The Effect of Access to Health Services, Health Financing, Health Status and Social Status on Life Expectancy and Their Impact on Economic Growth

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Abstract. The goal of this research is to look at the impact of health-care access, health financing, educational status and social status on life expectancy and their impact on economic growth. This research was conducted in the territory of the Unitary State of the Republic of Indonesia. Secondary sources from the APBN and BPS reports is used in this research and the BPS Health Report of the Republic of Indonesia, including obtaining data from access to the National BPS website. besides that, it also accesses regional economic studies from Bank Indonesia (BI). The time of the research is related to these data for the last 5 years starting from 2015 to 2019. The population in this study was 34 provinces in the Unitary State of the Republic of Indonesia which were analyzed using time series data over a period of 5 years. So that the total population and sample in this study were 170 samples. The results showed that health services including the ratio of hospital beds and the ratio of doctors had an effect on life expectancy. Then to the health financing variables, it was found that the deconcentrating funds, special allocation funds and the coverage of the JKN program participation all had an effect on the life expectancy rate. The education variable also shows that the average length of schooling and literacy have an effect on life expectancy. Finally, the social factor variables which include the Gini ratio index, the depth index and the severity of poverty, all three have a significant effect on life expectancy which in turn has an impact on economic growth in Indonesia with a contribution of 97.21%. Simultaneously access to health services, health financing, educational status and social status affect life expectancy This has a big and favorable effect on economic development.

Keywords: Access to health services and financing-1; educational status-2; and social status, life expectancy -3; economic growth -4

1   Introduction

One of the most significant topics in achieving sustainability is health growth. This agenda will not be realized without the active participation of the community for a healthy and quality life [1]. Quality of life can describe the level of community welfare and the success of development programs implemented by local governments. Several of the govt's health improvement projects is the Healthier Indonesia Initiative. The goal of this program is to improve the society's proper nutritional condition via health initiatives and public participation, as well as financial security and equitable distribution of health services. The goal of health-

care development is to create a healthy Indonesian society with a long-life expectancy in the future. This program is socialized by the government through healthy living behavior and increasing community economic growth to have access to high-quality health-care services fair and equitable with the aim of increasing quality health degrees [2].

One indicator that is able to describe the phenomenon of problems and strategic issues in the health sector in an area is life expectancy (AHH). Life expectancy is often even linked to the level of progress of an area, because in general underdeveloped areas show a low life expectancy and conversely, developed areas show a high life expectancy [3]. The success of development in the health sector is marked by the decreasing infant mortality rate and increasing the population's life expectancy. Indonesia's economic growth is slowing down in line with the trend of the poverty rate in some areas which is still positive, especially in disadvantaged areas where it is difficult to get access to education and health [4].

Health services

Health services are one form of service that is very important among the community. According to Goerg (2013) Individuals, families, groups, and communities' benefit from every effort made individually or collectively in an organization to ensure and enhance health, avoid sickness, and treat and regain health. [5]

The goal of health services is to increase the patients' quality of life and capability as a whole in maintaining their health to achieve optimal health for themselves, their families and communities. Health services according to Mackintosh, (2019) and Goerg (2013) say that health services have several levels [6]:
a. Primary health care, Essential medical services is the first level of service that is intended for light public health services or pusling, pustu, bakesmas.
b. Secondary health care, Secondary health care is a second-level service aimed at people who require hospitalization and require the availability of general practitioners and specialists.
c. Tertiary health care, Tertiary health care is a third-level health service that is shown to a group of people who can no longer be handled by secondary health and require superspecialist personnel.

Health Financing

Health financing is the management of various efforts to extract, allocate, and spend health funds to support the implementation of health development in order to get the highest increase in public hygiene possible. The purpose of the implementation of the health financing subsystem is the availability of health funds in sufficient quantities, allocated fairly, equitably, and utilized effectively and efficiently, distributed according to their designation to guarantee that it is implemented of health development in order to boost the state of one's wellbeing of the community as high as possible [7].

The principles of the health financing subsystem consist of: adequacy; effective and efficient; and fair and transparent. The implementation of the health financing subsystem consists of: fundraising; allocation of funds; and spending.

Social Security Program
a. National Health Insurance (JKN)
Social insurance is a mechanism for collecting mandatory contributions from participants, in order to provide protection to participants against socioeconomic risks that befall them and or their family members (SJSN Law No. 40 of 2004).

b. JKN Principles

The National Healthcare standards are based on the principles of the National Social Welfare System (SJSN): Reciprocal collaboration as a concept, The philosophy of non-profit, the notion of mobility is a concept that may be applied to a variety of situations Engagement is a must-have concept. The trustee's approach, Outcomes of management concepts.

Education

Education is primarily a deliberate exertion to acquire the knowledge and skills and process of learning in which having students grow their prospects for religious spiritual strength, control, personality, intelligence, character formation, and qualifications needed by own selves, their neighborhood, country, and condition. (National Education System Law No. 20 of 2003) the same thing was conveyed by Postman and Weigartner in Bahtiar that education is a long process to learn how to negotiate with the outside world [8].

a. Educational Indicator
   Average length of school
b. The national education system must be ability to access a large number of individuals to become educated citizens so that the quality of human resources will increase.
   Literacy rate
c. Education is a pioneer in the future development of a nation. If the education of a nation has been damaged, then the destruction of the nation is just a matter of time.

Socio-Economic Characteristics

In social life, each member of society has a different level. In sociology this term is often known as Class differences in society which is the distinctiveness of In a systematic way, divide the people or culture into groups. Theoretically all humans are considered equal. However, according to the reality of life for social groups, this is not the case. Real manifestations of social stratification are high classes and low classes. This can happen because of the unequal distribution of social values in social life. According to Tumengkol (2012). The formation of layers of society occurs automatically in the process of community growth [9].

According to Itang (2017) there are several causes of poverty in Karimah Kuraiyyim's opinion. These include [10]:

a. The decline in the standard of development of per capita income globally.
b. Decreased work ethic and community productivity
c. High cost of living
d. Unequal distribution of government income subsidies

2 Research Methods

The data analysis method of this research is grouping and statistics tabulation based on multiple factors. The presentation of data from each variable studied is then calculated to respond to the proposed approach and do computations to test the offered premise. Data analysis method used to test the effect of Hospital Bed Ratio, Doctor Ratio, Health Sector Deconcentration Fund. Special Allocation Fund for Health, Coverage of JKN Program participation, Average length of schooling, Literacy Rate, Gini Ratio Index, Recession Sensitivity Rating and Poor Trench Rating are two measures of income hardship on life expectancy and its impact on economic growth either simultaneously or partially. In this study,

the test analysis used was panel data regression analysis. Dataset is a blend of time - series models sectional values, according to Basuki and Prawoto (2017). Material in a dataset is made up of one or more factors that will be monitored in one method of sampling over a long period. [11] Rectangular prism input, on the other hand, is scientific metadata from the many national survey at the same time.

3 Results and Discussion

3.1 Result

Table 1. Results of Regression Panel Data Equation 1

Method: Panel EGLS (Cross-section weights)
Date: 01/14/22   Time: 04:11
Sample: 2015 2019
Periods included: 5
Cross-sections included: 34
Total panel (balanced) observations: 170
Linear estimation after one-step weighting matrix
Cross-section weights (PCSE) standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.717840	0.029022	59.19076	0.0000
X1	0.007878	0.003465	2.273698	0.0243
X2	0.001379	0.000344	4.004179	0.0001
X3	0.007878	0.003719	2.118632	0.0357
X4	2.94E-09	1.43E-09	2.062799	0.0412
X5	2.08E-05	7.83E-06	2.661697	0.0088
X6	0.002667	0.000734	3.634140	0.0004
X7	0.001551	0.000323	4.794551	0.0000
X8	-0.012599	0.004374	-2.880407	0.0047
X9	-0.002793	0.001251	-2.231475	0.0270
X10	-0.005797	0.002924	-1.982378	0.0492

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

R-squared	0.982103	Mean dependent var	3.233382
Adjusted R-squared	0.975996	S.D. dependent var	1.830521
S.E. of regression	0.001794	Sum squared resid	0.000406
F-statistic	1478.315	Durbin-Watson stat	1.981940
Prob(F-statistic)	0.000000		

Unweighted Statistics

R-squared	0.978665	Mean dependent var	1.841353

Table 2. Fixed Effect Model Analysis Results Using Eviews

Variable	Coefficient	Std. Error	t-Statistic	Prob.	Conclusion	Hypothesis Answer	Effect on Cashetr
C	1.717840	0.029022	59.19076	0.0000			
X1	0.007878	0.003465	2.273698	0.0243	< 0,05	reject H0	Impact that is just marginally substantial
X2	0.001379	0.000344	4.004179	0.0001	< 0,05	reject H0	Impact that is just marginally substantial
X3	0.007878	0.003719	2.118632	0.0357	< 0,05	reject H0	Impact that is just marginally substantial
X4	2.94E-09	1.43E-09	2.062799	0.0412	< 0,05	reject H0	Impact that is just marginally substantial
X5	2.08E-05	7.83E-06	2.661697	0.0088	< 0,05	reject H0	Impact that is just marginally substantial
X6	0.002667	0.000734	3.634140	0.0004	< 0,05	reject H0	Impact that is just marginally substantial
X7	0.001551	0.000323	4.794551	0.0000	< 0,05	reject H0	Impact that is just marginally substantial
X8	-0.012599	0.004374	-2.880407	0.0047	< 0,05	reject H0	Impact that is just marginally substantial
X9	-0.002793	0.001251	-2.231475	0.0270	< 0,05	reject H0	Impact that is just marginally substantial
X10	-0.005797	0.002924	-1.982378	0.0492	< 0,05	reject H0	Impact that is just marginally substantial

Table 3. Determination Test

Weighted Statistics			
R-squared	0.977715	Mean dependent var	86874.91
Adjusted R-squared	0.972102	S.D. dependent var	40937.71
S.E. of regression	7336.196	Sum squared resid	7.27E+09
F-statistic	174.2002	Durbin-Watson stat	0.936113
Prob(F-statistic)	0.000000		

Unweighted Statistics			
R-squared	0.976711	Mean dependent var	55743.36
Sum squared resid	7.32E+09	Durbin-Watson stat	0.590652

3.2 Discussion

From the proposed analysis, it is revealed that the average length of schooling has a strong and beneficial influence on life expectancy. Supported by the findings of the t-test obtained 3.634140 with a significance level of 0.0004. These results indicate that the average ratio of education really does have a substantial impact on life expectancy. This study is the same as the research of Asmawani et al (2020) who reported that the average length of schooling affects life expectancy which has an impact on increasing the Human Development Index (IPM) of research in North Sumatra Province . Furthermore, Arofah & Rohimah's research (2019) reveals that path analysis shows that life expectancy the actual duration of education has an impact. which also has an impact on the human development index (IPM) in East Nusa Tenggara Province.

Literacy rate affects life expectancy. The t-count value of 4.794551 with a significance level of 0.000 and a coefficient of determination greater than =0.05 indicates that the Enrolment has a substantial impact on user duration in Indonesia. Research by Tjiptoherijanto (1994) reveals that in general health will be correlated with education which has an impact on the level of productivity of the population and workers. Improved health will prolong the working life and endurance which is influenced by a high life expectancy and the ability to increase the output of goods produced [12].

Life span is significantly affected by the Gini Index Ratio. The t - statistics is —2.880407 with a significance level of 0.0047, according to the findings of the t-test reported in table 4.15. This indicates that the Gini index ratio has a significant effect on life expectancy. The negative sign indicates that a decrease in the Gini index has an effect on increasing life expectancy. The Euler percentage score is a method for determining how unequally distributed people are. It is centered on the Lorenz curve, which should be a composite spending graph that compared the characteristics of the input variable (for example, income) to a uniform distribution that represents the voter's total proportion. The Euler ratio is an indicator of general disparity that ranges from zero (perfect equality) to one (extreme disparity).

The severity of poverty has a large and favorable influence on life duration. The t-count value is -2.231475 with a significance level of 0.0270, significant t findings. Here demonstrates that the probability value is smaller than =0.05 (0.0270 < 0.05). It can be concluded that the poverty depth index has a significant effect on life expectancy. A negative sign means that a decrease in poverty will increase life expectancy. In the regression results in this research model, the poverty depth index has a negative relationship and significantly affects the life expectancy. The lower the poverty depth index of a region, the better the health of the region. With a healthy population, productivity will also increase. With an increase in population productivity from an economic perspective, their income increases thereby increasing the welfare of the region.

Poverty Severity Index to Life Expectancy with a t value of -1.982378 with perhaps a degree of evidence of 0.0492 This indicates that the probability value is less than 0.05 so it may be summed up that the poverty severity index has a serious outcome on life expectancy. A negative sign indicates that the poverty severity index is decreasing. means an increase in life expectancy. Supported by the findings of the investigation, It may be stated that Indonesia still has numerous provinces with a strong thickness index, severity index and percentage of poor people. This finding reveals that both the depth index, severity index and the percentage of the poor are still high in Indonesia today, which affect the difficulty of improving life expectancy.

Life Expectancy has an effect on Economic Growth. The determined t value is 8.202233 with a test statistic of 0.000, basis of the findings of the t test shown in the figure below. This

indicates that the chance is less than 0.05 (0.000 0.05). As a result, it may be argued that life expectancy has a large influence on economic growth.

Life expectancy shows the number of years of life that residents of an area are expected to enjoy. Life Expectancy at Birth (AHH) is an estimate of the number of years of life that can be taken by a person from birth who lives in a certain area of a group of living things. Life expectancy is the estimated average age of a person on the basis of the death rate at that time which tends to remain unchanged in the future. The overall birthrate age that the baby can reach under current conditions. Since many deaths occur in developing countries during infancy and childhood, the average life expectancy is much lower than in developed countries.

4 Conclusion

The final conclusion may be derived from the finding of this study and the explanation previous paragraph:

a. Partially, the three main variables studied showed a significant effect between Health Services with the sub-variable ratio of hospital beds and the ratio of doctors, Health Financing with the sub-variable of deconcentrated funds in the health sector. special allocation funds for health, coverage of JKN program participation, education status with sub-variables average length of school and literacy rate and social status with sub-variables Gini ratio index, indices of the severity of poor, and a measure of the intensity of deprivation affect the life expectancy of people at the level of Province.

b. Simultaneously all sub-variables of Hospital Bed Ratio, Doctor Ratio, Health Sector Deconcentration Fund. Special Allocation Fund for Health, Coverage of JKN Program participation, Average length of schooling, Literacy Rate, Gini Ratio Index, Poverty Depth Index, and Poverty Severity Index also showed a considerable amount and positive effect on life expectancy with a contribution of 0.9759 or 97.59%. While the remaining 2.41% the value of the dependent variable is impacted by external factors even outside the report's selected variable.

c. Life expectancy has a strong and favorable influence on economic growth. Based on the results of the t test, it was obtained 174.202 with a significance level of 0.000. This means that if there is a 1 percent increase in the life expectancy of the population, it will contribute a 17.42% increase to economic growth. Based on the results of Adjusted R-Squared, the contribution value of life expectancy is 97.21% affecting economic growth. Other factors beyond the independent variables in this study impact the remaining 2.79 percent.

Suggestions

Regarding the implications of this study, the researcher analyzed the effect of the Hospital Bed Ratio, Doctor Ratio, and Health Deconcentration Fund. Special Allocation Fund for Health, Coverage of JKN Program participation, Average length of schooling, Literacy Rate, Gini Ratio Index, Scale of Welfare Intensity, and The Suffering Index is a measure of how bad deprivation is on life expectancy and their impact on Indonesia's economic growth in 2015-2019, the authors suggest some of the following:

a. It is suggested to the provincial government to continuously increase the positive rate of public health, especially to meet the bed availability ratio so that public health services are guaranteed.

b. The provincial government is also advised to continue to optimize the service coverage of the JKN Program properly, especially in an effort to overcome the deficit in the membership financing budget.

c. In the education sector, the provincial government is advised to open up job opportunities widely and open to all educated workers, through various economic strengthening in the creative economy sector.

d. It is recommended that the provincial government overcomes the problem of poverty by continuing to better one's condition and education index of by the actions of the public to open decent jobs that can increase the income per capita of the community and strive for equitable development throughout the province, so that the development inequality index (gini ratio) can be achieved. pressed.

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