RELATIONSHIPS OF CAUSALITY FROM LEVEL OF EDUCATION, REVENUES, AND CONSUMPTION TO THE QUANTITIES OF POOR PEOPLE IN THE COASTAL BEACH IN CITY OF BITUNG IN AEC FREE COMPETITION

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ABSTRACT

Poverty is a complex issue that is influenced by various interrelated factors, including the level of people's income, unemployment, health, education, access to goods and services, location, geography, and environment. The high level of poverty in North Sulawesi, indicated by the large number of poor people, shows the development process that has not been able to improve the welfare of its people. This study aims to analyze the direct and indirect effects of the average length of schooling, per capita GRDP, and per capita expenditure on the number of poor people in North Sulawesi City in 2017. The method of analysis in this study using path analysis using cross-district data in North Sulawesi in 2017 with the help of SPSS program application. Based on the results of data analysis found that education has a significant effect both directly and through income and consumption of the number of poor people, although the influence is still weak.

***Keywords*:** Consumption, education, income, poverty

INTRODUCTION

In order to enter the ASEAN Economic Community (MEA) where free competition will be a challenge as well as opportunities for economic development. Like many nations and countries in ASEAN, Indonesia makes poverty alleviation a priority program in the effort to improve people's welfare. Various kinds of subsidies, village funding, rural infrastructure development, MSME development, lending to agriculture and financial inclusion programs, rice programs for the poor, and mission-aiming scholarships are among programs intended to help alleviate poverty in Indonesia.

One way of alleviating poverty is with development aimed at improving people's welfare. Measures of development success can be seen from economic growth, economic structure, and the smaller income gap between populations, between regions and between sectors. The main objectives of economic development efforts besides creating equal growth, should also eliminate or reduce poverty, income disparities, and unemployment rates (Todaro, 2000). Therefore, the priority of development is to eliminate poverty. Poverty is a complex issue that is influenced by various interrelated factors, including the level of people's income,

unemployment, health, education, access to goods and services, location, geography, and environment.

Now in Indonesia the poverty trap is getting worse. The percentage of poor people in Indonesia in 2017 amounted to 10.6% of the total population of Indonesia. The following is a general overview of the poor by Cities and Regions in Indonesia by 2017:

Table 1. Indonesia Poverty 2017

Propinsi	Jumlah Penduduk Miskin (000)			Persentase Penduduk Miskin (%)		
	Kota	Desa	Kota+Desa	Kota	Desa	Kota+Desa
Aceh	158.04	679.38	837.42	11.36	19.19	16.98
Sumatera Utara	667.47	693.13	1360.60	9.81	9.89	9.85
Sumatera Barat	108.53	246.21	354.74	5.41	7.84	6.89
Riau	159.53	338.75	498.28	6.53	8.93	7.99
Kepulauan Riau	91.27	32.90	124.17	5.61	10.54	6.40
Jambi	109.07	172.68	281.75	10.67	7.39	8.39
Sumatera Selatan	370.86	714.94	1085.80	12.96	13.99	13.62
Bangka Belitung	20.27	46.96	67.23	3.04	6.84	4.97
Bengkulu	99.59	216.91	316.50	17.19	17.04	17.09
Lampung	224.21	919.73	1143.93	10.68	15.46	14.21
DKI Jakarta	412.79	0.00	412.79	4.09	0.00	4.09
Jawa Barat	2554.06	1684.90	4238.96	8.32	10.88	9.18
Banten	381.18	268.01	649.19	4.74	7.18	5.51
Jawa Tengah	1771.53	2790.29	4561.83	11.50	15.35	13.58
DI Yogyakarta	324.43	208.15	532.59	13.36	16.88	14.55
Jawa Timur	1531.89	3216.53	4748.42	8.30	15.92	12.28
Bali	109.20	86.76	195.95	4.35	5.39	4.76
Nusa Tenggara Barat	385.31	431.31	816.62	19.17	15.52	17.05
Nusa Tenggara Timur	105.70	886.18	991.88	10.68	21.78	19.60
Kalimantan Barat	78.53	303.38	381.92	5.47	9.20	8.07
Kalimantan Tengah	39.45	109.37	148.83	4.75	6.74	6.07
Kalimantan Selatan	61.21	128.28	189.50	3.68	5.64	4.81
Kalimantan Timur	98.48	154.20	252.68	3.98	10.06	6.31
Sulawesi Utara	60.08	137.48	197.56	5.57	10.47	8.26
Gorontalo	23.88	171.22	195.10	6.24	23.21	17.41
Sulawesi Tengah	71.65	315.41	387.06	10.35	14.66	13.61
Sulawesi Selatan	154.40	651.95	806.35	4.93	12.25	9.54
Sulawesi Barat	29.87	124.82	154.69	9.99	12.67	12.05
Sulawesi Tenggara	45.79	268.30	314.09	6.62	15.17	12.77
Maluku	47.58	259.44	307.02	7.35	25.49	18.44
Maluku Utara	11.17	73.62	84.79	3.58	8.85	7.41
Papua	35.61	828.50	864.11	4.46	35.87	27.80
Papua Barat	14.06	211.40	225.46	5.52	35.01	26.26
Indonesia	**10356.69**	**17371.09**	**27727.78**	**8.16**	**13.76**	**10.96**

Sumber: Badan Pusat Statistik.

Table 1 illustrates the differences in the number of poor people in each of the cities in Indonesia. This will lead to the impact of differences in welfare levels between regions, which in turn will lead to greater interregional disparities. The area of North Sulawesi, which has

been relatively more developed compared to other regions, is not separated from the problem of poverty. In 2017, North Sulawesi has a fairly poor population of 8.26% of the population of North Sulawesi.

Table 2. Povery Number in North Sulawesi Province Based on Region

Kabupaten/Kota	Jumlah Penduduk Miskin menurut Kabupaten/Kota (Ribu Jiwa)									
	2003	2004	2005	2006	2007	2008	2010	2011	2012	2013
Bolaang Mongondow	50.4	45.4	52.9	65.1	39.6	32.5	20.8	18.6	17.1	20.2
Minahasa	41.4	45.96	23.8	29.7	30.5	27.1	27.9	24.9	22.9	28.5
Kepulauan Sangihe	25.5	24.85	29	33.8	23.2	18.4	16.7	14.9	13.6	15.7
Kepulauan Talaud	11.2	10.86	10.1	11.7	11.9	9.7	9.5	8.5	7.8	9
Minahasa Selatan	25.1	26.82	31.3	7.3	24.9	21.4	21	18.8	17.3	20.4
Minahasa Utara	-	-	12.8	17.5	17.5	14.7	15.8	14.1	12.9	15.7
Bolaang Mongondow Utara	-	-	-	-	10.4	8.4	7.2	6.4	5.9	7.2
Kepulauan Sitaro	-	-	-	-	9.9	7.9	7.5	6.7	6.1	7.4
Minahasa Tenggara	-	-	-	-	21	17.5	17.7	15.8	14.6	16.6
Bolaang Mongondow Selatan	-	-	-	-	-	-	10.7	9.6	-	9.2
Bolaang Mongondow Timur	-	-	-	-	-	-	5	4.5	4.1	4.6
Kota Manado	17.5	17.25	21.2	28.1	23	28.5	25.1	22.4	20.5	20.5
Bitung	14.7	14.67	15	19	19.4	16.8	18	16.1	14.6	12.9
Kota Tomohon	5.9	6.35	5.3	7.1	7	6.3	6.8	6.1	5.6	6.4
Kota Kotamobagu	-	-	-	-	11.8	9	8.1	7.2	6.6	6.9
Sulawesi Utara	191.6	192.2	201.4	249.4	250.1	218.2	217.8	194.7	177.4	201.1

Sumber: Badan Pusat Statistik.

According to Table 2 the number and percentage of poor people in the period 2003 - 2013 has increased from year to year. In the period 2003-2010 the number of poor people increased due to the economic crisis, from 191.6 million people in 2003 to 217.8 million people in 2010.

Quality education will produce quality and reliable educated people in accordance with the needs of the era. People with their own abilities are expected to increase their participation in various activities, so that in the future they can live more worthy lives. In this context, education is a means to achieve that goal. Education is an important element of socio-economic development and development of society. Where the high education of a person will be able to sustain his life to be more feasible ie higher levels of income earned. This

means showing the direct correlation of the level of education to income, ie the higher the level of education the higher the income.

Revenue of a region can be measured from GRDP per capita. GRDP per capita is PDRB divided by population. GRDP per capita is often used as an indicator of development. The higher the PDRB per capita of a region, the greater the potential of the region's revenue source due to the greater income of the area (Thamrin, 2001). This also means that the higher the per capita GRDP per population of a region can be demonstrated by the high level of consumption as measured by per capita expenditure. In other words, the number of poor people will decrease.

Then the relationship between education and consumption. One component of the total cost of consumption is the cost of education, which is classified as non-food and beverage consumption. This means that the higher the level of education, the higher the cost of consumption to be spent, the lower. Therefore, it is clear that income and consumption have a direct influence on poverty, it can be argued that education levels actually also have an indirect effect on poverty levels through income and consumption factors.

Definition of Poverty

The poverty cycle is a series that interacts with each other in such a way that it creates a state where a country will remain poor and will experience many difficulties to achieve a better level of development. Low investment results in backwardness and so on. This logic of thought was put forward by Ragnar Nurkse 1953 which states "a poor country is poor because it is poor".

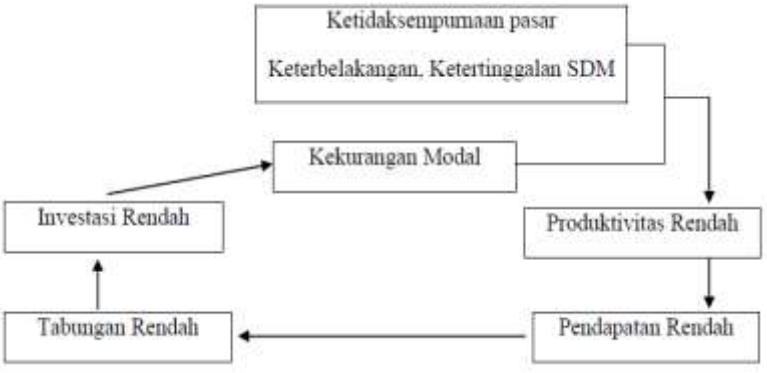

Figure 1. Poverty Cyrcle Baldwin dan Meier

Sumber: Mudrajat Kuncoro, 1997

According to Nurkse there are two circles of poverty trap, namely in terms of supply (supply) low income levels caused by low productivity levels cause the ability of people to

save low. The ability to save low, cause low capital formation rate, low capital formation (investment) causes a lack of capital, and thus the level of productivity is also low and so on. In terms of demand, in poor countries the incentive to invest is very low, as the market for various goods is limited, due to the very low public income. Community income is very low due to low productivity levels, as a form of limited capital formation in the past. Limited capital formation due to lack of stimulus to invest capital and so on.

Education

For the development of education in the National Development Program (PROPENAS), GBHN 1999-2004 set the direction of education development policy as follows:

1) To strive for expansion and equality of opportunity to obtain high quality education for all Indonesian people towards the creation of high quality Indonesian human with significant improvement of education budget.
2) Improving academic and professional skills and improve the welfare of educational personnel so that educators are able to function optimally, especially in improving the education of character and character in order to restore the authority of institutions and educational personnel.
3) Renewal of the education system including curriculum renewal, in the form of curriculum diversification to serve the diversity of learners, the preparation of curriculum applicable nationally and locally in accordance with local interests, as well as diversify the type of education in a professional manner.
4) Empowering educational institutions both schools and outside schools as a center for the culture of values, attitudes, and abilities, and increase the participation of families and communities supported by adequate facilities and infrastructure.
5) Reform and strengthen the national education system based on the principles of decentralization, scientific autonomy and management.
6) Improving the quality of educational institutions organized by both the public and the government to establish effective and efficient education system in facing the development of science, technology, and art.
7) To develop the quality of human resources as early as possible directed, integrated and comprehensive through various proactive and reactive efforts by all components of the nation so that the young generation can develop optimally accompanied by the right of support and protection in accordance with its potential.

RESEARCH METHOD

Variable of Research and Definition of Operational Variable

This research uses two variables that are exogenous variable (exogenous variable) and endogenous variable (endogenous variable).

1. Endogenous variable (endogenous variable)

Endogenous variables in this study is the number of poor people in the District/City Coastal Coast Area in Bitung City North Sulawesi City in 2017.

2. Exogenous variable (exogenous variable)

Exogenous variables in this study are education level, income level, and consumption. While the operational definition of each variable is as follows:

1. Poverty

According to the Central Bureau of Statistics (2010), the poor are residents who have average per capita spending per month below the poverty line. For minimum food needs is equalized with 2,100 kilo calories per capita per day. Non-food poverty line is minimum requirement for housing (building floor area, use of clean water, and big sewer facility); education (literacy rate, 9-year compulsory education, and drop-out rate); and health (low consumption of nutritious food, lack of health facilities and inadequate sanitary and environmental conditions). In this study the data used is the data of the number of poor people in the Regency / City in the Coastal Coast in Bitung City, North Sulawesi City in 2017 (in soul units).

2. Education

Education is measured from the average length of school. The average length of school describes the number of years used by people aged 15 years and over in formal education. The data used in this study is the average data on school length in the Regency / City in the Coastal Coast in Bitung City, North Sulawesi City in 2017 (in years).

3. Revenue

Revenue is measured from GRDP per capita. GRDP per capita is PDRB divided by population. The per capita GRDP data used is PDRB per capita in Kabuapaten / KotaDaerah Coastal Coast in Bitung City of North Sulawesi City in 2017 based on 2000 constant prices (in rupiah units).

4. Consumption

Consumption is measured from per capita expenditure. Per capita expenditure is household expenditure consisting of food and non-food expenditure that can illustrate how the population allocates household needs. Although the price between regions is different, but the

value of household expenditure can still show differences in the level of welfare of the inhabitants between cities, especially in terms of economy. The data used in this research is per capita expenditure data in Regency / City of Coastal Area in Bitung City of North Sulawesi City in 2017 (in rupiah units).

Types and Data Sources

The data in this study is secondary data in the form of cross section data from the Regency / City in North Sulawesi 2017. Secondary data obtained from various related agencies namely the Central Bureau of Statistics (BPS) and other sources of the journals and the results research.

Analysis Method

To identify the factors affecting poverty in North Sulawesi in 2017 an analysis was performed using the Path Analysis Model. The path analysis model is to analyze the pattern of causal relationships between variables with the aim to determine the direct and indirect influence, simultaneously or independently of several causal variables to the variables.

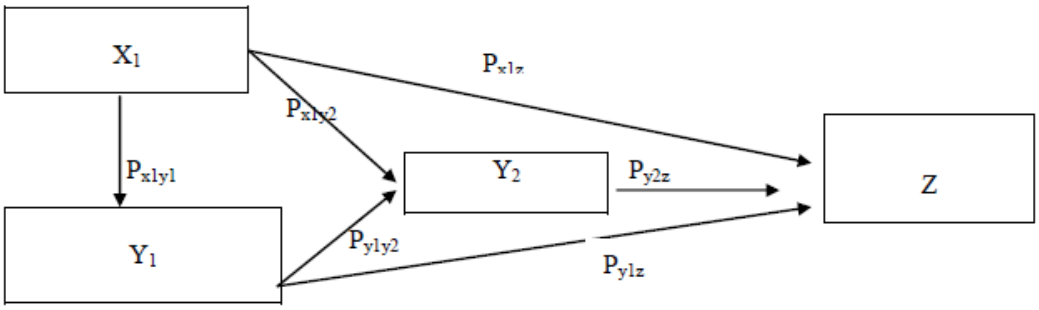

Figure 2. Path Analysis.

RESULT AND DISCUSSION

Data processing performed by SPSS program application yields correlation matrix between variables and the magnitude of path coefficients as shown in Tables 3 and 4.

Interrelated Correlation Matrix

Table 3. Matrix of Correlation as Data Input

	Z	X1	Y1	Y2
Z	1.000	-0.644	-0.460	-0.472
X1	-0.644	1.000	0.660	0.593
Y1	-0.460	0.660	1.000	0.383
Y2	-0.472	0.593	0.383	1.000

Source: Data Processed, 2017

From the correlation matrix in Table 3 shows that all variables related to poverty (the number of poor people) are negative. As the level of education with the number of poor people has a negative relationship of -0.644, which signifies the higher the level of education means the lower the number of poor people. Conversely, the lower the education the higher the number of poor people. Similarly, income and consumption levels both have a negative relationship to the number of poor people, each of -0.460 and -0.472. Means, the higher the level of income and consumption the lower the number of poor people, vice versa.

Path Coefficient

Input data correlation matrix above then processed with the application of SPSS program with the results as in Table 4.

Tabel 4. Path Coefficient

No.	Jalur	Koef.	t-stat	Prob.	Hasil
1	Pendidikan – Pendapatan	0.660	5.047	0.000	Signifikan
2	Pendidikan – Konsumsi	0.593	4.227	0.000	Signifikan
3	Pendidikan - Penduduk Miskin	-0.644	-4.842	0.000	Signifikan
4	Pendapatan – Konsumsi	0.383	2.383	0.023	Signifikan
5	Pendapatan - Penduduk Miskin	-0.460	-2.978	0.005	Signifikan
6	Konsumsi - Penduduk Miskin	-0.472	-3.077	0.004	Signifikan

Source: Data Procesed, 2017

The performance of successful lane model constructed based on the input of correlation matrix in Table 4 shows a high level of significance. All paths, from education to income, to consumption to the number of poor are indicated to be very significant at 95% confidence level, since all coefficients have a t-stat probability less than 0.05 as the upper limit for rejecting or accepting a null hypothesis. For the education to income path, the t-stat coefficient value of the path from the proportional rate ratio is 0.000 <0.05. Then for the income line to the number of poor people is 0.005 <0.05. So also for the consumption line to the number of poor people shows the same condition that is 0.004 <0.05.

Based on all the above statistical tests, it was finally decided that all the path coefficients involved in the model had a very high degree of significance to explain the effect of a variable on other variables either partially or simultaneously.

Results Interpretation

The results of all hypothesis testing above can be summarized in the following table:

Table 5. Hypothesis Test Results

Pengaruh Variabel	Persentase
X_1 terhadap Y_1	43,56
X_1 terhadap Y_2	50,15
Y_1 terhadap Y_2	14,67
X_1, Y_1 bersama-sama terhadap Y_2	35,10
Residu ε terhadap Y_2	64,90
X_1 terhadap Z	79,04
Y_1 terhadap Z	29,47
Y_2 terhadap Z	22,28
X_1, Y_1, Y_2 bersama-sama terhadap Z	43,00
Residu ε terhadap Z	57,00

1. Effect of X1 on Y1

The effect of X1 on Y1 is 43.56 percent. This means that the level of education has a weak influence on income. The higher the level of education the higher the income earned. In this case the average length of school in Bitung does not affect the income earned. Therefore, the tendency to work will be higher than going to school.

2. The effect of X1 on Y2

The effect of X1 on Y2 is 50.15 percent. This means that the level of education has a not too strong influence on consumption. The higher the level of education, the more likely to understand and understand the needs consumed. However, the high level of education in Bitung education level is not very influential on consumption expenditure.

3. The effect of Y1 on Y2

The effect of Y1 to Y2 is 14.67 percent. This means that the income level has a weak effect on consumption, this is the variable that has the lowest influence among other variables. The higher the income level the higher the consumption expenditure. This reflects that the per capita GDP in Bitung City is included in the low category, meaning that consumption has already led to secondary needs.

4. Effect of X1, Y1 together to Y2

The effect of X1, Y1 together with Y2 is 35.10 percent. This means that the level of education and income have a weak effect on consumption. Education and income levels in

Bitung City have no effect on consumption expenditure. High level of education and income earned, consumption expenditure fixed for daily needs.

5. Effect of X1 on Z

The effect of X1 on Z is 79.04 percent, this is the variable that has the greatest influence. This means that the level of education becomes the most dominant variable affect the rise and fall of the number of poor people in the city of Bitung. Thus education in Bitung is very important in poverty alleviation programs, because it is considered the most influential factor on poverty in Bitung.

6. The effect of Y1 on Z

The effect of Y1 to Z is 29.47 percent. This means that the income level has a weak influence on the number of poor people in Bitung. In Kota Bitung, income levels do not affect the number of poor people. GDP per capita in Bitung is included in the low category, this means the number of poverty is still high.

7. The effect of Y2 on Z

The effect of Y2 on Z is 22.28 percent. This means that the level of consumption has a weak effect on the number of poor people in Bitung. The high level of consumption expenditure does not affect the number of poor people.

8. The effect of X1, Y1, Y2 together on Z

The effect of X1, Y1, Y2 together on Z is 43.00 percent. This means that the level of education, income, and consumption have a weak influence on the number of poor people in Bitung. The higher the level of education the higher the income and the level of consumption expenditure will increase, but the number of poor people is still high. Thus the level of education, income and consumption together do not affect the number of poor people in the city of Bitung.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

Based on the analysis that has been done in Chapter VI, the following conclusions are obtained:

1. The hypothesis proposed completely can be accepted, because based on the path coefficient test from X1 to Y1, X1 to Y2, Y1 to Y2, X1 to Z, Y1 to Z, and Y2 to Z are statistically significant. This information gives an indication that:

- The average length of school affects GRDP per capita,

- The average length of school affects per capita expenditure,
- GRDP per capita affects per capita expenditure,
- The average length of school affects the number of poor people,
- GDP per capita affect the number of poor people,
- Per capita expenditure affects the number of poor people.

2. Partially the strength of X1 determining Y1 changes is 43.56%. The strength of X1 which directly determines Y2 changes is 35.16%, which through its relationship with Y1 is 14.99%. Thus the effect of X1 to Y2 in total is 50.15%. Partially the Y1 power that determines Y2 changes is 14.67%. Together X1 and Y1 affect Y2 by 35.10%. The strength of X1 which directly determines Z changes is 41.47%, which by its relationship with Y1 is 19.55%, and which by its relationship with Y2 is 18.02%. Thus the effect of X1 to Z in total is 79.04%.

The power of Y1 which directly determines Z changes is 21.16%, which by its relationship with Y2 is 8.31%. Thus the effect of Y1 to Z in total is 29.47%. Partially the power Y2 determining Z changes is 22.28%. Together X1, Y1 and Y2 affect Z by 43%. Based on the above analysis it is known that the variables that have a relatively large influence on the number of poor people (Z) is the average of the average length of school (X1) or education level, while the relatively small influence is the variable per capita expenditure (Y2) or the level of consumption.

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