Analysis of Social Inequality and Education Level in South Sulawesi Province, Indonesia

Besse Qur'ani[1*], Abdul Hadis[2], Muh. Ashary Anshar[3], Rukman Pala[4]

[1,2]State University of Makassar, South Sulawesi, Indonesia
[3]IBK Nitro, Makassar, South Sulawesi, Indonesia
[4]National Research and Innovation Agency (BRIN), Indonesia

ABSTRACT	Published Online: July 12, 2023

The purpose of this research is to analyze social inequality and education levels in regencies and cities in South Sulawesi so that the development process can be improved and there is an equitable distribution of development. This type of research is survey research with quantitative data. The factors analyzed and influencing social inequality in this study are population growth, population density, level of education, and the number of workers. The findings show that the average socio-economic inequality in the high category includes Selayar regency, Bulukumba regency, Bantaeng regency, Takallar regency, Pangkep regency, Soppeng regency, Wajo regency, Sidrap regency, Bone regency, Barru regency, Enrekang regency, Tana Toraja regency, North Luwu regency, Luwu regency, East Luwu regency and Makassar city. Meanwhile, the average socio-economic inequality in the moderate category includes Jeneponto regency, Gowa regency, Maros regency, Sinjai regency, Pinrang regency, North Toraja regency, Pare-pare city, and Palopo city. The suggestions to be conveyed are to expand the study by adding several related variables and developing a Green Open Space (RTH) variable to see the environmental quality of each Regency and City in responding to climate change issues.

KEYWORDS:
Social inequality, education level, South Sulawesi.

1. INTRODUCTION

Development is a process in realizing equity, justice, prosperity and welfare for the people without discrimination (Gupta & Vegelin, 2016). Efforts to equalize development are the noble ideals of the Indonesian people which must be realized in eliminating disparities (Firdaus, 2020). The existence of equitable development is expected to accelerate economic growth, create jobs, and eliminate development gaps (Stanef, 2012; Didiharyono et al, 2023). Experts have formulated that economic progress and equitable development are two important things in achieving the goals of justice and prosperity (Hernovianty et al, 2022).

Among the challenges in national development is overcoming the problem of inequality and development gaps (Greig, 2007). Data from the Central Statistics Agency (BPS) show that over the last three decades, the average rate of economic growth in Indonesia has been relatively high, but at the same time the income gap has also been high. Poverty data for 1970–2017 shows that the average poverty rate in urban areas is 13.9 percent, while in rural areas it reaches 19.0 percent (BPS, 2018). These conditions indicate that rural residents who generally work in the agricultural sector experience poverty most often than urban residents (Sukwika, 2018; Ivanic & Martin, 2018).

Development gaps will become the root of the problem in progress between regions so that justice is needed in order to bring prosperity to the community (Wahyuntari & Pujiati, 2016). Development gaps are sometimes influenced by differences in geographical conditions, education levels, economic growth, and other social conditions of the population (Rosmeli, 2018). If the development gap is not immediately anticipated, it will become an obstacle and a challenge for economic development that will cause losses on a fairly large scale (Hofman, 2014; Mansi et al, 2020). It can even trigger bigger problems such as social conflict in society which takes many victims (Kagan et al, 2019).

The regencies and cities in South Sulawesi Province still have problems of social inequality, including the uneven distribution of the population and tend to be concentrated in

Corresponding Author: Besse Qur'ani

*Cite this Article: Besse Qur'ani, Abdul Hadis, Muh. Ashary Anshar (2023). Analysis of Social Inequality and Education Level in South Sulawesi Province, Indonesia. International Journal of Social Science and Education Research Studies, 3(7), 1297-1303

urban centers with the availability of fairly complete development facilities (Dini & Fauzan, 2020; Surya et al, 2020). While the population density in rural areas, the distribution is uneven and the area is quite large and depends on agricultural activities. The low level of population density also makes the development process quite difficult (Hu et al, 2013; Hernovianty et al, 2023).

In addition, the factors of education level and number of labor force are also important indicators in supporting sustainable development (Haque et al, 2019; Strelan et al, 2020). Based on this explanation, it is necessary to conduct a study related to the analysis of social inequality and education levels in districts and cities in South Sulawesi so that the development

process can be improved and there is an equitable distribution of development.

II. METHODOLOGY

This type of research is survey research with quantitative data. Data collection techniques apply literature studies, interviews, documentation, and tabulation of secondary data obtained online from the Central Statistics Agency (BPS) and related institutions of South Sulawesi province. The analytical method used is scoring analysis based on the assumption of benchmarks for each aspect of the assessment as shown in Table 1 below.

Table 1. The indicator for determining the score for each aspect of social inequality (Hernovianty et al, 2022).

No.	Variable	Data	Parameter	Score	Inequality Criteria
1	Population growth	Total population 2020-2021	LPP of Regencies/Cities < LPP of province	3	High
			LPP of Regencies/Cities = LPP of province	2	Middle
			LPP of Regencies/Cities > LPP of province	1	Low
2	Population density	Total population divided by the area.	Population density of Regencies/Cities < Population density of province	3	High
			Population density of Regencies/Cities = Population density of province	2	Middle
			Population density of Regencies/Cities > Population density of province	1	Low
3	Education level	Total population by Education and Total population by school age.	Total population by education < Total population by school age	3	High
			Total population by education = Total population by school age	2	Middle
			Total population by education > Total population by school age	1	Low
4	Labor force	Total of working population and total population of working age.	Total of working population < Total population of productive age	3	High
			Total of working population = Total population of productive age	2	Middle
			Total of working population > Total population of productive age	1	Low

In this study the number of observations was 3 so that the results obtained for the number of classes were $k = 1 + 3.3 \log 3 = 2.57$ and rounded up to 3 class intervals. As for determining the range of data using the interval formula with 3 classes. The highest and lowest scores are obtained from the largest and smallest total scores for each indicator of social inequality, namely population growth, population density, education level, and labor force. The equation is,

$$I = \frac{Range}{K} \qquad (1)$$

Description, I = Interval, Range = Highest Score - Lowest Score, and K = Class.

$$I = \frac{12-4}{3} = 2,67 \text{ or } 3$$

Then the class intervals applied to measure the level of social inequality in each district and city in South Sulawesi, among others

> 3 – 6 : Low inequality
> 6 – 9 : Middle inequality
> 9 – 12 : High inequality.

III. RESULTS AND DISCUSSION
Population growth

Population growth is interpreted as a description of the rate of population growth in a certain period by considering death, birth, immigration and emigration rates. The population growth rate (LPP) for each district in South Sulawesi is different, so a different score is also obtained. Comparing the LPP of the province with the LPP of the Regency is a way to see regional disparities from the aspect of population growth as shown in Table 1. The calculation of the population growth score for the regencies and cities of South Sulawesi can be seen in Table 2.

Table 2. Population growth scores in the regencies and cities of South Sulawesi.

Regencies and cities	Total populations 2020 (000)	Total populations 2021 (000)	LPP (%)	Indicator	Score	Inequality Criteria
Kep. Selayar	137.1	138	0.65	0.72	3	High
Bulukumba	437.6	440.1	0.57	0.72	3	High
Bantaeng	196.7	197.9	0.61	0.72	3	High
Jeneponto	401.6	405.5	0.97	0.72	1	Low
Takalar	300.9	302.7	0.59	0.72	3	High
Gowa	765.8	773.3	0.97	0.72	1	Low
Sinjai	259.5	261.4	0.73	0.72	1	Low
Maros	391.8	396.9	1.3	0.72	1	Low
Pangkep	345.8	348.2	0.69	0.72	3	High
Barru	184.5	185.5	0.54	0.72	3	High
Bone	801.8	806.8	0.62	0.72	3	High
Soppeng	235.2	235.6	0.17	0.72	3	High
Wajo	379.1	379.4	0.79	0.72	1	Low
Sidrap	320	323.2	1.01	0.72	1	Low
Pinrang	404	407.4	0.84	0.72	1	Low
Enrekang	225.2	227.5	1.02	0.72	1	Low
Luwu	365.6	367.5	0.52	0.72	3	High
Tana Toraja	280.8	285.2	1.57	0.72	1	Low
Luwu Utara	322.9	325.1	0.69	0.72	3	High
Luwu Timur	296.7	300.5	1.29	0.72	1	Low
Toraja Utara	261.7	264.1	1.15	0.72	1	Low
Makassar city	1,423.9	1,427.6	0.26	0.72	3	High
Parepare city	151.5	152.9	0.92	0.72	1	Low
Palopo city	184.7	187.3	1.41	0.72	1	Low

Based on the Table 2, the highest LPP is owned by Tana Toraja Regency, which is equal to 1.57% where the LPP of the Regency is higher than the LPP of the Province of 0.72%, so that the level of inequality in Tana Toraja Regency is classified as low inequality. The lowest LPP is owned by Soppeng Regency at 0.17% where the Regency LPP is lower than the LPP of the Province at 0.72%, so that the level of inequality in Soppeng Regency is classified as high inequality. It can be seen that in general the level of social inequality in the South Sulawesi province in terms of population growth is classified as low inequality. This is indicated by the proportion of low inequality level owned by 13 out of 24 regencies or 54.17% and 11 out of 24 regencies or 45.83% have high inequality level.

Population density

The conce ntration of development and population density in the downtown is caused by the uneven population density of an area. This affects the development process only to occur in the downtown, thereby increasing social inequality between densely populated and sparsely populated areas. The basic assumptions for measuring the level of social inequality for the aspect of population density are as shown in Table 1. The calculation of population density scores in the regencies and cities of South Sulawesi province can be seen in Table 3.

Table 3. Population density score in the regencies and cities of South Sulawesi province.

Regencies and cities	Area (km²)	Total populations 2021 (000)	Population density	Indicator	Score	Inequality Criteria
Kep. Selayar	1,357.03	138	101.69	195.63	3	High
Bulukumba	1,284.63	440.1	342.59	195.63	1	Low
Bantaeng	395.83	197.9	499.96	195.63	1	Low
Jeneponto	706.52	405.5	573.94	195.63	1	Low
Takalar	566.61	302.7	534.94	195.63	1	Low
Gowa	1,883.32	773.3	410.60	195.63	1	Low
Sinjai	798.96	261.4	327.18	195.63	1	Low
Maros	1,619.12	396.9	245.13	195.63	1	Low
Pangkep	1,131.08	348.2	307.58	195.63	1	Low

Barru	1,174.71	185.5	157.91	195.63	3	High
Bone	4,559	806.8	176.97	195.63	3	High
Soppeng	1,557	235.6	151.32	195.63	3	High
Wajo	2,504.06	379.4	151.51	195.63	3	High
Sidrap	1,883.23	323.2	171.62	195.63	3	High
Pinrang	1,961.67	407.4	207.68	195.63	1	Low
Enrekang	1,784.93	227.5	127.46	195.63	3	High
Luwu	3,343.97	367.5	109.89	195.63	3	High
Tana Toraja	1,990.22	285.2	143.30	195.63	3	High
Luwu Utara	7,502.58	325.1	43.33	195.63	3	High
Luwu Timur	6,944.58	300.5	43.27	195.63	3	High
Toraja Utara	1,215.55	264.1	217.27	195.63	1	Low
Makassar city	199.36	1,427.6	7,160.91	195.63	1	Low
Parepare city	99.33	152.9	1,539.31	195.63	1	Low
Palopo city	252.99	187.3	74035	195.63	1	Low

Education level

The education level consists of several categories, namely elementary school with an age range of 7-12 years, junior high school with an age range of 13-15 years, high school with an age range of 16-18 years and education in university with an age range of 19-45 years. Comparing the population according to education level with the population according to school age (see Table 4) is the method used in this study to see regional social inequality scores according to educational level aspects as shown in Table 1. Calculation of education level scores in regencies and cities of South Sulawesi province can be seen in Table 5.

Table 4. Comparison of education level with school age in the regencies and cities of South Sulawesi.

Regencies and cities	Elementary school	7-12 years	Junior high school	13-15 years	Senior High School	16-18 years	University	19-45 years
Kep. Selayar	14,362	10,054	6,717	12,638	3866	13,541	0	52,091
Bulukumba	43,588	31,627	14,596	36,255	11430	35,503	1,274	171,204
Bantaeng	19,450	13,992	6,578	15,672	3572	17,580	0	81,971
Jeneponto	40,807	31,350	13,479	34,628	8442	34,628	2,216	169,052
Takalar	31,819	23,842	13,233	24,865	9415	24,450	308	118,405
Gowa	73,600	60,076	29,223	67,076	16841	67,355	32,024	309,307
Sinjai	25,074	19,057	9,630	22,373	7934	24,574	2,551	101,205
Maros	41,310	34,656	15,318	26,775	10738	40,584	342	153,645
Pangkep	37,352	27,535	14,882	31,101	8181	32,631	874	133,489
Barru	17,411	13,434	7,199	15,181	3724	14,815	836	67,956
Bone	69,535	57,854	25,063	66,709	19513	73,354	10,254	305,053
Soppeng	19,992	14,284	7,074	16,595	4417	18,492	301	83,950
Wajo	36,371	27,949	11,063	30,469	7484	27,456	982	146,260
Sidrap	30,955	24,063	9,837	26,373	6137	26,930	775	124,139
Pinrang	40,807	32,094	15,151	35,555	7905	35,095	250	156,850
Enrekang	23,127	17,987	9,119	22,614	7624	25,173	0	87,102
Luwu	37,382	29,467	16,282	34,931	12451	36,183	0	144,014
Tana Toraja	28,164	20,221	14,997	26,604	8310	30,024	0	112,396
Luwu Utara	29,452	24,764	13,154	29,917	9438	32,756	0	127,681
Luwu Timur	30,831	25,172	13,177	27,988	10884	27,298	0	122,129
Toraja Utara	30,805	23,008	16,603	27,931	8103	27,607	0	96,242
Makassar city	13,6792	111,964	63,573	127,006	38695	129,358	7,691	589,710
Parepare city	15,024	12,368	6,533	12,844	4338	13,179	10,058	61,979
Palopo city	17,771	14,325	8,895	16,489	5636	17,169	9,913	80,079

Table 5. The educational level scores in the regencies and cities of South Sulawesi

Regencies and cities	Elementary school	Junior high school	Senior School	High University	Average	Inequality Criteria
Kep. Selayar	1	3	3	3	3	High
Bulukumba	1	3	3	3	3	High
Bantaeng	1	3	3	3	3	High
Jeneponto	1	3	3	3	3	High
Takalar	1	3	3	3	3	High
Gowa	1	3	3	3	3	High
Sinjai	1	3	3	3	3	High
Maros	1	3	3	3	3	High
Pangkep	1	3	3	3	3	High
Barru	1	3	3	3	3	High
Bone	1	3	3	3	3	High
Soppeng	1	3	3	3	3	High
Wajo	1	3	3	3	3	High
Sidrap	1	3	3	3	3	High
Pinrang	1	3	3	3	3	High
Enrekang	1	3	3	3	3	High
Luwu	1	3	3	3	3	High
Tana Toraja	1	3	3	3	3	High
Luwu Utara	1	3	3	3	3	High
Luwu Timur	1	3	3	3	3	High
Toraja Utara	1	3	3	3	3	High
Makassar city	1	3	3	3	3	High
Parepare city	1	3	3	3	3	High
Palopo city	1	3	3	3	3	High

Based on Table 5, after determining the score, it was found that the level of disparity between districts and cities in South Sulawesi province based on education level is high inequality. For the elementary education level, the number of people attending school exceeds the number of school-age residents in each district. This means that regional social inequality according to the aspect of education level for the elementary level is low inequality. Meanwhile, the number of people who have graduated from junior high school, high school and tertiary education is less than the number of people at the higher education level, so it is classified as high inequality.

Labor force

Labor force is an influential factor in regional development. The more people who work, the faster the development of a region. Regional disparities from the labour force aspect can be seen by comparing the number of working population and the working age population according to the criteria in Table 1. Calculation of the labor force scores in regencies and cities can be seen in Table 6.

Table 6. Labor force score in the regencies and cities of South Sulawesi province.

Regencies and cities	Total population that working	Total population with working age	a/b	score	Inequality Criteria
Kep. Selayar	69,522	71,533	a < b	3	High
Bulukumba	205,932	212,606	a < b	3	High
Bantaeng	103,255	107,631	a < b	3	High
Jeneponto	183,928	188,408	a < b	3	High
Takalar	145,791	151,752	a < b	3	High
Gowa	390,040	407,545	a < b	3	High
Sinjai	128,919	132,374	a < b	3	High\
Maros	150,533	160,661	a < b	3	High
Pangkep	155,435	165,108	a < b	3	High
Barru	72,997	78,272	a < b	3	High
Bone	368,032	383,962	a < b	3	High
Soppeng	104,645	108,914	a < b	3	High

Wajo	200,994	210,059	a < b	3	High
Sidrap	131,361	138,174	a < b	3	High
Pinrang	158,714	165,431	a < b	3	High
Enrekang	107,536	110,112	a < b	3	High
Luwu	163,271	171,502	a < b	3	High
Tana Toraja	130,483	134,643	a < b	3	High
Luwu Utara	141,028	146,770	a < b	3	High
Luwu Timur	154,130	162,182	a < b	3	High
Toraja Utara	116,712	119,838	a < b	3	High
Makassar city	629,933	725,529	a < b	3	High
Parepare city	69,777	74,806	a < b	3	High
Palopo city	77,465	84,969	a < b	3	High

Based on the results of the analysis in table 6, the number of working people in regencies and cities of South Sulawesi province tends to be lower when compared to the working age population. So, the score results obtained show that the level of social inequality according to the aspect of labour force for each district in South Sulawesi is high. It can be seen in the following table that the ratio of the working population to the working age population is 2:1.

The average level of social inequality in the South Sulawesi province

After obtaining the social inequality scoring results for each aspect of the assessment in 24 regencies and cities, then the score results are accumulated to see the average value of the level of social inequality in the South Sulawesi province as shown Table 7.

Table 7. Social Inequality in the regencies and cities of South Sulawesi province

Regencies and cities	Population growth	Population density	Education level	Labor force	Total	Inequality Criteria
Kep. Selayar	3	3	3	3	12	High
Bulukumba	3	1	3	3	10	High
Bantaeng	3	1	3	3	10	High
Jeneponto	1	1	3	3	8	Middle
Takalar	3	1	3	3	10	High
Gowa	1	1	3	3	8	Middle
Sinjai	1	1	3	3	8	Middle
Maros	1	1	3	3	8	Middle
Pangkep	3	1	3	3	10	High
Barru	3	3	3	3	12	High
Bone	3	3	3	3	12	High
Soppeng	3	3	3	3	12	High
Wajo	1	3	3	3	10	High
Sidrap	1	3	3	3	10	High
Pinrang	1	1	3	3	8	Middle
Enrekang	1	3	3	3	10	High
Luwu	3	3	3	3	12	High
Tana Toraja	1	3	3	3	10	High
Luwu Utara	3	3	3	3	12	High
Luwu Timur	1	3	3	3	10	High
Toraja Utara	1	1	3	3	8	Middle
Makassar city	3	1	3	3	10	High
Parepare city	1	1	3	3	8	Middle
Palopo city	1	1	3	3	8	Middle

IV. CONCLUSION

Socio-economic disparities in regencies and cities of South Sulawesi province are in the moderate and high inequality categories. The factors analyzed and influencing social inequality in this study are population growth, population density, level of education, and the number of workers. The average socio-economic inequality in the high category includes Selayar regency, Bulukumba regency, Bantaeng regency, Takallar regency, Pangkep regency, Soppeng regency, Wajo regency, Sidrap regency, Bone regency, Barru

regency, Enrekang regency, Tana Toraja regency, North Luwu regency, Luwu regency, East Luwu regency and Makassar City. Meanwhile, the average socio-economic inequality in the moderate category includes Jeneponto regency, Gowa regency, Maros regency, Sinjai regency, Pinrang regency, North Toraja regency, Pare-pare city, and Palopo city. The recommendations to be conveyed are to expand the study by adding several related variables and developing a Green Open Space (RTH) variable to see the environmental quality of regencies and cities in responding to climate change issues.

V. ACKNOWLEDGMENTS

Thank you to all university leaders and all parties involved in this research.

VI. DISCLOSURE

The author reports no conflicts of interest in this work. All authors contributed and were actively involved in the research.

REFERENCES

1. Badan Pusat Statistik (BPS). (2018). Jumlah Penduduk Miskin, Persentase Penduduk Miskin dan Garis Kemiskinan, 1970-2017. Badan Pusat Statistik. Retrieved from https://www.bps.go.id/statictable/2014/01/30/1494/jumlah-penduduk-miskin--persentasependuduk-miskin-dan-garis-kemiskinan--1970-2017.html
2. Didiharyono, D., Syukri, M., & Purnama, E. (2023). Analisis Pertumbuhan Ekonomi Sulawesi Selatan Menggunakan Regresi Spline. *JEMMA (Journal of Economic, Management and Accounting)*, 6(1), 76-85.
3. Dini, S. K., & Fauzan, A. (2020). Clustering provinces in indonesia based on community welfare indicators. *EKSAKTA: Journal of Sciences and Data Analysis*, 56-63.
4. Firdaus, P. (2020). Pengembangan wilayah perbatasan sebagai upaya pemerataan pembangunan wilayah di Indonesia. *SOL JUSTICIA*, 3(1), 74-82.
5. Greig, A., Hulme, D., & Turner, M. (2007). *Challenging global inequality: Development theory and practice in the 21st century*. Bloomsbury Publishing.
6. Gupta, J., & Vegelin, C. (2016). Sustainable development goals and inclusive development. *International environmental agreements: Politics, law and economics*, 16, 433-448.
7. Haque, A. U., Kibria, G., Selim, M. I., & Smrity, D. Y. (2019). Labor force participation rate and economic growth: Observations for Bangladesh. *International Journal of Economics and Financial Research*, 5(9), 209-213.
8. Hernovianty, F. R., Pratiwi, N. N., & Adventia, D. (2022). Analisis ketimpangan sosial wilayah di Kabupaten Sekadau, Provinsi Kalimantan Barat. *Region: Jurnal Pembangunan Wilayah dan Perencanaan Partisipatif*, 17(1), 212-225.
9. Hofman, K. (2014). Non-communicable diseases in South Africa: a challenge to economic development: guest editorial. *South African Medical Journal*, 104(10), 647.
10. Hu, H., Nigmatulina, K., & Eckhoff, P. (2013). The scaling of contact rates with population density for the infectious disease models. *Mathematical biosciences*, 244(2), 125-134.
11. Ivanic, M., & Martin, W. (2018). Sectoral productivity growth and poverty reduction: National and global impacts. *World Development*, 109, 429-439.
12. Kagan, C., Burton, M., Duckett, P., Lawthom, R., & Siddiquee, A. (2019). *Critical community psychology: Critical action and social change*. Routledge.
13. Mansi, E., Hysa, E., Panait, M., & Voica, M. C. (2020). Poverty—A challenge for economic development? Evidences from Western Balkan countries and the European Union. *Sustainability*, 12(18), 7754.
14. Rosmeli, R. (2018). Dampak Infrastruktur Terhadap Ketimpangan Pembangunan Antar Daerah di Provinsi Jambi. *Jurnal Sains Sosio Humaniora*, 2(1), 79-84.
15. Stanef, M. R., Manole, A. M., & Militaru, M. (2012). Lifelong learning–A way to reduce development gaps between rural and urban areas. *Procedia-Social and Behavioral Sciences*, 46, 4508-4512.
16. Strelan, P., Osborn, A., & Palmer, E. (2020). The flipped classroom: A meta-analysis of effects on student performance across disciplines and education levels. *Educational Research Review*, 30, 100314.
17. Sukwika, T. (2018). Peran pembangunan infrastruktur terhadap ketimpangan ekonomi antarwilayah di Indonesia. *Jurnal Wilayah dan Lingkungan*, 6(2), 115-130.
18. Surya, B., Ahmad, D. N. A., Sakti, H. H., & Sahban, H. (2020). Land use change, spatial interaction, and sustainable development in the metropolitan urban areas, South Sulawesi Province, Indonesia. *Land*, 9(3), 95.
19. Wahyuntari, L. I., & Pujiati, A. (2016). Disparitas pembangunan wilayah kabupaten/kota di Provinsi Jawa Tengah. *Economics Development Analysis Journal*, 5(3), 296-305.