Health Profile in North Sumatra Province

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Abstract. Public health is an aspect that determines the level of poverty. A healthy society will create a high level of productivity. Government policy guarantees citizens' right to remain healthy by facilitating complete and guaranteed quality health services at relatively low costs so that they can be reached by the entire community, even those from the lower classes. The aim of this research is to try to analyze the influence of government spending in the health sector, the number of community health centers and the number of medical personnel on poverty levels in North Sumatra. The data used is data from the National Socio-Economic Survey (Susenas) March 2022. This data includes many social and economic indicators carried out by the Central Statistics Agency, poverty levels, and total government spending. Number of health centers and number of medical personnel in districts/municipalities in North Sumatra Province. This research uses a panel data model to see the condition of each region. The research results show the influence of different variables in each region, the response of each region is influenced by the profile and resources it has, but in general all policies are able to reduce the level of poverty in society.

Keywords: Poverty Level, Government Expenditures, Number of Community Health Centers, Number of medical personnel
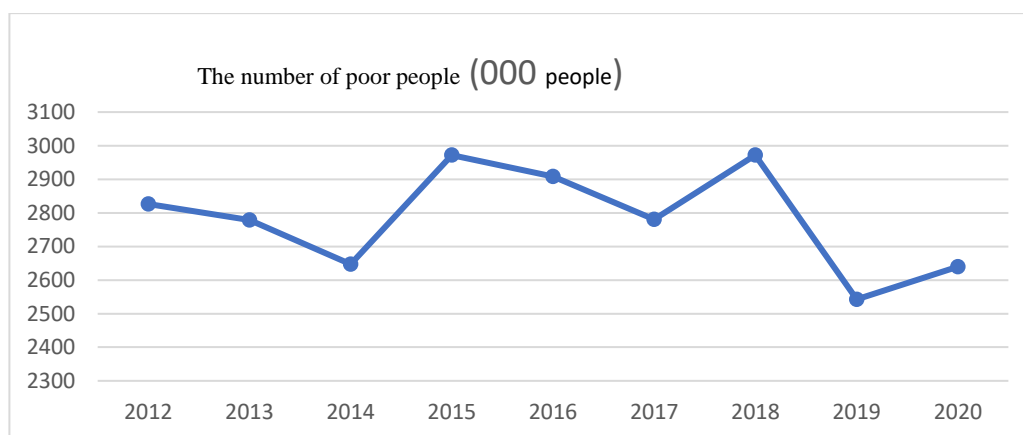
1 Introduction

World Bank defines poverty as "Poverty is lack of shelter. Poverty is being sick and not being able to see a doctor. Poverty is not being able to go to school and not knowing how to read. Poverty is not having a job, is fear of the future, living one day at a time. Poverty is losing a child to illness brought about by unclean water. Poverty is powerlessness, lack of representation and freedom." Poverty is related to not having a place to live, being sick and not being able to go to the doctor, not being able to go to school and not knowing how to read and write. Poverty is when you don't have a job so you are afraid to look at the future, and you don't have access to a source of clean water. Poverty is powerlessness, lack of representation and freedom. More simply, the World Bank (2000) defines poverty as deprivation, which is often measured by the level of welfare. Poverty is usually defined as the extent to which an individual is below the minimum level of living standards acceptable to society or his community. Marianti and Munawar (2006) argue that poverty is a multi-dimensional phenomenon, defined and measured in many ways. In many cases, poverty has been measured in terms of economic well-being, such as income and consumption.Seseorang dikatakan miskin bila ia berada di bawah tingkat kesejahteraan minimum tertentu yang telah disepakati. Niemietz (2011) menyatakan bahwa

kemiskinan adalah ketidakmampuan untuk membeli barang-barang kebutuhan dasar seperti makanan, pakaian, papan dan obat-obatan.

Experts make various versions of the meaning or definition of poverty. Poverty can be a description of material deficiencies, lack of social needs, income, access to certain resources and others. Various theories have been developed in an effort to understand the aspects that determine the occurrence of poverty in more depth. The diversity of theories that have been developed illustrates the differences in viewpoints among observers of the problem of poverty (Maipita, 2014) Poverty is a classic and multisectoral problem. The problem of poverty still plagues all provinces in Indonesia. North Sumatra Province, as one of the largest provinces in Indonesia, is also not free from the problem of poverty. The regional government of North Sumatra continues to strive to reduce the poverty rate in North Sumatra. The local government's efforts are bearing fruit. The poverty rate has decreased by 0.07 points, namely from 8.49 percent in September 2021 to 8.42 percent in March 2022. This poverty rate is equivalent to 1.27 million people in March 2022, or a decrease of around 4.88 thousand people in the last semester. The percentage of poor people in March 2022 in urban areas was 8.76 percent, and in rural areas it was 7.98 percent. Urban areas experienced an increase of 0.08 points, while rural areas decreased by 0.28 points compared to September 2021. The Poverty Line in March 2022 was recorded at IDR. 561,004,-/capita/month with a Food Poverty Line composition of Rp. 423,760,- (75.54 percent) and the Non-Food Poverty Line is IDR. 137,244,- or around 24.46 percent (BPS, 2022).

The number of poor people in North Sumatra Province has fluctuated over the last few years. The development of the number of poor people from 2012-2020 can be seen in Figure 1.1.

Figure 1. The number of poor people (000 people)

Source: BPS, North Sumatra Province, 2021

In the last two years the number of poor people has shown a drastic decline compared to 2018. Efforts to reduce poverty certainly come from all communities in Indonesia with assistance and support from the government. The government will continue to strive to create a healthy and

quality society so that productivity increases. Various efforts are needed to improve the quality of society. The government always spends a number of budgets through various policies to create a quality society.Sumber : BPS , Provinsi Sumatera Utara, 2021

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Poverty is not a trivial problem, poverty is a problem that covers various aspects of people's lives. The poor situation may be caused by the following indicators; Firstly, low levels of education and health will result in limitations in self-development and mobility to work. This will then influence a person's ability to compete in gaining or entering the world of work. Second, low levels of health and nutrition will have an impact on low thinking power and physical endurance and will further reduce initiative in the world of work. Third, limited employment opportunities will further worsen poverty. Getting a job can at least open up the opportunity to change a person's or society's fate. Fourth, isolated or remote conditions will also cause public services such as education, health and others to be less than optimal and unable to reach them. Fifth, political instability will also cause failure in pro-poor policies. With various strategies and government programs in alleviating poverty, their implementation will experience difficulties if they are not supported by good and stable political conditions.

Public health is an aspect that determines the level of poverty. A healthy society will create a high level of productivity. This research tries to analyze the influence of government spending in the health sector, the number of community health centers and the number of medical personnel on poverty levels in North Sumatra. Districts and municipalities have different numbers of health facilities and infrastructure, so people's poverty levels also vary.

The number of health facilities and health workers in each district/city is different, of course this will affect the level of public health. The Regional Government of North Sumatra Province will carry out development in all sectors, especially the health sector. Evenly, according to the needs of the area. Table 1.1. explains the distribution of health workers in all districts/cities in North Sumatra Province. Medan City is a city that has the largest number of medical personnel among districts and municipalities in North Sumatra Province. The population of Medan City is the largest compared to other regencies and cities, so the need for medical personnel is the greatest compared to other regencies/cities

2. Method

Methods The research was conducted in a qualitative descriptive manner. The data taken is the profile of Health in Provinsi Sumatera. The data taken are monthly data and annual data, namely from January 2015 to December 2021. The data collection technique used in this study is the documentation method, using primary data from MSE actors and secondary data available at Bank Indonesia, the Central Agency National Statistics. This research will describe how the number of poor people, gross regional domestic income, number of doctors, and government spending in the health sector have developed.
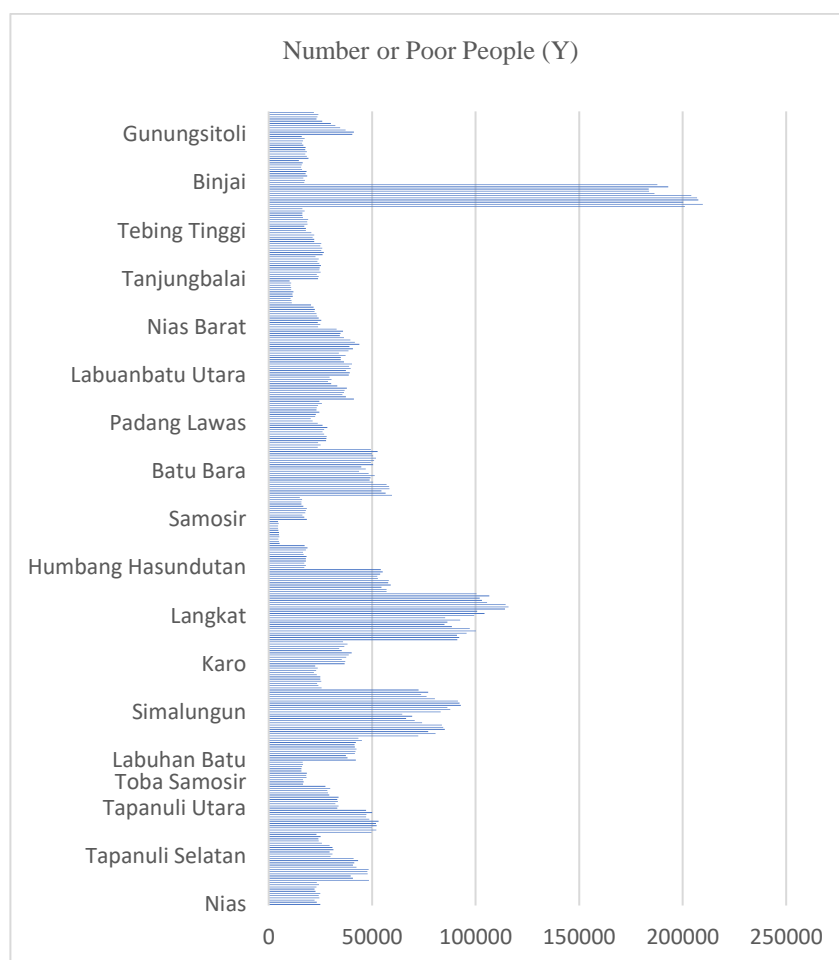
3. Result and Discussion

North Sumatra Province is one of the provinces located on Sumatra Island, with borders with Aceh in the north and West Sumatra and Riau in the south. The majority of tribes in North Sumatra are the Batak tribe who live in the mountains and the Malay tribe who live in the eastern coastal areas. Apart from that, there are also Nias ethnic groups on the West coast of Sumatra, Mandailing, Java and Chinese. North Sumatra Province is located at 1° - 4° North Latitude and 98° - 100° East Longitude. The land area of North Sumatra Province is 71,680 km². North Sumatra can basically be divided into: The east coast is the region within the province that is developing the fastest because the infrastructure requirements are relatively more complete than other regions. The eastern coastal region is also an area with a relatively dense population concentration compared to other regions. In the central area of the province are the Bukit Barisan Mountains. In these mountains there are several plateaus which are pockets of population concentration. The area around Lake Toba and Samosir Island is also home to residents who depend on this lake for their livelihoods.

1. Poverty in North Sumatra Province

Poverty is a condition where a person or group does not have adequate access to economic resources, such as income, education, health services, housing and decent work. Poverty levels can vary significantly between regions, including within districts in North Sumatra. Factors that can influence poverty levels in an area include:

a. Income and Unemployment: The income level of the population as well as the unemployment rate in an area can directly influence the poverty level. Areas with high unemployment rates tend to have higher poverty rates.

b. Education: Access to quality education can help lift people out of poverty. Areas with lower levels of literacy and education tend to have higher levels of poverty.

c. Infrastructure: The availability of basic infrastructure such as roads, electricity, clean water and sanitation can also influence poverty levels. Regions that lack adequate infrastructure may face difficulties in developing the local economy.

d. Health: Access to good and affordable health services also plays an important role in reducing poverty. High health costs and a lack of health facilities can hinder efforts to escape poverty.

e. Economic Development: The availability of jobs, business opportunities and developing economic sectors in an area can help reduce poverty levels.

f. Government Policy: Government policies in terms of income redistribution, provision of social assistance, education, and infrastructure development can have a significant impact on the level of poverty in an area.

g. Natural and Geographical Factors: Geographical factors and natural conditions of an area can also influence poverty levels. Areas that are remote or have limited access to natural resources may face greater economic challenges.
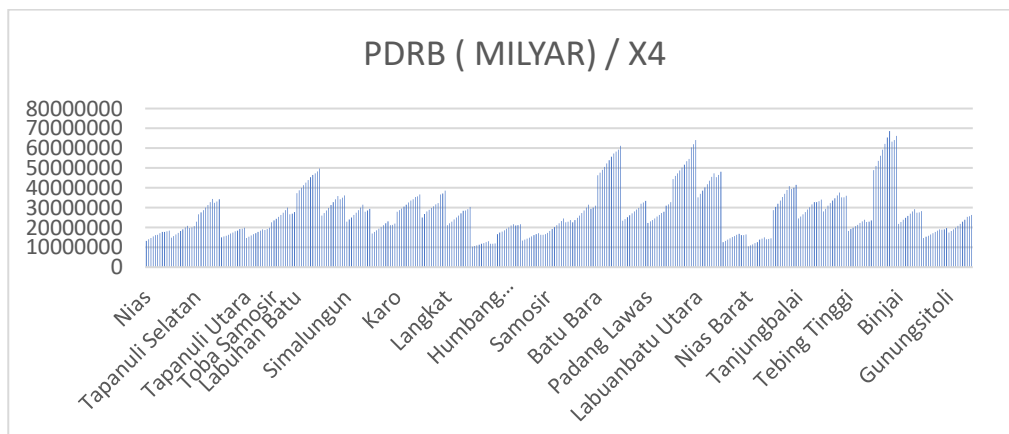

Figure 2.. Number of Poor People in Provinsi Sumatera Utara

Source: National Social and Economic Survey Data, March 2022 (processed)

The number of poor people in districts and municipalities in North Sumatra Province can be seen in Figure 5.1. Most poor communities are located in the Municipality of Medan, the capital of Sumatra Province. The attractiveness of Medan City has succeeded in attracting workers from all districts/municipalities to come and survive, but unfortunately many workers come without having the skills and knowledge to be able to compete so that many workers can only cover basic needs, or even many workers are paid wages below the provincial minimum wage.

1. Gross Regional Domestic Income (GRDP)

Gross Regional Domestic Income (GRDP) theory is an economic concept used to measure the total value of all goods and services produced by a region or region within a certain period of time, usually within one year. GRDP reflects the level of economic activity in a region and can be used to analyze economic growth, income distribution, and the contribution of economic sectors to the regional economy. GRDP is often used as an indicator to compare economic performance between various regions or areas, as well as to design economic development policies. GRDP can be calculated using three different approaches, namely: a. Production Approach: GRDP is calculated based on the total value of all goods and services produced by economic sectors in the region. This approach focuses on economic output and measures the contribution of economic sectors to GRDP. b. Expenditure Approach: GRDP is calculated based on total expenditure for purchasing goods and services in the region. This approach includes household spending, investment, and government spending. c. Income Approach: GRDP is calculated based on the total income received by production factors in the area, such as wages, profits, and rent. This approach assesses the distribution of income between factors of production. Medan Municipality's GRDP is the largest compared to other city districts, because all economic activities are centered in the provincial capital. High GDP indicates that social welfare has also increased. But unfortunately, if we look at the poverty indicators, the highest poverty also occurs in the city of Medan, this condition shows that income distribution is unequal.
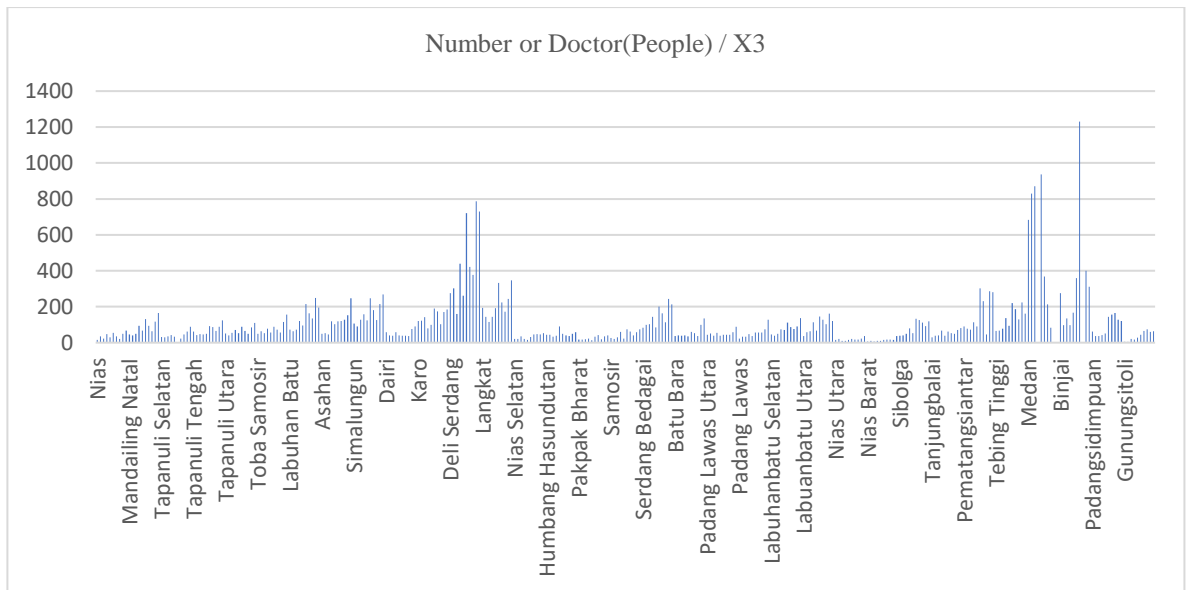

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Figure 3. North Sumatra Province Gross Regional Domestic Income 2012-2022

2. Number of Doctors in North Sumatra Province

    The need for doctors in a province, including North Sumatra, is influenced by various factors, including population growth, level of access to health services, development of medical facilities, and government policies regarding health and medical services. I don't have recent access to data beyond September 2021, but I can provide an overview of the factors influencing physician workforce needs: a. Population Growth: Significant population growth usually results in an increased need for health services, including doctors. The larger the population, the greater the demand for medical services. b. Doctor-Population Ratio: The ratio between the number of doctors and the population is an important indicator to measure the availability of medical personnel. If this ratio is low, it means that the need for doctors may be higher. c. Development of Health Facilities: If there is development or expansion of health facilities such as hospitals or clinics in the province, there will likely be a greater demand for doctors. d. Access to Health Services: If public access to health services increases, such as through government programs or private initiatives, then the demand for doctors may also increase. e. Specialization and Certain Expertise: The need for doctors is not only related to number, but also specialization or certain expertise. Some regions or regions may require specialist doctors or certain experts to treat specific health problems. f. Government Policy: Government policy regarding health plans and development of health infrastructure can influence the need for doctors. The government can plan the placement of doctors in areas where there is a shortage of medical personnel. Level of Education and Training: g. The number of doctors who graduate from medical educational institutions also has an impact on the availability of doctors in an area. An adequate level of education and training will help meet these needs.

Figure 4. Number of Doctors in North Sumatra Province 2012-2022

The number of doctors in districts and townships in Sumatra Province is sufficient compared to the number of people, but distribution to regions is not evenly distributed so that sometimes services in rural areas are less than optimal.

3. Total Government Expenditures in the Health Sector

Government expenditure in the health sector is the amount of funds or budget allocated by the government to finance various programs and activities related to public health. These funds are used to run the health care system, increase the accessibility of health services, develop health facilities, finance medical research, and carry out various efforts to promote public health. Government spending in the health sector can cover several aspects, including:

1. Basic Health Services : this includes funding for hospitals, community health centers, clinics and other health care facilities. These funds are used to ensure that residents have adequate access to basic health services such as medical examinations, prenatal care, pediatric care, and emergency services

2. Public Health Programs: Government funds are also used to support public health programs, such as immunization programs, infectious disease control, health promotion, and health education. The aim is to prevent the spread of disease and increase public awareness about good health practices.

3. Health Facilities; most of the government budget in the health sector is used to finance the construction, maintenance and operation of health facilities.

4. Medical Research : some funds are allocated for medical research and the development of new medicines

5. Administrative expenses, including expenses for the administration and management of the health care system.

The amount of government spending varies, of course, based on needs, area size, population of districts and municipalities in North Sumatra Province. Medan Municipality is the highest municipality which has the largest amount of government expenditure compared to other districts and municipalities. Medan as the provincial capital has the largest population compared to other districts and municipalities. As a center for education, government, trade and other activities, it is natural that Medan is a destination area for residents from other areas, so it requires the most health facilities compared to other areas. Deli Serdang Regency is a district that has the second largest health sector expenditure after Medan Municipality. The large area size results in a large population in Deli Serdang Regency, so it requires more health facilities to facilitate the community's needs in the health sector.

Figure 5. Total Government Expenditures in the Health Sector (Rupiah)

4. Conclusion

The factors causing poverty between districts in North Sumatra are the GRDP variable, and government spending in the health sector and the number of hospitals. The GRDP index

has a negative effect of - 114.78 on the poverty level in North Sumatra, and is not significant because the probability value is $0.6537 > 0, 05$. This means that increasing the GRDP will reduce the poverty level in North Sumatra. The number of hospitals has a negative and significant effect on the level of poverty in Indonesia. This can be interpreted as meaning that when education expenditure increases, the poverty level in Indonesia will decrease. Meanwhile, the probability value is $0.003 < 0.05$. Government spending in the health sector has an effect on health of -2.65 on the poverty level in Indonesia, and is significant because the probability value is $0.0081 < 0.05$. This means that increasing government spending in the health sector will reduce poverty levels in Indonesia. The decrease in the amount of GRDP is not able to reduce the level of poverty, because the workforce absorbed is labor that has basic skills with low income, ultimately the distribution of income is still unequal. Evenly distributing the number of hospitals in all districts and cities is an important thing, but its influence is very small compared to the priorities given by the government, meaning that this expenditure is not yet effective in its implementation, so it is necessary to monitor each expenditure post so that the goal of improving human quality is achieved. The distribution of government expenditure in the health sector provided by the government to improve the welfare of village communities has not been utilized optimally, so it still has a small effect compared to the amount of expenditure made.

References

[1]Bank Dunia (2006). *Era Baru Dalam Pengentasan Kemiskinan Di Indonesia*. The World Bank Office Jakarta

[2] BPS (2022), Badan Pusat Statistik Provinsi Sumatera Utara

[3]Marianti, Ruly., Wawan Munawar. (2006). *Moving Out of Poverty: The Case of Desa Branta Pesisir*, Kabupaten Pamekasan. SMERU Research Institute.

[4]Maipita Indra (2014) Kemiskinan dan Dsitribusi Pendapatan, YKPN Yogyakarta

[5]Kuncoro, M, (2007) , Otonomi dan Pembangunan Daerah, Erlangga

[6]Niemietz, Kristian. (2011). *A New Understanding of Poverty, Poverty Measurement and Policy Implications*. Institute of Economic Affair. London.

[7]KOUSAR, SHAZIA, SAEED AHMAD SABIR, SHAGUFTA MANZOOR, MANZOOR ALI ISRAN, and MAHWISH ZAFAR. (2021). An Application of Vecm to Investigate the Role of Socio-Economic Factors in Poverty: New Evidence from Pakistan." *Estudios de Economia Aplicada* 39 (2). https://doi.org/10.25115/eea.v39i2.3797.

[8]Liu, Fengqin, Li Li, Yun Qian Zhang, Quang Thanh Ngo, and Wasim Iqbal.(2021). Role of Education in Poverty Reduction: Macroeconomic and Social Determinants Form Developing Economies. *Environmental Science and Pollution Research*. https://doi.org/10.1007/s11356-021-15252-z.

[9]Mihai, Mihaela, Emilia Ţiţan, and Daniela Manea. (2015). Education and Poverty. *Procedia Economics and Finance* 32 (15): 855–60. https://doi.org/10.1016/s2212-5671(15)01532-4.

[10]Nurdiansah, Sendi Nugraha, and Laelatul Khikmah. (2020). Binary Logistic Regression Analysis of Variables That Influence Poverty in Central Java. *Journal of Intelligent Computing & Health Informatics* 1 (1). https://doi.org/10.26714/jichi.v1i1.5381.

[11]Osarumwense, Osabuohien Irabo.(2014). UNIVERSITY EDUCATION AND POVERTY DYNAMICSLINKAGESIN NIGERIA: A STATE LEVEL ANALYSIS USING LOGIT AND PROBIT MODELS." *Pakistan Journal of Education* 30 (2). https://doi.org/10.30971/pje.v30i2.90.

[12]Putri, Rahmaniar Zulfana, and Muhammad Effendi. (2021). Pengaruh Pertumbuhan Ekonomi, Belanja

Bantuan Sosial Dan Kesempatan Kerja Terhadap Pengentasan Kemiskinan Di Kota Banjarmasin. *JIEP: Jurnal Ilmu Ekonomi Dan Pembangunan* 4 (2). https://doi.org/10.20527/jiep.v4i2.4392.

[13]Teguh, Dartanto, and Nurkholis Nurkholis.(2012). Munich Personal RePEc Archive Finding out of the Determinants of Poverty Dynamics in Indonesia : Evidence from Panel Data." *Munich Personal RePEc Archive*, no. 41185.

[14]Undang-Undang Republik Indonesia Nomor 20 Tahun 2003, http://pusdiklat.perpusnas.go.id

World Bank,(2022), https://www.worldbank.org/in/country/indonesia/overview