THE EFFECT OF REGIONAL DEVELOPMENT ON POVERTY REDUCTION IN NORTHERN MEDAN, MEDAN

[1]OK HENRY, [2]LIC.RER.REG.SIROJUZILAM, [3]SUWARDI LUBIS, [4]H.B. TARMIZI

Regional Planning, Sumatera Utara University
E-mail: ok.henry.s3@gmail.com

Abstract: The poverty is one of the main problems of development which is complex and multi-dimensional. The phenomena on of poverty are influenced by various interrelated factors, such as: the level of income, health, education, location, gender and environmental conditions. An inequality (gap) between poverty theory, development planning theory and regional development with empirical facts occurs in three regions of North Medan. Because of that, we need the complex research through the perspective of science and regional planning theory of poverty. The purposes of this study are to examine and analyze the effect of regional development on poverty reduction in North Medan. The results of this study are Development of regions affects the efforts to reduce poverty in North Medan, but the effect is not significant.

Keywords: Poverty and Regional Development

I. INTRODUCTION

The poverty is one of the main problems of development which is complex and multi-dimensional. The phenomena on poverty are influenced by various interrelated factors, such as: the level of income, health, education, location, gender and environmental conditions. Poverty is not only as the lack of economic, but also the failure to fulfill basic rights and discrimination against a person or group of people to live a life with dignity.

Implementation equitable urban development in every part of the city, according to the Spatial Plan of Medan establishes district Medan Belawan as part of the City Region I, which will be the center of growth and regional economic activity. According to Dawkins (2003), the concept of growth centers that are implemented in the form of Mainstay area became the focus of discussion.

The central of growth concept (growth pole) appears to answer imperfections classical location theory which assumes that all the activities take place on same concepts, geographical differences do not exist, there is a transportation facilities in all directions, as well as industrial raw materials, technical knowledge, and production opportunities is same in all region. The concept of growth centers or also known as growth poles, was first coined by François Perreoux, an economist who stated that the development or growth does not occur in all areas, but limited to certain places with different variable intensity.

Based on the background above, we may state that occurs inequality (gap) between poverty theory, the theory of development planning and development area with empirical facts that occurred in the three Northern Medan. For that we need in-depth research in the perspective of science and theory of regional planning poverty.

II. LITERATURE REVIEW

The regional planning is directly related to poverty reduction, through some policies such as growth pole policies, spatial and pro-poor policies. The regional planning through growth pole policies is done through regional autonomy (Craig, 2003), grouping community based on poverty level (Elbers, 2007), the allocation of resources (Alwang, 2003, Byerlee, 2000), public participation in development (Brinkerhoff, 2003). The regional planning in spatial planning through building regional growth center (Tsai, 2007), regional nature conservation (Tschakert, 2007), (Cernea, 2006), (Sunderlin, 2006), Investment street (Fan and Connie, 2008). Planning in the area of pro-poor policies through subsidies to poor students (Schultz, 2004), a reduction in the cost of education (Klaauw, 2008), the implementation of a progressive tax (Pirttil, 2004), providing assistance (Schultz, 2004), national and regional policy differences (Ramos, 2009).

According to Dawkins (2003), *growth pole* concept that is implemented in the form of Growth pole area becomes the focus of discussion. *Growth pole* concept appears for answering imperfections classical location theory which assumes that all the activities take place on the same place, geographical differences do not exist, there is a transportation facilities in all directions, as well as industrial raw materials, technical knowledge, and production opportunities is same across the region.

The poverty can be caused by human factors such as economic inequality (Kim, 1997), government policies (Sanchez, 2008) (Petrovici, 2005), the effects of corruption (Chetwynd, et.al, 2003), and the state of the international economy (Rutherford, 2008).

The communities are poor because they do not have sufficient resources both natural resources (Balsdon, 2007); (Alwang, 2003); (Pegg, 2006); (Adeoti.et.al.

2001); (Komnenic, 2009); (Madulu, 2005), human resources and development resources, or if they participate in development (Fan and Connie, 2008); they only got a low income benefits (Kim, 1997).

For doing overcome poverty, the government has programs with the aim to reduce the level of poverty through program of social, economic and environmental. Program in economics is done through employment and income distribution (Sanchez, 2008), free trade (Tsai, 2007), food assistance (Harringan, 2008), community empowerment (Bellon, 2005), energy assistance program (Bhattacharya, 2009), efficiency in production (Tschakert, 2007), tax reduction (Pirttil, 2004), development of superior products (Alene, 2007), use of technology and increased productivity (Minten, 2008), modernization of equipment (Mendola, 2007), the principle of efficiency economic (low cost) (Duclous, 2005).Where Big industries will be able to lay a foundation for regional economic growth in its place (Acs and Attila, 2002).

III. RESEARCH METHODS

The research design used in this research is an explanatory research; according Singarimbun (1996) is a study that aims to explain the influence between variables exists.

This type of research can be seen by the sampling technique, variables, the model development or growth, and according to the study design. According to the model of development or growth, this type of research can be distinguished on the model of longitudinal and cross-sectional. Model longitudinal study various levels of growth by "following" developments for the same subject. While the cross-sectional model is a specific time research by using many respondents. This study uses data in specific time for a group of samples, therefore this study is a cross-sectional study models (Arikunto, 2002), while the study design verification which was stated by Moh. Nazir (1988), is used to test the hypothesis that using statistical calculations.

The population in this study is overall poor communities in the District of Medan Belawan, Medan Labuhan, and Marelan Medan (Northern Medan). In this study population is poor meant that recorded by the BPS Medan as Target Households (RTS) beneficiaries of poverty alleviation programs that spread over three districts of three administrative regions.

In this study population used was 108.648 people, so that the sample used by tables Isaac and Michael are 347 people.

The technique of analysis data is Structural Equation Modeling (SEM). The analysis tool is used by Analysis of Moment Structures (AMOS) that can be used to analyze the data, including SEM, analysis of covariance structures and causal modeling (Arbucle, 2005).

The model is structural equations. This equation was formulated to express causality between various constructs. Structural equation proposed in the conceptual study as follows:

$$Y1 = \gamma 1.1\ X1 + \zeta 1$$

γ (gamma) = Direct relationship exogenous variables with the endogenous variables
X1 = Regional Development
Y1 = Poverty
ζ (zeta) = *measurement error*

Techniques Analysis Structural Equation Model (SEM) in this study is as follows:

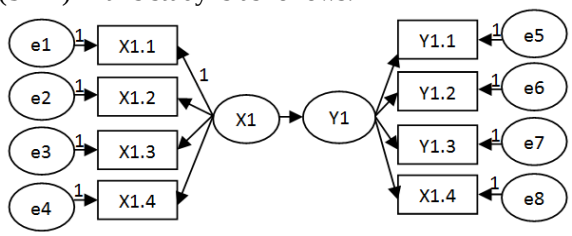


Fig. 1: SEM Analysis Technique Research Framework

Specification:

X1 = Regional Development
- X1.1 = Income
- X1.2 = Employment Opportunities
- X1.3 = Human Development Index
- X1.4 = Infrastructure

Y1 = Poverty

IV. THE RESULT

The result test by structural equation modeling with AMOS program. The structural equation model is to test each variable on other variables. The result of the overall goodness of fit of the model fit can be seen in the following table:

Table 1: SEM Suitability Index

Criteria	Value Cutt off	Results	Caption
Chi-Square	Expected to be small	18790	Good Model
Significance Probability	≥ 0,05	0,000	Good Model
RMSEA	≤ 0,08	0,161	Good Model
CMIN/DF	≤ 2,00	1,402	Good Model
TLI	≥ 0,95	0,244	Good Model
CFI	≥ 0,95	0,296	Good Model

Source: Appendix (Processed)

Based on the table above it can be concluded that all latent variables have acceptable measurement model, which means that according to the empirical data. Structural equation estimation results, it can be analyzed the influence between the variables studied. By arranging the equation is:

$$\mathbf{Y_1 = -0{,}001X_1}$$

Based on the equation, can be interpreted path coefficient of Regional Development variable is -0.001, a negative value, means Regional Development Variable affect negatively on the poverty indicator variable, meaning that if the

Regional Development program increases, will reduce poverty. Value -0.001 means if Regional Development increased by one unit will lower the poverty of 0.001.

Variable Area Development has indicators that make up the Regional Development influence on the measurement of poverty by itself. These indicators are income, employment, the Human Development Index (HDI), infrastructure, residential development, prosperity.

Table 2: The Effect of Regional Development Indicators

No	Indicator	Estimation
1	X1.1	0.074
2	X1.2	0.224
3	X1.3	0.127
4	X1.4	-0.007
5	X1.5	0.007
6	X1.6	-0.05

Source: Appendix (Processed)

Based on the table above, it can be explained that the indicator of regional development variable which have most negative influence is employment (x1.2).

The net effect of each variable on poverty is different, as some variables have an indirect effect on poverty. The following table the influence of each variable.

Table 3: Analysis of Direct Effect, Indirect Effect and Total Effect

Variable			Direct Effect	Indirect Effect	Total Effect
Poverty (Y1)	<---	Regional Development (X4)	-0,015	4,871	-0.221

Source: Appendix (Processed)

In a subsequent study for the purpose of proving whether the hypothesis is proven or not proven supported.

Table 4: The Results of Testing Effect

Variable			Coefficient	C.R	Prob	Explanation
Poverty (Y1)	<---	Regional Development (X4)	-0,015	0,091	0,928	Not significant

Source: Appendix (Processed)

Based on the results table above, shown that the regional development variable effect is negative but it is not significant on poverty. It can be seen from the value of the path coefficient of -0.015 with a CR rate of 0.091 and significance probability value (p) of 0.928. This value is greater than the significance level (α) which is set at 0.05.

The Path equation coefficients of Regional development variable is -0.015. This negative value indicates that Regional development variable effects negative on poverty. These results are supported by research (Craig, 2003) urban planning is directly related to poverty alleviation, through some policies such as policies of growth pole, spatial, and pro-poor policies. The planning area policy through the growth pole is done by regional autonomy.

CONCLUSION

Obtaining results of research related to The Effect Of Regional Development on Poverty Reduction in Northern Medan, Medan, as following:

1. The Regional Development effect on efforts to reduce poverty in the Northern Medan, Medan, but the effect is not significant.
2. Strategy in the Regional Development, should be oriented to the community aspects rather than on regional growth strategy.
3. For suggestions to the further research is to use the outside variable from this study by using the technique analysis better than SEM and using research data in some parts regions of Indonesia.

REFERENCES

[1] Acs, Zoltan J., and Attila Varga. 2002. Geography, endogenous growth, and innovation. *International Regional Science Review* 25, 1: 132-48

[2] Adeoti, O.*et al*. 2001. Could fuel wood use contribute to household poverty in Nigeria? *Biomass and Bioenergy* 21 (2001) 205–210

[3] Alene, Arega D. 2007. Targeting agricultural research based on potential impacts on poverty reduction: Strategic program priorities by agro-ecological zone in Nigeria. *Food Policy* 32 (2007) 394–412

[4] Alwang, Jeffrey and Paul B. Siegel. 2003. Measuring the impacts of agricultural research on poverty reduction. *Agricultural Economics* 29 (2003) 1-14.

[5] Arbucle, James L. 2005. *Amos User Guide*. USA: Amos Development Cooperation

[6] Arikunto, S. 2002. Prosedur Suatu Penelitan: Pendekatan Praktek. Edisi Revisi Kelima. Jakarta: Rineka Cipta

[7] Balsdon, Edmund M., 2007. Poverty and the management of natural resources: A model of shifting cultivation. *Structural Change and Economic Dynamics* 18 (2007) 333–347

[8] Bellon Mauricio R. 2005. Targeting agricultural research to benefit poor farmers: Relating poverty mapping to maize environments in Mexico. *Food Policy* 30 (2005) 476–492

[9] Bhattacharya, Jayanta, et al. 2004. Poverty, food insecurity, and nutritional outcomes in children and adults. *Journal of Health Economics* 23 (2004) 839–862

[10] Brinkerhoff, Derick W. And Arthur A.Goldsmith. 2003. How Citizens Participate in Macroeconomic Policy: International Experience and Implications for Poverty Reduction. *World Development* Vol.31, No.4, pp.685–701, 2003

[11] Byerlee, Derek. 2000. Targeting poverty alleviation in priority setting for agricultural research. *Food Policy* 25 (2000) 429–445

[12] Cernea, Michael M. 2006. Poverty Risks and National Parks: Policy Issues in Conservation and Resettlement. *World Development* Vol. 34, No. 10, pp. 1808–1830, 2006

[13] Chetwynd, Eric, et al. 2003. Corruption and Poverty: A Review of Recent Literature. *Management System International*: Washington DC

[14] Craig, David. 2003. Poverty Reduction Strategy Papers: A New Convergence *World Development* Vol.31, No.1, pp.53-56,2003

[15] Dawkins, Casey J. 2003. Regional Development Theory: Conceptual Foundations, Classic Works, and Recent Development. *Journal of Planning Literature*, Vol 18, No. 2.

[16] Duclos, Jean-Yves, et al. 2005. Poverty-dominant program reforms: the role of targeting and allocation rules. *Journal of Development Economics* 77 (2005) 53– 73

[17] Elbers Chris. 2007. Poverty alleviation through geographic targeting: How much does disaggregation help? *Journal of Development Economics* 83 (2007) 198–213

[18] Fan, Shenggen and Connie Chan Kang. 2008. Regional road development, rural and urban poverty: Evidence from China. *Transport Policy* 15 (2008) 305–314
[19] Harrigan, Jane. 2008. Food insecurity, poverty and the Malawian Starter Pack: Fresh start or false start?. *Food Policy* 33 (2008) 237–249
[20] Kim, Kwan S. 1997. Income Distribution and Poverty: An Interregional Comparison. *World Development*, Vol. 25, No. 11, pp. 1909-1924
[21] Klaauw, Wilbert van der. 2008. Breaking the link between poverty and low student achievement: An evaluation of Title. *Journal of Econometrics* 142 (2008) 731–756
[22] Komnenic, V.,et al. 2009. Assessing the usefulness of the water poverty index by applying it to a special case: Can one be water poor with high levels of access?. *Physics and Chemistry of the Earth* 34 (2009) 219–224
[23] Madulu, Ndalahwa F. 2005. Environment, poverty and health linkages in the Wami River basin:A search for sustainable water resource management. *Physics and Chemistry of the Earth* 30 (2005) 950–960
[24] Mendola, Mariapia. 2007. Agricultural technology adoption and poverty reduction: A propensity-score matching analysis for rural Bangladesh. *Food Policy* 32 (2007) 372–393
[25] Minten, Bart And Christopher B. Barrett. 2008. Agricultural Technology, Productivity, And Poverty In Madagascar. *World Development* Vol. 36, No. 5, pp. 797–822, 2008
[26] Moh. Nazir. 1988. *Metode penelitan*. Jakarta: Cetakan ketiga, Ghalia Indonesia
[27] Pegg, Scott. 2006. Mining and poverty reduction: Transforming rhetoric into reality. *Journal of Cleaner Production* 14 (2006) 376-387
[28] Petrovici, D.A. and M. Gorton. 2005. An evaluation of the importance of subsistence food production for assessments of poverty and policy targeting: Evidence from Romania. *Food Policy* 30 (2005) 205–223
[29] Pirttil, Jukka and Matti Tuomala. 2004. Poverty alleviation and tax policy. *European Economic Review* 48 (2004) 1075 – 1090
[30] Ramos, Tomas B. 2009. Development Of Regional Sustainability Indicators and The Role Of Academia In This Process: The Portuguese Practice. *Journal of Cleaner Production* 17 (2009) 1101–1115
[31] Rutherford, Thomas F. and David G. Tarr. 2008. Poverty effects of Russia's WTO accession: Modeling "real" households with endogenous productivity effects. *Journal of International Economics* 75 (2008) 131–150
[32] Sanchez, Thomas W. 2008. Poverty, policy, and public transportation. *Transportation Research Part* A 42 (2008) 833–841
[33] Schultz, T. Paul. 2004. School subsidies for the poor: evaluating the Mexican Progresa poverty program.. *Journal of Development Economics* 74 (2004) 199– 250
[34] Singarimbun. 1996. *Metoda Penelitian Survey*. PT. Gramedia
[35] Sunderlin, William D. 2006. Poverty alleviation through community forestry in Cambodia, Laos, and Vietnam: An assessment of the potential. *Forest Policy and Economics* 8 (2006) 386– 396
[36] Tsai, Pan-Long And Chao-Hsi Huang. 2007. Openness, Growth And Poverty: The Case Of Taiwan. *World Development* Vol. 35, No. 11, Pp. 1858–1871, 2007
[37] Tschakert. Petra. 2007. Environmental services and poverty reduction: Options for smallholders in the Sahel. *Agricultural Systems* 94 (2007) 75–86
[38] 2011. Evaluasi Penanggulangan Kemiskinan Di Kota Medan. Bappeda Kota Medan

★★★