cities, adjacent areas and surrounding areas. The objective of this research is to examine the effects of surrounding community concern, the community understanding of the landfill, environmental awareness behavior, and the government role on the community diseases condition and negative effects of the landfill presence. This research was conducted in Kulo Village, North Tondano District, Tondano City as the location of landfill (TPA) of Tondano City and in the surrounding waters area. The time of the research was planned for six months, starting in November 2012 until April 2012. In this research, the analyses used to test the hypotheses that have been proposed were hypothesized between variables using path analysis with the Sobel test approach to between variables mediation testing. Based on the analysis in the previous chapter, the conclusions are as follows: on the results of the path analysis, the community diseases condition and negative impacts of the landfill presence are directly and significantly affected by the surrounding community concern, community understanding of the landfill, and environmental awareness behavior, meanwhile the government role does not directly affect the community diseases condition and negative impact of the landfill presence.

**Keywords:-** Surrounding, Landfill, Environmental, Negative Impact

### I. INTRODUCTION

The development realization is closely related to land provision process which is surely closely related to human activities and their environment. The development of a city will always closely related to land provision; whether in cities, adjacent areas and surrounding areas. In accordance with growth and development of a city, there are two styles of urban development, i.e. the centripetal force leading to the city center and the centrifugal force leading to the outer. The growth pattern of each city is varied based on its characteristics. Generally, the bigger a city, the faster the growth and the stronger the function and role. Meanwhile, small cities remain stagnant and do not stir a pag. However, the development and growth of a city indirectly demand the provision of infrastructure that must be equipped by it.

The limited budget of waste management of the government becomes a classic problem. It has also always been an obstacle, due to low private investment in waste management. Garbage problem is also worsened by the paradigm that garbage is household domestic waste or useless industrial waste. Therefore, what is the most important thing today is to change the paradigm that garbage is useless; instead, it is something valuable and has economic value. Waste management is not related to transport and their disposal to landfill sites, but they must be sorted and processed to become something useful from the source. Currently, public and private sectors participation in urban waste management is perceived very low. Waste management concept "3r" is still inapplicable within the community due to various limitations (Kusumah et al, 2008). Landfill sites condition in various cities in Indonesia is commonly inadequate. Based on the evaluation results of the monitoring team of *Adipura Program* (2007), it is known that the average score obtained for various major components is laid between 46 and 60, with poor qualification.

Land management is frequently implemented to pursue increased revenue instantly. Besides, the agricultural land and forest areas are often exploited to a level which is inappropriate with the functions and land carrying capacity. Area management giving a guarantee for optimal land carrying capacity should determine territorial integrity and buffer area functions. Not to mention, land is only seen as most wanted object but merely understood by human as a limited resource. In determining land use planning, it is frequently based on economic consideration only which is usually short term. In fact, land is one of components of environmental carrying capacity.

One form of land uses is activities on landfill sites. In urban areas, the intensity trend of land use is getting higher. Due to high demand for land in downtown area, in certain period of time, a saturation point will happen naturally when the accumulated demand for land and land offer become unbalanced, thus this phenomenon makes the suburban becomes an ideal alternative choice for land development, particularly in the development of the landfill sites provision.

Despite in the research and study on garbage and landfill sites having been carried out, there has been no integrated study which conducts technical feasibility analysis on landfill sites feasibility technique and evaluating the landfill management performance and the effects of technical performance and management performance on ecology. Based on such description, the objective of this research is to examine the effects of surrounding community concern, the community understanding of the landfill, environmental awareness behavior, and the government role on the community diseases condition and negative effects of the landfill presence.

## **II. THEORETICAL BASIS**

The development of a city will be accompanied by the growth of its population, both from non natural sector (migration) and natural sector, i.e. the birth rate and mortality. Cities will always be associated with the population, and the population will always be associated with garbage. Increasing rate of growth of the urban population will increase the activities of the development of various sectors, such as housing, industry, and trade which certainly will increase the volume of garbage piles (Setiawan, 2010). This condition may happen due to increasingly consumerist lifestyle of the community resulting in increased amount of waste, thereby increasing the burden of landfill sites (TPA), which in turn emerging garbage landfill inability problem in accommodating the amount of waste that is increasingly growing.

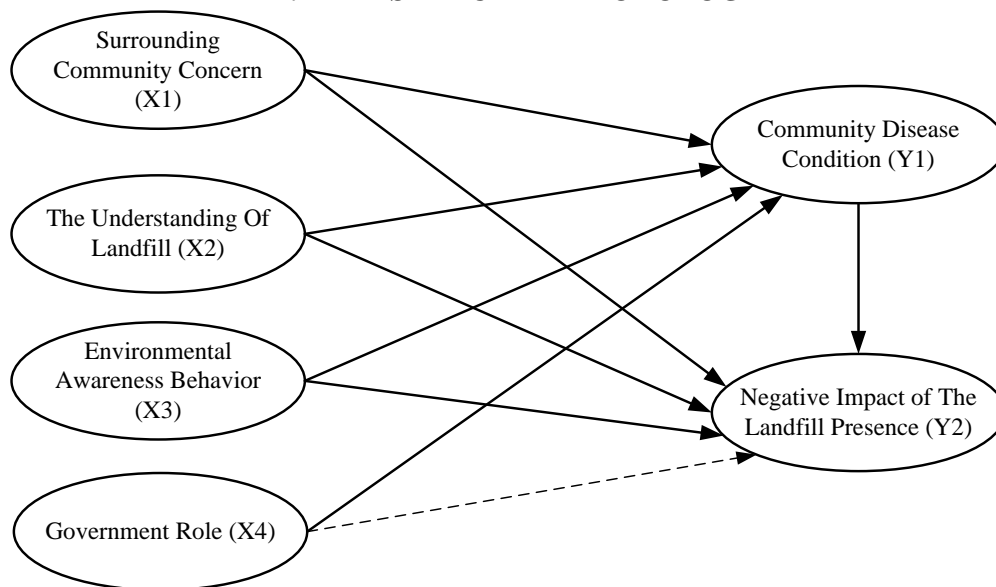
Landfill sites of Kulo Tondano currently operate with the controlled disposal system which is accommodating the garbage as much as 40.13 m<sup>3</sup> per day despite the landfill operational management which has not been done according to criteria of controlled landfill system standard requirements. Tondano City is the capital of Minahasa Regency located on the edge of Tondano Lake and on Tondano upriver which comes down to Manado City. The rapid development in various fields affects population growth rate of Tondano City. According to Regional Development Agency of Minahasa (2010), the municipal administrative region is 114.55 km<sup>2</sup> in width, with urban population of 63,537. Meanwhile, according to BPS census results of Minahasa Regency (2010), the rate of population growth of Minahasa Regency from 2000-2010 tends to increase. The significant increases in population occurred in the range of 2008-2010 is 1.88 percent. The increase in population resulted in an increase in the necessities of life that resulted in increased waste or garbage from the activities done. If it is assumed that every resident of Tondano City produces garbage of 0.8 kg, thus solid waste produced by Tondano City is about 50 tons per day.

The fact that the results of preliminary observations show that Kulo landfill site is located in the region with surging, sloping, rather steep to steep topography. During the rainy season, there will be a small stream around the landfill, i.e. "Wuku-Wuku" River (100 m from TPA), flowing through several raw water sources, such as Spring "Sumarongsong Kecil" (200 m from the landfill), Spring "Sumarongsong Besar" and Hot Spring "Ranopasu Sumarongsong" (500 m from the landfill). The river flow will rush to Kembuan Village (its population is about 1000 inhabitants) and will be united with "Dua-Dua" River (1500 m from the landfill) in Uluan village (its population is about 1500 inhabitants), Kembes Regency. The use of land along the river flow is for rice fields and other agricultural plantations. Besides, the community in both villages uses the water for bathing and washing, drinking and livestock needs.

Results of preliminary observations also show that the NSPM has not been implemented. For example, the existing composting infrastructure equipment has never been operated and the completeness of the infrastructure is still inadequate. In addition, in the landfill, there has been a landfill leachate treatment facilities, such as sedimentation tanks and maturation tub, however, the landfill leachate does not go to leachate treatment facility, but only being flowed into the drainage and penetrated into the surrounding soil. It has the potential to cause environmental pollution of soil and water. On the other hand, in order to control environmental pollution caused by landfill activities, one of the natural processes in the landfill that must be considered is the product of the garbage decomposition process that has piled up, in which if it mixes with rain water, it will produce leachate. According Tchobanoglous, et al., (1993), leachate is liquid waste resulted from the entry of external

water into the landfill waste, dissolving and rinsing solute material, including organic material resulted from decomposition biologically. Besides, garbage piles on the landfill are impossible to ignore by relying solely on natural garbage decomposition process. Therefore, in the treatment of leachate management, it requires the roles of technology, human resources, community, scavengers, and stakeholders to reduce the volume of waste that has been piling up in the landfill. Thus environmental problems in landfill, particularly in leachate indicator can be controlled and providing the benefits of extending the landfill life time. Therefore, it becomes an important consideration for managing the landfill that is currently using the selected system, i.e. controlled landfill. The problems above should be solved by answering the research questions, namely: (i) Is the presence of Kulo Tondano site in accordance with the Indonesian national standard requirements criteria – SNI technically?, (ii) Does the leachate obtained from Kulo Tondano landfill meet the standard norms of the guideline and manual (NSPM) for operating and maintenance for landfill?, (iii) Does the landfill operations of Kulo Tondano result negatively in form of water and soil pollution around the area?, and (iv) How is the management process of Kulo Tondano landfill in relation to SNI implementation and management of water and soil pollution?

### III. RESEARCH METHODOLOGY



**Figure 1: Path Diagram of Theoretical Research Model**

This research was conducted in Kulo Village, North Tondano District, Tondano City as the location of landfill (TPA) of Tondano City and in the surrounding waters area. The time of the research was planned for six months, starting in November 2012 until April 2012. The selection of research location was based on management operational consideration of landfill that had started in 2008, the age of the landfill was 4 years and the used area width was approximately of 1.3 ha, thus the landfill ability was estimated to last only to year 2015.

In this research, the analyses used to test the hypotheses that have been proposed were hypothesized between variables using path analysis with the Sobel test approach to between variables mediation testing. This research would like to find out the effects of surrounding community concern (X1), the understanding of landfill (X2), environmental awareness behavior (X3), and government role (X4) on negative impact of the landfill presence (Y2), with variable of community disease condition (Y1) as a mediating variable.

### IV. ANALYSIS RESULTS

The following table presents the average results and the loading factor of each indicator on each research variable. of the requirement to pass instrument validity is when the correlation value is greater than 0.3, meanwhile the requirement to pass the reliability test is when the Cronbach alpha value is above 0.6.

**Table 4.1. Test results of the research instrument, the mean score and loading factor**

Variable	Indicator	Correlation	Alpha Cronbach	Mean
<b>Surrounding Community Concern (X1)</b>	X1.1	0.840	0.664	2.95
	X1.2	0.714		4.37
	X1.3	0.738		4.40
	X1.4	0.511		4.77
<b>The Understanding Of Landfill (X2)</b>	X2.1	0.747	0.822	4.36
	X2.2	0.799		4.03
	X2.3	0.854		3.16
	X2.4	0.747		2.97
	X2.5	0.764		2.62
<b>Environmental Awareness Behavior (X3)</b>	X3.1	0.892	0.827	3.47
	X3.2	0.898		3.68
	X3.3	0.797		4.01
<b>Government Role (X4)</b>	X4.1	0.750	0.794	4.15
	X4.2	0.791		2.71
	X4.3	0.671		3.04
	X4.4	0.698		2.37
	X4.5	0.793		2.75
<b>Community Disease Condition (Y1)</b>	Y1.1	0.831	0.751	1.90
	Y1.2	0.863		1.74
	Y1.3	0.759		1.81
<b>Negative Impact of The Landfill Presence (Y2)</b>	Y2.1	0.859	0.818	3.88
	Y2.2	0.610		4.47
	Y2.3	0.512		4.79
	Y2.4	0.793		3.27
	Y2.5	0.824		3.44
	Y2.6	0.697		4.11
	Y2.7	0.462		4.74

From Table 4.1, it shows that the whole question items of the six variables are: surrounding community concern (X1), the community understanding of landfill (X2), environmental awareness behavior (X3), government role (X4) variable of community disease condition (Y1) and negative effects of the landfill presence (Y2) have a correlation value which is greater than 0.3, so as to the whole items are declared as valid questions. From the reliability test results, it shows that Cronbach alpha value is greater than 0.6, thus the instrument for the six variables is declared reliable. Therefore, the instrument has passed the valid test and reliable, thus the measurement result using the instrument can be used for data analysis.

This research involves six variables, namely; surrounding community concern (X1), the understanding of landfill (X2), environmental awareness behavior (X3), and government role (X4) and community disease condition (Y1), and negative effects of landfill presence (Y2). Models in this research are analyzed using path analysis (path analysis) with SPSS software version 15. The path analysis in this research consists of two equations: first, the equation describing the relationship between surrounding community concern (X1), the understanding of landfill (X2), environmental awareness behavior (X3), and government role (X4) on community disease condition (Y1). second, the equation describing surrounding community concern (X1), the understanding of landfill (X2), environmental awareness behavior (X3), and government role (X4) and community disease condition (Y1) on the negative impact of the landfill presence (Y2).

There are several assumptions that must be met by path analysis of first equation, namely; (1) the normality assumption, (2) the homogeneity assumption and (3) the assumption linearity. The testing result of Kolmogorov-Smirnov obtains a probability value of 0.163. As the probability value is above 5%, it is concluded that the normality assumption for the first equation path analysis is met. The heteroscedasticity assumption is tested using Spearman rank correlation technique. If the significance of the correlation value is above 0.5, thus the assumption of the absence of heteroscedasticity is met. From the analysis results on attachment 5, significance value is obtained in model 1, 0.157; 0.091; 0.549; and 0.229 respectively. Because those four significance values are greater than alpha 5% (0.05), it can be said that no heteroscedasticity symptoms happen or in other words the assumption of heteroscedasticity absence is not met. The last is linearity assumption, performed by curve fit method, showing linear model sig of <0.05, so that the linearity assumption of path

analysis on first equation is met. Those assumptions are met; thereby assumption for first equation in the path analysis is continued. Table 4.2. is the calculation result of the first equation path:

**Table 4.2 Equation Path First Results**

Independent Variable	Beta	t <sub>count</sub>	Sig t
<b>Surrounding Community Concern (X1)</b>	<b>-0.391</b>	<b>-4.018</b>	<b>0.000</b>
<b>The Understanding Of Landfill (X2)</b>	<b>-0.253</b>	<b>-2.582</b>	<b>0.012</b>
<b>Environmental Awareness Behavior (X3)</b>	<b>-0.249</b>	<b>-2.509</b>	<b>0.014</b>
<b>Government Role (X4)</b>	<b>-0.144</b>	<b>-1.468</b>	<b>0.147</b>
<b>R<sup>2</sup> = 0.367</b>			
<b>t<sub>table</sub> = 1.995</b>			
<b>Variable Dependent = Community Disease Condition (Y1)</b>			

From R<sup>2</sup> value of 0367 or 36.7% which means that the community diseases (Y1) is affected by 36.7% by surrounding community concern (X1), the understanding of landfill (X2), environmental awareness behavior (X3), and government role (X4) while the remaining 63.3% is affected by other factors. From table 4.2, it shows that the amount of path coefficients (obtained from beta coefficient of path result) between surrounding community concern (X1) on investment opportunities (Y1) is at -0391, with t<sub>count</sub> value of -4018 and sig t of 0000. Because |t<sub>count</sub>| > t<sub>table</sub> (4.018 > 1.995) and sig t < 0.05 (0.000 < 0.05), it can be concluded there are effects of surrounding community concern on (X1) investment opportunities (Y1). Negatively marked coefficient (-0.391) implies that there is an inversely proportional relationship. It means that the higher the value of surrounding community concern (X1), it will affect on the lower community disease condition (Y1).

The amount of path coefficients (obtained from beta coefficient of path results) between community understanding of landfill (X2) on investment opportunities (Y1) is at -2582 with t<sub>count</sub> value of -2.582 and sig t by 0.012. Since |t<sub>count</sub>| > t<sub>table</sub> (2.582 > 1.995) and sig t < 0.05 (0.012 < 0.05), it can be concluded there are community understanding of landfill (X2) on investment opportunities (Y1). Negatively marked coefficient (-0.253) implies that there is a relationship which is inversely proportional. It means that the higher the value of community understanding of the landfill (X2), it will affect the low condition of community diseases (Y1).

The amount of path coefficients (obtained from beta coefficient of path results) between conscious behavior (X3) on investment opportunities (Y1) is at -0.249, - with t<sub>count</sub> value of -2.509 and sig t by 0.014. Since |t<sub>count</sub>| > t<sub>table</sub> (2.509 > 1.995) and sig t < 0.05 (0.014 < 0.05), it can be concluded there are effects of conscious behavior (X3) on investment opportunities (Y1). Negatively marked coefficient (-0.249) implies that there is a relationship which is inversely proportional. It means that the higher the value of conscious behavior (X3), it will affect the low condition of community diseases (Y1).

The amount of path coefficients (obtained from beta coefficient of path results) between government role (X4) on investment opportunities (Y1) is at -0.144 with t<sub>count</sub> value of -1.468 and sig t by 0.147. Since |t<sub>count</sub>| > t<sub>table</sub> (1.468 > 1.995) and sig t < 0.05 (0.147 < 0.05), it can be concluded there are effects of government role (X4) on investment opportunities (Y1). It means that the higher the value of government role (X4), it will affect the low condition of community diseases (Y1).

**Table 4.3. The Results of The Second Equation Path**

Independent Variable	Beta	T <sub>count</sub>	Sig t
<b>Surrounding Community Concern (X1)</b>	<b>-0.378</b>	<b>-3.997</b>	<b>0.000</b>
<b>The Understanding Of Landfill (X2)</b>	<b>-0.223</b>	<b>-2.492</b>	<b>0.015</b>
<b>Environmental Awareness Behavior (X3)</b>	<b>-0.226</b>	<b>-2.492</b>	<b>0.015</b>
<b>Government Role (X4)</b>	<b>0.128</b>	<b>1.478</b>	<b>0.144</b>
<b>Community Disease Condition (Y1)</b>	<b>0.267</b>	<b>2.518</b>	<b>0.014</b>
<b>R<sup>2</sup> = 0.524</b>			
<b>t<sub>table</sub> = 1.995</b>			
<b>Variable Dependent = Negative Impact of The Landfill Presence (Y2)</b>			

from R<sup>2</sup> value of 0524 or 52.4% it means that the negative impact of the landfill presence (Y1) is affected by 52.4% by surrounding community concern (X1), the understanding of landfill (X2), environmental awareness behavior (X3), and government role (X4), and government role (X4) and community diseases condition (Y1) while the remaining 47.6% is affected by other factors.

From table 4.3, it shows that the amount of path coefficients (obtained from beta coefficient of path result) between surrounding community concern (X1) on negative effects of the landfill presence (Y1) at -0378, with t<sub>count</sub> value of -3.997 and sig t of 0000. Since |t<sub>count</sub>| > t<sub>table</sub> (3.997 > 1.996) and sig t < 0.05 (0.000 < 0.05), it

can be concluded there are effects of surrounding community concern on (X1) negative effects of the landfill presence (Y2). Negatively marked coefficient (-0.78) implies that there is an inversely proportional relationship. It means that the higher the value of surrounding community concern (X1), it will affect on the lower negative effects of the landfill presence (Y2).

The amount of path coefficients (obtained from beta coefficient of path results) between community understanding of landfill (X2) on negative effects of the landfill presence (Y2) is at -0.223 with  $t_{count}$  value of -2.492 and sig t by 0.015. Since  $|t_{count}| > t_{table}$  (2.492 > 1.996) and sig t < 0.05 (0.015 < 0.05), it can be concluded there are community understanding of landfill (X2) on negative effects of the landfill presence (Y2). Negatively marked coefficient (-0.223) implies that there is a relationship which is inversely proportional. It means that the higher the value of community understanding of the landfill (X2), it will affect the lower negative effects of the landfill presence (Y2).

The amount of path coefficients (obtained from beta coefficient of path results) between conscious behavior (X3) on negative effects of the landfill presence (Y2) is at -0.226 with  $t_{count}$  value of -2.492 and sig t by 0.015. Since  $|t_{count}| > t_{table}$  (2.492 > 1.996) and sig t < 0.05 (0.015 < 0.05), it can be concluded there are effects of conscious behavior (X3) on negative impact of the landfill presence (Y2). Negatively marked coefficient (-0.226) implies that there is a relationship which is inversely proportional. It means that the higher the value of conscious behavior (X3), it will affect on the lower negative impact of the landfill presence (Y2).

The amount of path coefficients (obtained from beta coefficient of path results) between government role (X4) on negative impact of the landfill presence (Y2) is at -0.128 with  $t_{count}$  value of -1.478 and sig t by 0.144. Since  $|t_{count}| > t_{table}$  (2.492 > 1.996) and sig t < 0.05 (0.015 < 0.05), it can be concluded there are no effects of government role (X4) on negative impact of the landfill presence (Y2). It means that the high and low of government role (X4), it will not affect on the high and low negative impact of the landfill presence (Y2).

The amount of path coefficients (obtained from beta coefficient of path results) between community diseases condition (Y1) on negative impact of the landfill presence (Y2) is at -0.267 with  $t_{count}$  value of -2.518 and sig t by 0.014. Since  $|t_{count}| > t_{table}$  (2.518 > 1.996) and sig t < 0.05 (0.014 < 0.05), it can be concluded there are effects of community diseases condition (Y1) on negative impact of the landfill presence (Y2). Positively marked coefficient (-0.267) implies that there is a relationship which is directly proportional. It means that the higher the value of community diseases condition (Y1), it will affect on the higher negative impact of the landfill presence (Y2).

From the second equation of the path analysis, the description results of overall path analysis are obtained as follows.

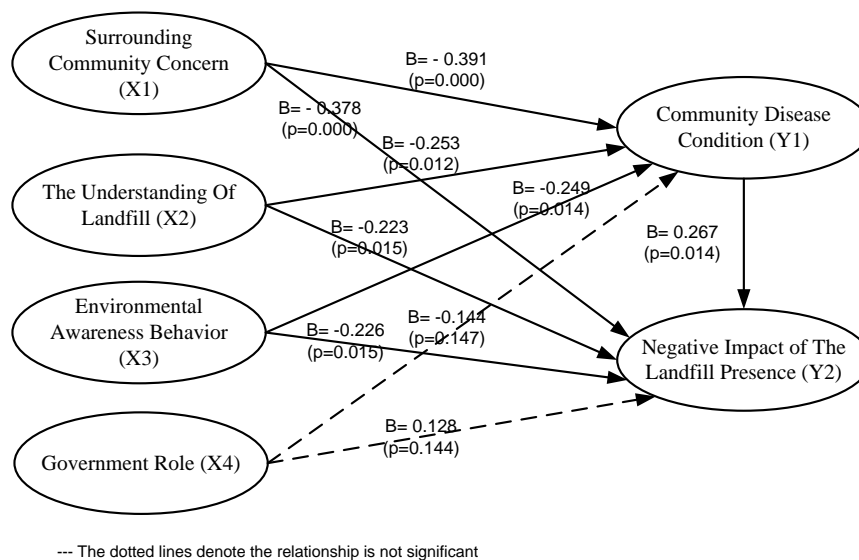


Figure 2. Results of overall path analysis.

To determine the model suitability, the testing result of total determination coefficient ( $r^2_{total}$ ) is as follows:

$$r^2_{total} = 1 - (1 - 0.367) (1 - 0.524) = 0.699 = 69.9\%$$

From the causal relationship between variables in the path diagram, total coefficient of determination of 0.699 is obtained or the information contained in the data is at 69.9% is explainable by the path model. Referring to the guidelines by Hair and Ringle (2011), the model obtained has exceeded 50%, including the

model category which is quite good. Thus, the result of the path analysis is appropriate (meeting goodness of fit).

From the results of Figure 2, it shows surrounding community concern (X1), the community understanding of landfill (X2), environmental awareness behavior (X3) affect on community disease condition (Y1). Besides, surrounding community concern (X1), community understanding of landfill (X2) and conscious behavior (X3) also affect directly or indirectly to the negative impact to the landfill presence (Y1), but the government role (X4) has no direct or indirect effects to the negative impact to the presence of TPA (Y1).

The results of the path analysis, in addition to direct effect testing as described in the previous sub-chapter, indirect effect is also known in path. Indirect effect is the result of multiplying two indirect effects. Indirect effect is declared significant if both forming direct effects are significant. The following are presented the results of the indirect effects:

**Table 4.4 Indirect Effect of The Path Analysis**

Indirect Effect	Direct Effect Coefficient		Indirect Effect Coefficient	Explanation
X1 → Y1 → Y2	X1 → Y1 = -0.391*	Y1 → Y2 = 0.267*	-0.104	Significant
X2 → Y1 → Y2	X2 → Y1 = -0.253*	Y1 → Y2 = 0.267*	-0.068	Significant
X3 → Y1 → Y2	X3 → Y1 = -0.249*	Y1 → Y2 = 0.267*	-0.066	Significant
X4 → Y1 → Y2	X4 → Y1 = -0.391*	Y1 → Y2 = 0.267*	-0.038	Non Significant

Based on table 4.4 and figure 2, the testing results of significant indirect effect are presented as follows:

1. The indirect effect of surrounding community concern on the negative impact of the presence of TPA, through the intermediary of community disease condition, the coefficient of the indirect effect is obtained at -0.104. Since both direct effects, i.e. between surrounding community concern on community disease condition is significant, and the community diseases condition on the negative impact of the landfill presence is also significant, thus the indirect effect of surrounding community concern on negative impact of the landfill presence, through the intermediary of the community diseases is significant. With negatively marked coefficient, it means the higher surrounding community concern and decreasing community diseases condition, it will result in the lower negative impact of the landfill presence.
2. The indirect effect between community understanding of the landfill on negative impact of the landfill presence, through the intermediary of community disease condition, the coefficient of the indirect effect of -0.068 is obtained. Since both direct effects, i.e. between surrounding community concern on community disease condition is significant, and the community diseases condition on the negative impact of the landfill presence is also significant, thus the indirect effect of surrounding community concern on negative impact of the landfill presence, through the intermediary of the community diseases is significant. With negatively marked coefficient, it means the higher surrounding community concern and the community diseases condition decreases and will result in the lower negative impact of the landfill presence.
3. The indirect effect between environmental awareness behavior on negative impact of the landfill presence, through the intermediary of community disease condition, the coefficient of the indirect effect of -0.066 is obtained. Since both direct effects, i.e. between environmental awareness behavior on community disease condition is significant, and between environmental awareness behavior on the negative impact of the landfill presence is also significant, thus the indirect effect of environmental awareness behavior on negative impact of the landfill presence, through the intermediary of the community diseases is significant. With negatively marked coefficient, it means the higher environmental awareness behavior and the decreasing community diseases condition, it will result in the lower negative impact of the landfill presence.
4. The indirect effect between government role on negative impact of the landfill presence, through the intermediary of community disease condition, the coefficient of the indirect effect of -0.038 is obtained. since one of direct effects, i.e. between government role on community disease condition is significant, and between community diseases condition on the negative impact of the landfill presence is also insignificant, thus the indirect effect of government role on negative impact of the landfill presence, through the intermediary of the community diseases is insignificant. It means that the role of the government would not result in changes in negative impact of the landfill presence despite the community disease condition increases or decreases.

From the analysis testing of indirect effects, it is evident that the presence of government participation does not provide any good effects on community diseases condition and negative impact of the landfill presence. It describes that the interference from the government is unnecessary in minimizing in the presence of negative impact of landfill. However, high community concern, a high community understanding of the landfill and high community environmental awareness are required so that the diseases condition can be reduced, which at once will result in a lack of negative impacts emerging from landfill presence.

From this research, it can be seen clearly that the diseases condition in the community and the negative impact of the landfill presence have the greatest effects resulted from the human behavior themselves (low concern, poor understanding of the landfill, and low awareness).

## **V. CONCLUDING SECTION**

Based on the analysis in the previous chapter, the conclusions are as follows: on the results of the path analysis, the community diseases condition and negative impacts of the landfill presence are directly and significantly affected by the surrounding community concern, community understanding of the landfill, and environmental awareness behavior, meanwhile the government role does not directly affect the community diseases condition and negative impact of the landfill presence.

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