

WHETHER THE QUALITY OF POPULATION GROWTH THROUGH THE HEALTH ECONOMY CAN BE APPLIED

AnnisaIlmiFaried¹ Rahmad Sembiring² Lia Nazliana Nasution³
Diwayana Putri Nasution⁴

^{1,2,3,4}(Economy Development Study Program Faculty OfScience ScienceUniversitas Pembangunan Panca Budi, Indonesia)

ABSTRACT:In essence, health development aims to increase awareness, willingness, and ability to live a healthy life, so that all communities can realize the degree of public health and investment to empower socially and economically productive communities. Based on the results of this study showing that fertility has a significant effect on health economics and population growth, then health care has a significant effect on health economics and population growth, hence the level of illiterate has a significant effect on the health economy and population growth, then migration has a significant effect on the health economy. As well as migration does not significantly affect population growth due to the value $P > 0.05$. For government intervention to pay attention to health services in this village, health facilities are expected to encourage better public health.

Keywords: Fertility, Health, Migration, Economy, Population Growth

I. INTRODUCTION

The main investment for human resource development, especially in the regions through health development. In an effort to increase awareness, willingness, and the ability of each person is required to behave in a healthy life in order to achieve the highest level of health. This reasoning is made that a systematic, directed, integrated and comprehensive health development planning is needed, and the involvement of various sectors and all components of the nation is needed in the implementation of its activities. According to Mills and Gillson (1999) defines health economics as the application of theories, concepts and techniques to economics in the health sector[1].

Health affects economic conditions, and vice versa the economy affects health. Fishing communities have different lifestyles compared to urban communities. This is indicated by the limited access to production, limited capital, lack of facilities in terms of fishing and is influenced by hereditary socio-cultural factors. The potential of fish farming in Pahlawan Village is quite an opportunity to be developed [1].(Faried *et al.*, 2019)

The amount of data from the public health center is as follows:

Table 1.1 Number of Community Health Centers And the Like in 2020

Village	Public Health Center	Supporting Health Center	Clinic	Integrated Healthcare Center	General Pharmacy	General Store
Guntung	-	1	-	2	-	-
Bagan Dalam	-	1	1	4	-	1
Suka Maju	-	1	2	8	-	-
Tanjung Tiram	-	1	1	5	1	7
Bogak	-	1	1	4	2	-
Suka Jaya	-	-	1	6	-	1
Kampung Lalang	1	-	1	1	-	1
Bagan Arya	-	1	-	2	-	-

Pahlawan	-	-	1	5	1	1
Bandar Rahmat	-	-	-	2	-	-
Jumlah	1	6	8	39	4	11

Source: Statistics Agency, Batu Bara Regency, 2020

From the above table, it is explained that there are many community health centers and the like in 2020 in DesaPahlawan that the health center in DesaPahlawan is quite minimal for the health center. Puskesmas in the area are inadequate in providing services to the community, both in terms of facilities and infrastructure as well as from medical personnel or the budget used to maintain daily activities. The facilities and infrastructure at the puskesmas appear to have been ignored by the local government. this occurs due to limited financial resources owned by the Puskesmas so that the quality of puskesmas services is also low because it is not in accordance with health standards and for the pattern of community waste disposal in Pahlawan Village dumped in any place, causing odors and unhealthy environmental views. the lack of clean water supply, due to environmental pollution, makes the water needs of the Pahlawan Village community clean. Efforts to manage the environmental economy that has been promoted and the laws that have been issued will not be in vain without the support of human awareness of the importance of the environment in order to improve the quality of the environment and the awareness that the current environment is a deposit for future generations[2] (Ilmi and Lubis, 2019b).

The low level of family economic capability will encourage parents to marry off their female children even though they are still young because of thoughts such as fear of their children becoming spinsters, pride if their children are quickly proposed and also want to reduce the burden (responsibility) as parents when their children are married .with the large number of residents in the Village of Heroes, not all people get employment opportunities it will lead to unemployment and the number of unemployment will drive crime rates because they do not have income.

Sustainable development in synergy with environmental insights as a basic and planned effort, integrating the environment as a resource in the development process to ensure the ability, welfare, and quality of life of present generations to future generations. Preparing resources as environmental elements including human resources, natural and non-biological resources and artificial resources[3](Ilmi and Lubis, 2019a).By making efforts to prevent pollution, matters that need to be considered are related to environmental quality standards. Diane M. Dewar (2009) states that demand for health services depends on the status of age, income, education and health itself. Demand for health is very sensitive to price and income [5].

II. RESULTS AND DISCUSSION

Figure 1.1 Conceptual Framework for Structural Equation Modeling (SEM)

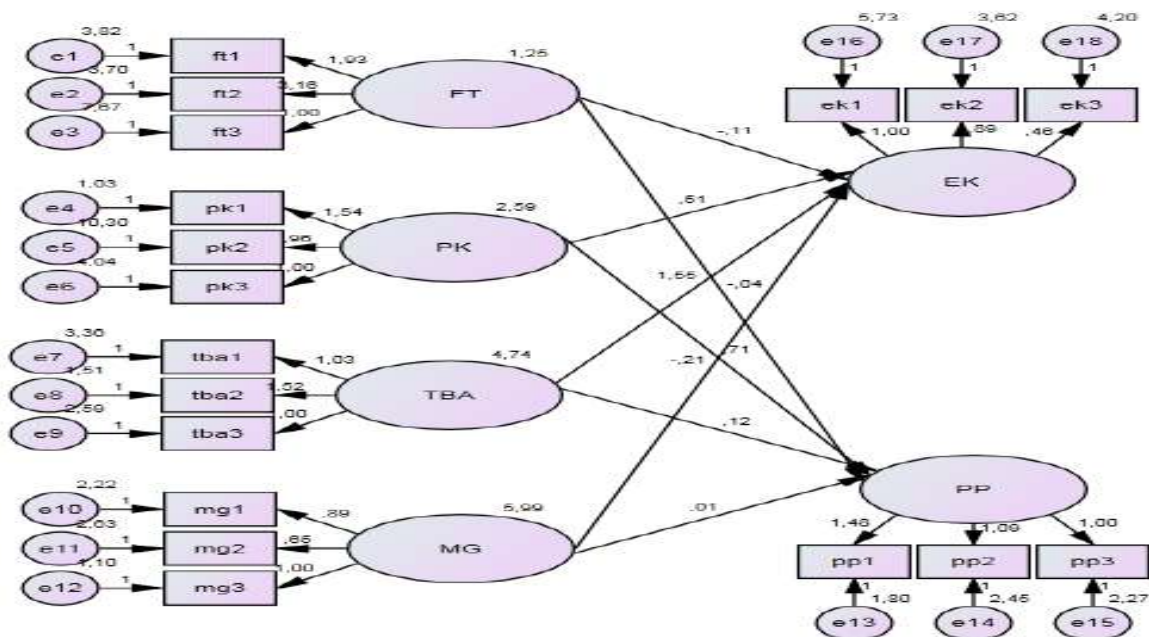


Figure 1.2. Amos Output Frame

Table 1.2. Results of Testing the Feasibility of Research Models for SEM Analysis

<i>Goodness of Fit Indeks</i>	<i>Cut of Value</i>	<i>Hasil Analisis</i>	<i>Evaluasi Model</i>
<i>Min fit function of chi-square</i>	p>0,05	(P=0.88)	<i>Fit</i>
<i>Chisquare</i>	<i>Carmines & Mever (1981)</i> Df=168 = 129.69	175.609	<i>Fit</i>
<i>Non Centrality Parameter (NCP)</i>	Penyimpangan sample cov matrix dan fitted kecil < Chisquare	139.609	<i>Fit</i>
<i>Root Mean Square Error of Approx (RMSEA)</i>	<i>Browne dan Cudeck (1993)</i> < 0,08	.051	<i>Fit</i>
Model AIC	Model AIC > Saturated AIC < Independence AIC	4143.609 > Saturated AIC (240) < Independence AIC (159.609)	<i>Fit</i>
Model CAIC	Model CAIC << Saturated CAIC < Independence CAIC	489.752 < Saturated CAIC (755) < Independence CAIC (1320.910)	<i>Fit</i>
<i>Normed Fit Index (NFI)</i>	>0,90	0.985	<i>Fit</i>
<i>Parsimoni Normed Fit Index (PNFI)</i>	0,60 – 0,90	0.635	<i>Fit</i>
<i>Parsimoni Comparative Fit Index (PCFI)</i>	0,60 – 0,90	0.670	<i>Fit</i>
<i>PRATIO</i>	0,60 – 0,90	0.815	<i>Fit</i>
<i>Comparative Fit Index (CFI)</i>	>0,90 (Bentler (2000))	0.930	<i>Fit</i>
<i>Incremental Fit Index (IFI)</i>	>0,90 Byrne (1998)	0.833	<i>Fit</i>
<i>Relative Fit Index (RFI)</i>	0 – 1	0.825	<i>Fit</i>
<i>Goodness of Fit Index (GFI)</i>	> 0,90	0.981	<i>Fit</i>
<i>Adjusted Goodness of Fit Index (AGFI)</i>	>0,90	0.950	<i>Fit</i>
<i>Parsimony Goodness of Fit Index (PGFI)</i>	0 – 1,0	0.710	<i>Fit</i>

Source: Amos Output 22

Table 1.3: Results of estimation of C.R (Critical Ratio) and P-Value

	Estimate	S.E.	C.R.	P	Label
EK <--- FT	-,106	,080	-1,329	,184	par_13
PP <--- FT	-,041	,035	-1,176	,240	par_14
EK <--- PK	,510	,094	5,414	***	par_15
PP <--- PK	,705	,091	7,733	***	par_16
EK <--- TBA	1,551	,111	13,911	***	par_17
PP <--- TBA	,120	,028	4,259	***	par_18
EK <--- MG	-,214	,055	-3,889	***	par_19
PP <--- MG	,006	,023	,249	,804	par_20

Source: Amos Output 22

Causality test results show that there are only 5 (five) variables that have causality, except between fertility and health economics, fertility with population growth, and migration with population growth that has no causality relationship. The critical ratio probability causality test that has a three star can be presented in the following explanation:

1. There is a causal relationship between health services and the health economy. The value of the critical value of 5.414 is two times greater than the standard error value and the probability value (p) which has a significant asterisk.
2. A causal relationship exists between health services and population growth. The critical value of 7.733 is two times greater than the standard error value and the probability value (p) which has a significant asterisk.
3. A causal relationship exists between the level of illiteracy and the health economy. Critical value of 13,911 is two times greater than the standard error value and the probability value (p) which has a significant asterisk.
4. A causal relationship exists between the level of illiteracy and population growth. Critical value of 4.259 is two times greater than the standard error value and the probability value (p) which has an asterisk which means significant.
5. A causal relationship exists between migration and the health economy. Critical value of -3,889 is two times greater than the standard error value and the probability value (p) which has a significant asterisk.

The magnitude of the effect of each latent variable has a standardized direct effect or an indirect standardized effect and the total standardized effect can be seen in the following processing result :

Table 1.4. Standardized Direct Effects

	MG	TBA	PK	FT	PP	EK
PP	,006	,120	,705	-,041	,000	,000
EK	-,214	1,551	,510	-,106	,654	,000
pp1	,009	,177	1,045	-,061	1,482	,000
pp2	,006	,131	,770	-,045	1,092	,000
pp3	,006	,120	,705	-,041	1,000	,000
ek3	-,099	,716	,236	-,049	,000	,462
ek2	-,190	1,379	,454	-,094	,000	,889
ek1	-,214	1,551	,510	-,106	,000	1,000
mg1	,886	,000	,000	,000	,000	,000
mg2	,647	,000	,000	,000	,000	,000
mg3	1,000	,000	,000	,000	,000	,000
tba1	,000	1,025	,000	,000	,000	,000
tba2	,000	1,519	,000	,000	,000	,000
tba3	,000	1,000	,000	,000	,000	,000
pk1	,000	,000	1,542	,000	,000	,000
pk2	,000	,000	,959	,000	,000	,000
pk3	,000	,000	1,000	,000	,000	,000
ft1	,000	,000	,000	1,926	,000	,000
ft2	,000	,000	,000	3,158	,000	,000
ft3	,000	,000	,000	1,000	,000	,000

Source: Amos Output 22

Table 1.5. Standardized Indirect Effects

	MG	TBA	PK	FT	PP	EK
PP	,000	,000	,000	,000	,000	,000
EK	,000	,000	,000	,000	,000	,000
pp1	,009	,177	1,045	-,061	,000	,000
pp2	,006	,131	,770	-,045	,000	,000
pp3	,006	,120	,705	-,041	,000	,000
ek3	-,099	,716	,236	-,049	,000	,000
ek2	-,190	1,379	,454	-,094	,000	,000

	MG	TBA	PK	FT	PP	EK
ek1	-,214	1,551	,510	-,106	,000	,000
mg1	,000	,000	,000	,000	,000	,000
mg2	,000	,000	,000	,000	,000	,000
mg3	,000	,000	,000	,000	,000	,000
tba1	,000	,000	,000	,000	,000	,000
tba2	,000	,000	,000	,000	,000	,000
tba3	,000	,000	,000	,000	,000	,000
pk1	,000	,000	,000	,000	,000	,000
pk2	,000	,000	,000	,000	,000	,000
pk3	,000	,000	,000	,000	,000	,000
ft1	,000	,000	,000	,000	,000	,000
ft2	,000	,000	,000	,000	,000	,000
ft3	,000	,000	,000	,000	,000	,000

Source: Amos Output 22

Tabel 1.6. Standardized Total Effects

	MG	TBA	PK	FT	PP	EK
PP	,006	,120	,705	-,041	,000	,000
EK	-,214	1,551	,510	-,106	,654	,000
pp1	,009	,177	1,045	-,061	1,482	,000
pp2	,006	,131	,770	-,045	1,092	,000
pp3	,006	,120	,705	-,041	1,000	,000
ek3	-,099	,716	,236	-,049	,000	,462
ek2	-,190	1,379	,454	-,094	,000	,889
ek1	-,214	1,551	,510	-,106	,000	1,000
mg1	,886	,000	,000	,000	,000	,000
mg2	,647	,000	,000	,000	,000	,000
mg3	1,000	,000	,000	,000	,000	,000
tba1	,000	1,025	,000	,000	,000	,000
tba2	,000	1,519	,000	,000	,000	,000
tba3	,000	1,000	,000	,000	,000	,000
pk1	,000	,000	1,542	,000	,000	,000
pk2	,000	,000	,959	,000	,000	,000
pk3	,000	,000	1,000	,000	,000	,000
ft1	,000	,000	,000	1,926	,000	,000
ft2	,000	,000	,000	3,158	,000	,000
ft3	,000	,000	,000	1,000	,000	,000

Source: Amos Output 22

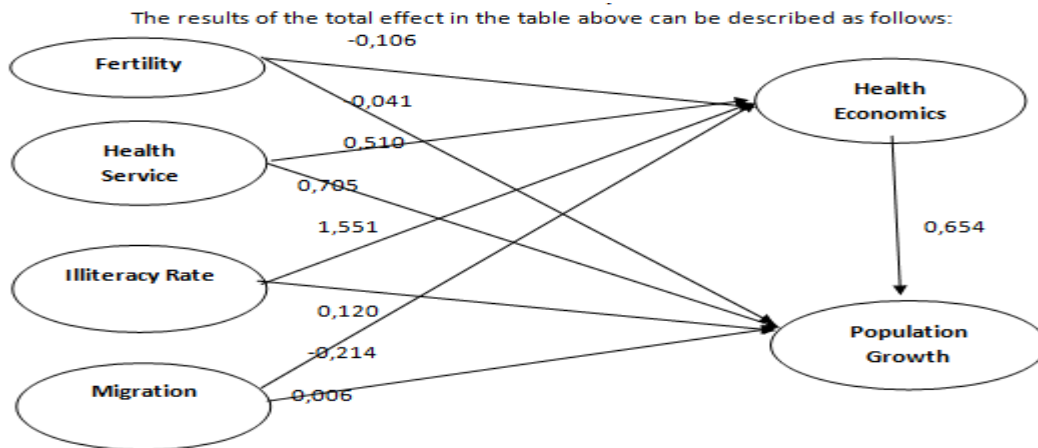


Figure 1.3. Total Effect of Fertility, Health Services, Illiteracy, Migration

Table 1.6. The estimated results of C.R (Critical Ratio) and P-Value

		Estimate	S.E.	C.R.	P	Label
EK	<--- FT	-,106	,080	-1,329	,184	par_13
PP	<--- FT	-,041	,035	-1,176	,240	par_14
EK	<--- PK	,510	,094	5,414	***	par_15
PP	<--- PK	,705	,091	7,733	***	par_16
EK	<--- TBA	1,551	,111	13,911	***	par_17
PP	<--- TBA	,120	,028	4,259	***	par_18
EK	<--- MG	-,214	,055	-3,889	***	par_19
PP	<--- MG	,006	,023	,249	,804	par_20
ft3	<--- FT	1,000				
ft2	<--- FT	3,158	,687	4,598	***	par_1
ft1	<--- FT	1,926	,288	6,687	***	par_2
pk3	<--- PK	1,000				
pk2	<--- PK	,959	,167	5,759	***	par_3
pk1	<--- PK	1,542	,152	10,142	***	par_4
tba3	<--- TBA	1,000				
tba2	<--- TBA	1,519	,091	16,724	***	par_5
tba1	<--- TBA	1,025	,080	12,820	***	par_6
mg3	<--- MG	1,000				
mg2	<--- MG	,647	,059	11,059	***	par_7
mg1	<--- MG	,886	,068	13,004	***	par_8
ek1	<--- EK	1,000				
ek2	<--- EK	,889	,057	15,480	***	par_9
ek3	<--- EK	,462	,046	9,926	***	par_10
pp3	<--- PP	1,000				
pp2	<--- PP	1,092	,139	7,832	***	par_11
pp1	<--- PP	1,482	,160	9,238	***	par_12

Source: Amos Output 22

III. CONCLUSION

1. There is no significant effect of fertility on the health economy in the community of Pahlawan Village, Tanjung Tiram Subdistrict, Batu Bara District, where the probability value is $0.184 > 0.05$, so it is known that fertility is not significant on the health economy.

2. There is no significant effect of fertility on population growth in the community of Pahlawan Village, Tanjung Tiram Subdistrict, Batu Bara District, where the probability value is $0.240 > 0.05$ so that it is known that fertility is not significant on population growth.
3. There is a significant influence of health services on the health economy in the community of Pahlawan Village, Tanjung Tiram District, Batu Bara District.
4. There is a significant influence of health services on population growth in the community of Pahlawan Village, Tanjung Tiram District, Batu Bara District.
5. There is a significant influence on the level of illiteracy on the health economy in the community of Pahlawan Village, Tanjung Tiram District, Batu Bara District.
6. There is a significant influence on the level of illiteracy on population growth in the community of Pahlawan Village, Tanjung Tiram District, Batu Bara District.
7. There is a significant effect of migration on the health economy in the community of Pahlawan Village, Tanjung Tiram District, Batu Bara District.
8. There is no significant effect of migration on population growth in the community of Pahlawan Village, Tanjung Tiram District, Batu Bara Regency, where the probability value of $0.804 > 0.05$ so that migration is known to be insignificant on population growth

REFERENCES

- [1] Mills, Anne dan Lucy Gilson., 1999. *Ekonomi Kesehatan untuk Negara–Negara Berkembang diterjemahkan oleh Unit Analisis Kebijakan dan Ekonomi Kesehatan (AKEK)*, Jakarta : Biro Perencanaan. Depkes RI.
- [2] Faried, A. I. *et al.* (2019) ‘Analysis of Factors Affecting the Quality of Life of Coastal Fishers in Pahlawan Village , Tanjung Tiram District , Batu Bara Regency’, pp. 78–85.
- [3] Ilmi, A. and Lubis, F. (2019a) ‘Influences of Environmental Pollution on Socio-Economic Factors in Coastal Areas Pahlawan Village , Tanjung Tiram District Batu Bara Regency’, pp. 200–204.
- [4] Ilmi, A. and Lubis, F. (2019b) ‘Structural Equation Modeling in the Environmental Economic Approach To Reduce Poverty Numbers Pahlawan Village Tanjung Tiram District’, pp. 152–156.
- [5] Dewar, Diane M., 2009. *The Essential Of Health Economics*. First Edition. USA: Jones & Bartlett Publishers.