Effect of Population Growth on Employment Opportunities and Per Capita Income in the Special Region of Yogyakarta

Khairurrafi Iqbal[1*], Fariq Hafiyan[2], Fashuaranty Nurfadilla Diniyah[3], Haris Al-rasyid[4], Alviani Sartika[5], Nur'aini Latifah[6]

[1, 2, 3, 4, 5]) Study Economic Development Program, Universitas Islam Bandung, Bandung, Indonesia

Corresponding Author Email: khairurrafi.iqball@gmail.com

ABSTRACT

Indonesia is a country with a large population. During the New Order government, Indonesia's population was relatively large, which led to the notion that the population was the basic capital of development. Development planners see that a large population is both an asset and a burden in development. Population growth is an important indicator in a country. The classical economists pioneered by Adam Smith considered that population is a potential input that can be used as a factor of production to increase the production of a corporate household. If the population in an area increases, it will positively impact the economy but must be accompanied by capital formation, which at certain times will directly impact state revenues. Economic development is multidimensional in nature covering various aspects of people's lives, not just one aspect, namely the economic aspect. According to Lincoln, "Economic development can be defined as any activity carried out by a State to develop economic activities and the standard of living of its people". Meanwhile, one indicator of economic development is population. The population in Indonesia has increased from year to year, this has resulted in a decrease in the level of welfare. DI Yogyakarta Province is one of the 34 provinces in Indonesia. DI Yogyakarta Province has a dense population and is divided into 5 (five) autonomous regions, namely: Yogyakarta City, Kulonprogo Regency, Gunungkidul Regency, Sleman Regency, and Bantul Regency. The population in DI Yogyakarta Province has also increased from year to year. To achieve prosperity as the main goal of development, in addition to paying attention to population growth, economic growth must also be a concern. The rate of economic growth is one indicator to see the success of the development. The rate of economic growth in Indonesia can be seen from its Gross Domestic Product (GDP), while the rate of economic growth in Yogyakarta Province can be seen from its Gross Regional Domestic Product (GDP).

1. INTRODUCTION

Indonesia is a country with a large population. During the New Order government, Indonesia's population was relatively large, which led to the notion that the population was the basic capital of development. Development planners see that a large population is both an asset and a burden in development.

Population growth is an important indicator in a country. The classical economists pioneered by Adam Smith considered that population is a potential input that can be used as a factor of production to increase the production of a corporate household.

If the population in an area increases, it will positively impact the economy but must be accompanied by capital formation, which at certain times will directly impact state revenues. Economic development is multidimensional in nature covering various aspects of people's lives, not just one aspect, namely the economic aspect. According to Lincoln, "Economic development can be defined as any activity carried out by a State to develop economic activities and the standard of living of its people". Meanwhile, one indicator of economic development is population. The population in Indonesia has increased from year to year, this has resulted in a decrease in the level of welfare.

DI Yogyakarta Province is one of the 34 provinces in Indonesia. DI Yogyakarta Province has a dense population and is divided into 5 (five) autonomous regions, namely: Yogyakarta City, Kulonprogo Regency, Gunungkidul Regency, Sleman Regency, and Bantul Regency. The population in DI Yogyakarta Province has also increased from year to year. To achieve prosperity as the main goal of development, in addition to paying attention to population growth, economic growth must also be a concern. The rate of economic growth is one indicator to see the success of the development. The rate of economic growth in Indonesia can be seen from its Gross Domestic Product (GDP), while the rate of economic growth in Yogyakarta Province can be seen from its Gross Regional Domestic Product (GDP). The success of economic development in DI Yogyakarta is the main attraction for residents of other areas to come looking for work. Continued population growth will become a large market share for products and be able to attract foreign investors to invest in DI Yogyakarta, which will ultimately affect the economic development of DI Yogyakarta, so it is necessary to conduct research on this issue.

2. LITERATURE REVIEWS

2.1 Population growth

Residents (Central Statistics Agency 2022) are all people who are domiciled in the geographical area of the Republic of Indonesia for 6 months or more and or those who have been domiciled for less than 6 months but aim to settle.

Population growth always leads to humans and when population growth develops rapidly it can affect economic growth, poverty and income inequality, education, health, food availability, environment, and international migration. According to Lincoln Theory, when population growth is out of control, there will be problems and several obstacles, because high population growth then will increase the number of workers and land to create very limited job opportunities.

This change in population is closely related to the population growth rate which can be positive or negative. The positive population growth rate increases the population. This increase is caused by birth factors, an increase in the quality of life or an improvement in the nutrition of the population, and immigration, namely the movement of people from outside into an area. While the negative growth rate means reducing the population. This reduction is influenced by the factors of death, war, disease outbreaks, and emigration, namely the movement of people from within to outside a region. Population growth is unavoidable, but the rate of growth can be controlled. One of them is the Family Planning (KB) program launched by the government in the 1970s.

Measuring the progress of an economy requires the right measuring instrument. Some tools to measure economic growth include:

    a. Gross Regional Domestic Product (GRDP). Gross Domestic Product (GDP) or at the regional level commonly called Gross Regional Domestic Product (GDP) is the number of goods or services produced by an economy within 1 year and is expressed in market prices. GDP or GRDP is a measurement that is global in nature, both of which are not appropriate measurement tools because they have not been able to prosper the real population. Welfare should be owned by every country in order to always increase per capita income.

    b. Income per capita. Per capita income is used to better measure the growth of an area because by measuring growth it can be seen the welfare of the population in that area. Per capita income at both the national and regional levels is the total national GDP or GRDP of an area divided by the total population of the country or region concerned or what is known as the average GDP or GRDP.

2.2 Economic Development

Economic development is a process of improving the quality of all life and human capabilities by increasing the standard of living, self-esteem, and freedom of the people (Todaro 2015). Development is characterized by high economic growth rates related to the allocation of resources owned. The resources in question are natural resources, labor, and capital.

Some countries use the rate of increase in the Gross Regional Domestic Product (GDP) to see the pace of economic development. It is clear that economic development is not only to achieve high per capita income. The level of economic success should be aided by the Human Development Index (HDI), which is a composite measure that reflects not only income but also life expectancy and educational attainment. (UNDIP, 2001 ;3) The Human Development Index (HDI) includes three components, namely life opportunities (Longevity), knowledge (Knowledge), and a decent standard of living.

2.3 Link page of Population Growth with Economic Development

The income of an area can be obtained from the activities of the population in the economy in the form of withdrawing taxes, levies, and so on. Having a population has a positive impact on increasing the economic activity of a region and increasing local revenue.

Where, if the population in an area increases, it will have a positive impact on the economy but must be accompanied by capital formation, which at certain times will have a direct impact on the acquisition of regional original income, through the collection of taxes and fees from residents to local governments.

Assuming other factors are constant (caters paribus), this research is only directed to examine two of these various factors which are associated with economic growth in DI Yogyakarta Province, namely in terms of labor and income per capita.

3. METHODOLOGY

3.1 Research Location Objects

This research was conducted in the Special Region of Yogyakarta. The consideration was that the research was conducted in the Special Region of Yogyakarta so that the research results could be used to provide information about population growth and per capita income in the Special Region of Yogyakarta.

3.2 Method Collection Data

The research method that we use here is a quantitative research method. Quantitative data is data that is measured on a numerical scale (numbers), which can be divided into interval data and ratio data. In this research, the data source used is secondary data. Secondary data is a source of data obtained indirectly through intermediary media (obtained and recorded by other parties). Secondary data is generally in the form of evidence, historical records, or reports that have been compiled in archives (published and unpublished documentary data). In this study, the secondary data referred to is GRDP and Population data in the Special Region of Yogyakarta from 2020 – 2022 for the initial period obtained from (Central Bureau of Statistics 2022).

3.3 Variable Operational Definitions

Population growth is a potential input that can be used as a factor of production to increase the production of a company household as measured in percent units. The formulation for calculating the natural population growth rate is formulated as follows:

Pt = Po + (L – M)

% = {(L – M)/Po} x 100%

Where:

Pt = population at the end of the calculation year

Po = total population in the initial year of calculation

L = number of births

M = number of deaths

% = percentage of population growth

Regarding population growth rates, the criteria for population growth rates can be divided into three, namely:

    a.   The rate of growth is fast if the population growth rate reaches more than 2% annually.

    b.   Moderate growth rate, if the population growth rate ranges from 1% - 2% annually.

    c.   Slow growth rate, if the population growth rate is less than 1% annually.

The income per capita, Income Per Capita is the total income of the state divided by the total population so that the average income of the population is known.

Employment Opportunity, Employment opportunities are the availability of jobs for the workforce who need work or a condition that describes the availability of jobs in the community.

4. RESULT AND DISCUSSION

4.1 Economic Growth and Development

Growth and development are important aspects of various fundamental changes in social structure, social behavior, and social institutions, as well as in the aspects of economic growth, reduction of income inequality, and eradication of poverty.

Regional economic development is a process in which local governments and communities manage existing resources

and form a pattern of a partnership between local government and the private sector to create new jobs and stimulate economic development in the region. Regional economic development is a process, namely a process that includes the formation of new institutions, development of alternative industries, improvement of existing workforce capacity to produce better products and services, identification of new markets, transfer of knowledge, and develop new companies.

The Special Region of Yogyakarta is one of the provinces on the island of Java, has an area of 3,185.80 km2, consists of four regencies, which are further divided into 78 Kapanewon / Kemantren (sub-districts that are in the district area are called Kapanewon, those in the city are called Kemantren), and 438 districts. According to the 2022 population census, DIY has a population of 4,021,816, an increase from 2021 which amounted to 3,970,220.

The success or failure of a region's development performance can be seen through economic growth. Economic growth describes changes in the economic condition that occur in a country or region on an ongoing basis towards a condition that is considered better and more advanced than before. One of the approaches to be considered in looking at development performance from an economic perspective can be seen from the analysis of the growth of the Gross Regional Domestic Product (GRDP). Through an analysis of GRDP growth from various economic activities, developments in economic changes and estimates of their development in the future can be analyzed. In addition, GRDP analysis can also be carried out by sector, so that the GRDP distribution can be identified based on the business sector.

In terms of district/city, the economic growth of the Special Region of Yogyakarta has quite varied patterns according to the potential of each region. The economic growth achieved at the provincial level is a combination of the growth of all regencies/cities in the province of the Special Region of Yogyakarta.

In 2021 GRDP in DIY is starting to crawl back, after experiencing a significant decline in the previous year due to Covid-19, although it has not fully recovered. The realization of DIY's GRDP growth recorded a growth of 2.82% (yoy). DIY's economic performance is lower than the National growth of 5.02% (yoy).
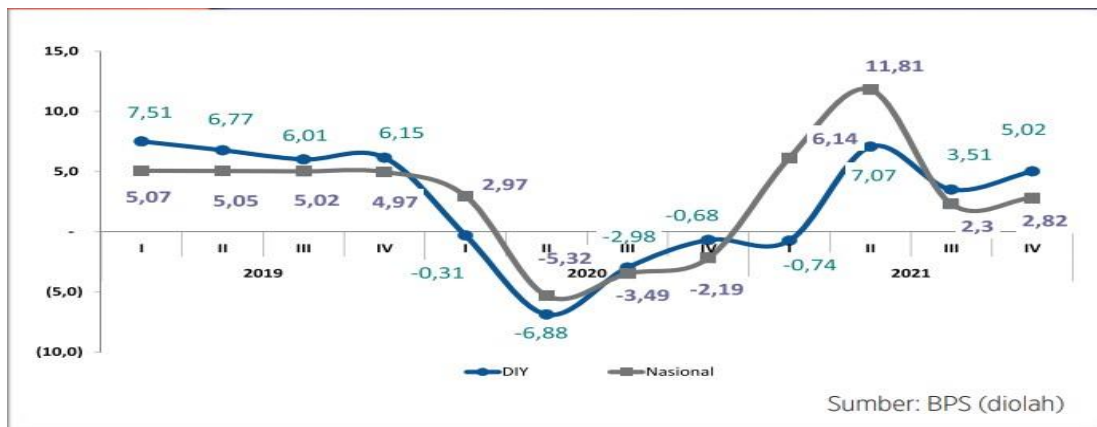
Indikator	2019				2020				2021			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Ekonomi Makro Regional												
Produk Domestik Regional Bruto (%,yoy)	7,51	6,77	6,01	6,16	(0,30)	(6,87)	(2,97)	(0,69)	5,74	11,88	2,31	2,82
Berdasarkan Sektor												
Pertanian, Kehutanan, dan Perikanan	4,89	-1,18	-0,13	-0,73	-9,44	10,65	7,50	15,21	6,82	-11,29	-12,90	25,41
Pertambangan dan Penggalian	12,44	2,63	2,10	-3,25	-6,91	-11,73	-10,60	-6,22	-3,05	1,23	-0,74	-9,14
Industri Pengolahan	5,74	5,16	6,05	5,97	-1,32	-7,50	-5,32	-3,33	0,50	6,74	-2,56	-2,88
Pengadaan Listrik, Gas	7,35	4,85	2,83	6,66	7,26	-4,74	1,81	-8,76	-5,72	6,39	0,89	8,51
Pengadaan Air	6,11	8,70	7,75	12,81	-1,84	3,16	1,80	-1,15	18,24	5,43	2,80	2,40
Konstruksi	20,31	18,91	8,46	11,83	-9,75	-22,10	-12,19	-17,71	11,40	21,42	14,63	-1,43
Perdagangan Besar dan Eceran, dan Reparasi Mobil dan Sepeda Motor	5,28	5,27	6,05	4,06	0,00	-9,43	-4,70	-3,68	-0,26	6,60	-1,71	1,77
Transportasi dan Pergudangan	4,29	2,08	4,08	3,78	-3,23	-34,30	-22,98	-19,55	-12,01	23,57	-7,79	9,56
Penyediaan Akomodasi dan Makan Minum	6,51	7,74	8,93	12,16	-1,12	-39,20	-18,82	-8,91	-2,13	58,81	-5,32	-2,89
Informasi dan Komunikasi	7,19	7,33	8,77	6,53	11,24	20,34	17,83	28,38	31,42	18,43	16,16	4,18
Jasa Keuangan	15,93	7,83	6,19	4,61	-1,98	0,19	-1,69	-0,71	0,27	5,18	2,57	-2,07
Real Estate	5,58	5,03	7,28	5,79	2,56	1,03	1,87	-0,36	-1,46	1,75	0,19	1,81
Jasa Perusahaan	5,66	6,38	7,67	7,19	-6,97	-27,08	-11,37	-14,05	4,58	26,19	2,22	3,16
Administrasi Pemerintahan, Pertahanan dan Jaminan Sosial Wajib	4,96	8,47	0,63	0,12	2,23	4,54	-4,29	-9,84	1,92	-2,85	0,56	-0,86
Jasa Pendidikan	6,32	6,14	6,65	7,12	5,99	5,13	3,85	3,05	5,25	4,85	4,76	5,13
Jasa Kesehatan dan Kegiatan Sosial	6,63	7,11	7,09	5,65	9,55	17,91	21,85	26,88	10,93	3,94	6,54	-2,25
Jasa lainnya	6,52	5,83	6,51	6,13	-2,18	-42,75	-23,37	4,22	5,38	79,29	11,42	13,34
Berdasarkan Permintaan												
- Konsumsi Rumah Tangga	3,34	3,67	4,50	3,71	2,47	(5,71)	(4,18)	(3,51)	(1,65)	5,52	(0,05)	3,43
- Konsumsi Pemerintah	3,16	3,22	2,13	3,82	2,34	(0,83)	(2,72)	(1,93)	(0,59)	1,83	(0,47)	0,25
- Pembentukan Modal Tetap Bruto (PMTB)	15,00	14,44	10,37	1,91	(6,97)	(19,09)	(14,47)	(12,26)	6,04	19,03	8,35	1,41
- Ekspor Luar Negeri	(1,80)	2,80	(0,11)	(0,99)	5,25	(34,24)	(16,18)	(7,16)	(2,08)	53,06	18,78	28,63
- Impor Luar Negeri	(7,01)	(4,84)	(11,25)	(11,40)	(3,68)	(12,31)	(26,83)	(29,28)	(4,23)	5,17	10,29	18,84
- Net Ekspor Antardaerah	(38,07)	10,54	83,96	(22,41)	30,79	(59,31)	(328,51)	(61,03)	(349,18)	(63,66)	(3,76)	4,05
Laju Inflasi Tahunan												
- Kota Yogyakarta (%,yoy)	2,61	3,11	2,99	2,77	2,95	1,95	1,66	1,40	1,43	1,50	1,58	2,29
Bank Umum*												
Aset (Rp Miliar)	69.012	72.169	73.926	75.662	73.715	75.866	80.141	81.320	81.917	84.661	85.394	87.110
Dana Pihak Ketiga (Rp Miliar)	58.455	60.204	61.582	61.910	62.711	64.043	66.073	66.979	67.942	69.725	69.410	72.545
Kredit (Rp Miliar)	45.247	48718,6	55.798	44.543	44.726	44.569	43.478	44.349	44.820	45.278	45.602	46.095
Loan to Deposit Ratio (%)	77,41	80,9219	90,61	71,95	71,32	69,59	65,80	66,21	65,97	64,94	65,70	63,54
NPL Gross (%)	1,82	1,99777	1,85	2,36	3,81	4,25	3,05	2,80	2,89	3,15	3,40	3,53

*Berdasarkan Lokasi Proyek

In order to find out whether the economy is experiencing growth, it must be distinguished from the real GRDP of one year from the real GRDP of the previous year. The formula for calculating economic growth can be written as follows:

$$Yt = Real\ PDRB - Real\ PDRB_{-1}\ /\ Real\ PDRB_{-1}\ X\ 100$$

Description:

Yt = Economic growth

Real PDRB = Real Gross Regional Domestic Income

Real t = Period years

4.2 Employment

In August 2021, the working-age population in DIY was recorded at 3,175.79 thousand people which grew 1.37% (yoy) when compared to August 2020. However, not all residents who have entered working age are actively involved in economic activities or enter the job market. This is shown by the number of residents who are not included in the labor force. The population that is not included in the labor force is recorded at 840.83 thousand people or 26.5% of the total working-age population. The total non-labor force population in the intended reporting period decreased compared to August 2020, -7.05% (yoy).

In line with the increasing working-age population, the number of labors force is also growing. The total working age population was recorded at 2,334.96 thousand people or 73.52% of the total working age population. The total workforce population during the reporting period grew 4.79% (yoy), or higher than the same period the previous year, which recorded a decrease of 0.8% (yoy). The increase in the working-age population that is active in economic activities has resulted in a higher labor force participation rate (TPAK)3. In August 2021, TPAK was recorded at the level of 73.52%, higher than in the same

period the previous year (71.12%). In particular, the TPAK for women and men in August 2021 has increased from the previous time in August 2020. The TPAK for men increased from 78.20% to 82.83%, while the TPAK for women increased from 64.33% to 64.59% in February 2021.

Status Keadaan Ketenagakerjaan	Ags-19	Pertumbuhan % (yoy)	Ags-20	Pertumbuhan % (yoy)	Ags-21	Pertumbuhan % (yoy)
Penduduk Usia Kerja	3.088,83	1,45	3.132,75	1,42	3.175,79	1,37
Angkatan Kerja	2.246,19	0,89	2.228,16	-0,80	2.334,96	4,79
Bekerja	2.174,71	1,09	2.126,32	-2,23	2.228,52	4,81
Pengangguran	71,48	-4,73	101,85	42,49	106,43	4,50
Bukan Angkatan Kerja	842,64	2,97	904,59	7,35	840,83	-7,05

Sumber: BPS DIY

Sumber: BPS DIY
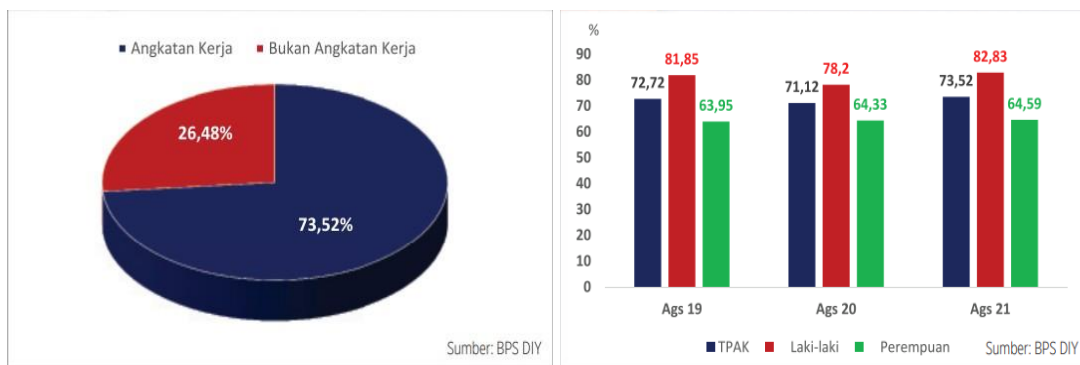
Since the occurrence of Covid-19, the DIY workforce absorbed has not experienced much change compared to the previous year's period. After the implementation of the Community Activity Restrictions (PPKM) policy, the percentage of the working population was quite stable according to employment. DIY's workforce absorption in August 2021 is still dominated by three main jobs, namely the trade sector at 21.97%; the agriculture sector at 18.22%; and the Manufacturing Industry sector at 17.71%. The biggest increase occurred in employment in the trade sector, which increased by 0.95 points from 21.02% in August 2020 to 21.97% in August 2021. The higher absorption of labor in the trade sector is thought to be a shift from tourism actors whose livelihood activities have not yet recovered during the spread of COVID-19. In addition, with the third largest share, employment for Agriculture LU experienced the largest decrease of 1.95 points from 20.17% in August 2020 to 18.22% in August 2021.

Several business fields that are directly related to tourism are still in recovery efforts. Absorption of labor in the Accommodation and Food and Beverage business field experienced limited growth, increasing from 8.24% in August 2020 to 8.46% in August 2021. This was due to the emergency PPKM in July 2021 which greatly impacted mobilization to DIY and affect tourist visits. Meanwhile, the transportation sector decreased by 0.26 points from 3.44% in August 2020 to 3.18% in August 2021.

No	Lapangan Pekerjaan	Aug-19	Aug-20	Aug-21
1	Pertanian	19,06	20,17	18,22
2	Pertambangan	0,76	0,76	0,63
3	Industri Pengolahan	17,05	17,03	17,71
4	Pengadaan Listrik dan Gas	0,18	0,13	0,13
5	Pengadaan Air	0,19	0,24	0,37
6	Konstruksi	6,77	6,02	6,53
7	Perdagangan	18,99	21,02	21,97
8	Transportasi	3,96	3,44	3,18
9	Akomodasi dan Makan Minum	9,4	8,24	8,46
10	Informasi dan Komunikasi	0,99	0,95	1,33
11	Jasa Keuangan	1,55	1,36	1,39
12	Real Estate	0,07	0,16	0,22
13	Jasa Perusahaan	2,44	1,61	1,87
14	Administrasi Pemerintahan	3,59	3,6	4,02
15	Jasa Pendidikan	6,85	6,15	6,2
16	Jasa Kesehatan	2,16	2,13	2,28
17	Jasa Lainnya	5,99	6,52	5,49

Since the outbreak of Covid-19 in 2020, 428.42 thousand people have experienced the impact, consisting of 12.61 thousand unemployed people, 16.67 thousand people not in the labor force, 15.82 thousand people temporarily not working, and a working population that has experienced a reduction in working hours 383.32 thousand people.

5. CONCLUSION

From the results of the discussion, several conclusions can be put forward, including the following:
a) Population growth has a positive and significant effect on economic growth in the Special Region of Yogyakarta, meaning that if population growth increases it will encourage economic growth in the Special Region of Yogyakarta.
b) In August 2021, TPAK was recorded at a level of 73.52%, higher than in the same period the previous year (71.12%). In particular, the TPAK for women and men in August 2021 increased from the previous August 2020. The TPAK for men increased from 78.20% to 82.83%, while the TPAK for women increased from 64.33% to 64.59 % in February 2021.

ACKNOWLEDGMENTS

a) Local governments must really be aware of what indicators are capable of spurring economic growth in order to reduce unemployment, this is caused by increased levels of education and training of local workers or changes in the economic structure towards a more modern one.

b) It is necessary to increase the utilization of good and organized human resources with the aim of creating a productive society that will result in good economic growth

c) To prevent high unemployment growth, all elements of society must start with entrepreneurial principles so that when looking for work they do not wait for job vacancies but are able to create jobs.

Given the relatively high population growth in DIY, it is hoped that the developmentstrategy in DIY is more directed towards a development-oriented strategy human resource development should always be associated with employment.

REFERENCES

Source book :

Todaro, Michael P. 2015.*Economic Development.*New York: Pearson Education.

Source article journal :

Statistics Center. 2021.*Social and Population*, April 30.

Central Bureau of Statistics. 2021. "Social & Population."*Human Development Index 2020*, April 21:4. 2022. "Social & Population".

Dedek Hasanur, Zainul. 2017. "The Influence of Population and Economic Growth

Against Regional Original Income"*Thesis*.