

Regional Typology Approach in Education Quality in West Java Based on Agricultural and Non-Agricultural Economic Structure

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Abstract. West Java is the province in Indonesia with the highest population and has a location close to the capital. However, the condition of education in West Java is generally still low. This is estimated because there are imbalances between districts / cities. The research objective is to get a clear picture of the condition of education in West Java by using secondary data issued by the Central Statistics Agency. The research method uses descriptive analysis, with analysis tools of regional typology. The division of regional typologies from the two indicators produces four regional terms, namely developed regions, developed regions constrained, potential areas to develop, and disadvantaged areas. Based on the indicators of education quality and life expectancy in 2017, from 27 municipal districts in West Java there were 33.3% in developed regions, 18.52% in developed regions were constrained, 7.4% in potential developing regions, and 40.74 % in disadvantaged areas. Bandung and Bekasi regencies are included in developed regions. While the cities of Banjar and Tasikmalaya include potential developing regions. Regional division with three indicators, namely the average length of school, Location Quation, and life expectancy. This division produces three filled quadrants. Quadrant I has 29.6%, quadrant III has 18.5%, and the remaining 51.9% is in quadrant IV. The results of this regional typology show that there are imbalances in education and public health. This research has implications for government policies in reducing education and health inequalities, it is important to consider which areas are the main priorities

Keyword. education; regional typology; inequality; life expectancy; location quation

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INTRODUCTION

Development of an area can be successfully seen from the education of its people. The relatively high education of the people makes development develop rapidly, because education will be related to welfare and health (Strulik, 2018). Good health and well-being will encourage the growth of a country's economy.

West Java has the largest population of the provinces in Indonesia. The situation in West Java greatly affects the overall condition of Indonesia. Moreover, the location of West Java is next to the National Capital. Of course, West Java needs to be prepared as a buffer of the capital. However, the condition of West Java seen from the Human Development Index (HDI) is still relatively small and is below the average value of Indonesia. Especially when looking at life expectancy in West Java is still lower than life expectancy in Indonesia. Life expectancy is closely related to health conditions (Gispert et al., 2008). In addition to

the low life expectancy value, education is also a special concern because education in West Java is still relatively low compared to other large provinces.

Table 1. Human Development Index

Region	Year				
	2013	2014	2015	2016	2017
West Java	68.25	68.80	69.50	70.05	70.69
Indonesia	68.31	68.90	69.55	70.18	70.81

Source: BPS (2018)

HDI is a measure that was introduced by the United Nations Development Program (UNDP) since 1990. This HDI can explain how residents can access the results of development in the form of income, health, education and so forth. As one of the benefits to measure success in efforts to build the quality of human life. The underlying dimensions of HDI are long life and healthy living, knowledge and a decent standard of living. This HDI measure can be used to determine the ranking or level of development of an area or country. HDI in Indonesia, aside from being a measure of government performance, is also one of the allocators for determining the General Allocation Fund (GAF).

Table 1 shows the West Java HDI increased from year to year. However, when compared to Indonesian HDI, West Java HDI is always below the Indonesian HDI value and the difference is getting bigger. This shows that the development of HDI in West Java is slower than the Indonesian average.

Table 2. Average length of school

Region	Year									
	2013		2014		2015		2016		2017	
	M	F	M	F	M	F	M	F	M	F
West Java	8.09	7.06	8.21	7.20	8.36	7.35	8.37	7.52	8.59	7.69
Indonesia	8.14	7.09	8.24	7.23	8.35	7.35	8.41	7.50	8.56	7.65

Source: BPS (2018)

The average length of schooling is a measure that shows the quality of local education. Information on average length of schooling was taken from BPS. By definition BPS states that the average length of school is the number of years of study of the population over the age of 15 years that have been completed in formal education. The high value of the average length of schooling in an area means the higher level of completion of the local community education level.

Table 2 shows that there are significant differences between women and men regarding the average length of schooling. But that difference is getting less and less. This shows the progress of women's education that is greater from year to year compared to men's education. Although until now the average length of schooling of women is still below the average length of schooling of men.

When viewed from year to year, the average length of schooling for West Java is less or close to the average length of schooling for Indonesia both women and men. This shows the progress of education in West Java exceeds the average progress of Indonesia's education. However, the average length of schooling in West Java is still at the junior high school level. In Indonesia the length of junior high school education is equivalent to 9 years

of schooling. Although education has increased from 2013 to 2017, the average education in both West Java and Indonesia in general is still at the junior high level.

Based on the HDI grades and the average length of schooling which is still low, West Java is an interesting province to study. This is expected because of the imbalance between regions in West Java. West Java is included in the 8 provinces with the largest Gini ratio (Saifuddin, 2014). This income inequality is one of the factors causing it is the existence of educational inequality (Digdowiseiso, 2009).

Research on income inequality is generally seen from the Klassen's typology and Gini ratio. But for educational inequality there is still less discussion. This study intends to see how the typology of the regions in West Java viewed from the aspect of quality of education. By looking at the description of the typology of this area, it is possible to find out how the imbalance of education between districts/ cities. Researchers focus on regional conditions in West Java, in terms of education and HDI. The equitable HDI is expected to encourage economic growth so that regional inequality decreases (Nurhuda, Muluk, & Prasetyo, 2011).

The role of education in supporting economic growth is still controversial because the high achievement of education does not guarantee improvement in economic conditions. However, Hanushek & Woessmann (2007) states that the role of quality education is very high to create economic prosperity.

Good quality of education can be seen from the even distribution of education, meaning that people's access to education is wide open. If the quality of education is uneven, it causes education disparity. This education inequality greatly affects income inequality. Income inequality can occur due to high unemployment, corruption, natural disasters, technological developments, and educational inequality (Kaasa, 2011).

Before measuring education disparity between districts / cities, it is necessary to first map the condition of the quality of education between regions. This mapping generally uses the regional typology method.

Typological methods that are commonly known as Klassen typology. This method uses indicators of economic growth and income per capita (Kuncoro, 2004). Besides that there are typologies that use indicators of economic growth and HDI (Lumbantoruan & Hidayat, 2015). The results of typology with economic growth indicators are divided into 4 classifications, namely: fast-growing and fast-growing regions, fast developing but not advanced regions, developed but depressed regions, and relatively disadvantaged regions. The Klassen typology in West Java also produced 4 categories (Saputra, 2016).

The typology method grows even more by involving different indicators. Typology analysis method by mapping typology / classification of waste generation with two determinant indicators namely population density and landfill (Rahardyan, Prajati, & Padmi, 2015), and there is also a mapping of PDAM market typology / indicators of service coverage and per capita income indicators (Saepudin, Handajani, & Mutaqin, 2019).

An understanding of the condition of this typology becomes the basis for a more in-depth study of the causes of educational disparity and its triggering factors. Inequality research in West Java looks more at the income inequality perspective. In 2013 the West Java region had a high-income inequality value of 0.61. This income inequality value decreased slightly compared to 2007 which was 0.68 (Aprianoor & Muktiali, 2015).

Calculation of the income inequality of West Java which averaged 0.578 was also obtained from the results of research with 1998-2013 data (Saputra, 2016).

Digdowiseiso (2009) conducted a study in 23 provinces in Indonesia in the 1996-2005 period. The results show that human capital as measured by the average length of school has the effect of inequality in income distribution.

Based on the condition of inequality that occurs in West Java, this study is needed to see whether the imbalance that occurs is due to the quality factor of human resources? One indicator of the quality of human resources is seen from his education.

In this study, we want to know how the condition of regional typology in West Java is seen in terms of HDI and education. Is there a real gap between HDI and education values between regions? Or, is it relatively the same for all regions? Life expectancy, health, education and a decent standard of living as an HDI dimension will be used as a basis for looking at the typology of this area.

METHOD

Research data sourced from the Central BPS and West Java BPS. Data of concern are educational data and data available in "*Jawa Barat dalam Angka Tahun 2018*". All data is taken online on the BPS official website, both the central and West Java provinces. The data used is the most recent data input in 2019. Some calculation data such as the HDI available at BPS, are currently using a new method.

The new method is used because there are indicators that are no longer relevant in measuring education and income. Early education indicators using literacy rates were replaced with old school expectations. The original income indicator used per capita Gross Domestic Product (GDP) was replaced by per capita Gross National Product (GNP).

This study uses a descriptive exploratory analysis method with a regional typology approach. The determination of regional typology in West Java uses typological analysis. Regional typology in this study is seen from the factor of life expectancy and the average length of school. It was also seen from the HDI classification with the average length of schooling. Calculation of HDI and average length of school use the new method issued by BPS. We analyze these results both as a whole and based on groups of men and women.

The regional typology model in this analysis uses a cartesian coordinate system in which life expectancy or HDI as ordinate and average length of schooling are absent. The meeting point between abscissa and ordinate is the origin. The origin is the intersection of the national average of the two indicators.

The typology of regions based on the human development index and the average length of schooling produce four quadrants, which will be called the type of developed region (quadrant I), constrained developed area (quadrant II), potential developing regions (quadrant III), and disadvantaged areas (quadrant IV). Likewise, for the type of region based on life expectancy and average length of school. Quadrant I is one of the regions with high life expectancy and high school average above the national average. Quadrant II is included in areas with high life expectancy and low average school years. Quadrant III includes areas with low life expectancy and average length of high school, while Quadrant IV includes regions with low life expectancy and average length of school.

The regional typology in this article involves the Location Quotation (LQ) indicator. LQ basically measures how concentrated a certain industry, cluster, occupation or demographic group of a region (province) is compared to the State. LQ can also be used for districts / cities compared to provinces. Development of typological analysis by including

LQ variables that divide districts / cities on an agricultural and non-agricultural basis within a province.

The LQ calculation model uses calculations according to Miller, Gibson, & Wrihgt (1991) accompanied by our modification with the following formula:

$$LQ = \frac{y_i/y}{Y_i/Y}$$

Notes:

y_i : GRDP of agricultural sector / sub sector in Regency / city i

y : GRDP of agricultural sector / sub sector in the province

Y_i : Total GRDP in regency / city i

Y : Total GRDP in the province

Criteria:

$LQ > 1$, means the area is based on the agricultural sector or sub-sector

$LQ < 1$, means the area is based on non-agricultural sectors or sub-sectors

$LQ = 1$, means that agricultural products owned by the area are consumed by the area (self-sufficiency)

RESULTS AND DISCUSSION

West Java consists of 18 regencies and 9 cities. Sukabumi Regency is the largest area in West Java, around 11.78%, and Bekasi City is the largest area in the city category in West Java, which is around 0.58%. Purwakarta Regency is the district with the smallest area (2.33%), and Cirebon City is the ncity with the smallest area (0.11%). The type of area in West Java according to *Potensial Desa* (PODES) in 2014 consisted of 626 urban and 5962 rural areas. The type of area (urban / rural) is determined by a composite indicator whose score or value is based on the score or value of three variables: population density, percentage of agricultural households, and access to public facilities. In general, the number of rural and urban areas in each regency or city can be seen in Table 3.

Table 3 Number of Urban and Rural Areas by Regency / City in West Java Province

No.	Regency/City	Number of Urban	Number of Rural	Urban Percentage
1	Bogor	291	143	67.05
2	Sukabumi	120	266	31.09
3	Cianjur	73	287	20.28
4	Bandung	211	69	75.36
5	Garut	162	280	36.65
6	Tasikmalaya	76	275	21.65
7	Ciamis	65	200	24.53
8	Kuningan	123	253	32.71
9	Cirebon	312	112	73.58
10	Majalengka	123	220	35.86
11	Sumedang	77	206	27.21
12	Indramayu	110	207	34.70
13	Subang	53	200	20.95
14	Purwakarta	73	119	38.02
15	Karawang	126	183	40.78
16	Bekasi	101	86	54.01
17	Bandung Barat	81	84	49.09
18	Pangandaran	12	81	12.90

No.	Regency/City	Number of Urban	Number of Rural	Urban Percentage
19	Bogor City	68	0	100.00
20	Sukabumi City	33	0	100.00
21	Bandung City	151	0	100.00
22	Cirebon City	22	0	100.00
23	Bekasi City	56	0	100.00
24	Depok City	63	0	100.00
25	Cimahi City	15	0	100.00
26	Tasikmalaya City	61	8	88.41
27	Banjar City	13	12	52.00
Total		2671	3291	

Source: Provincial Statistics Agency, PODES 2014 West Java

Based on BPS, in 2014 the number of urban and rural areas in West Java was 5,962 (2,671 including urban and 3,291 rural). The number of cities in West Java is 44.8%. The percentage of urban in West Java is very much different between regencies/cities, where the highest value is 100% and the lowest is 12.9% (Pangandaran Regency). There are 14 districts that have an urban percentage of less than 50% (Sukabumi, Cianjur, Garut, Tasikmalaya, Ciamis, Kuningan, Majalengka, Sumedang, Indramayu, Subang, Purwakarta, Karawang, Bandung Barat and Pangandaran).

The classification of regions based on agriculture and non-agriculture for districts / cities in West Java is shown in Table 4. The classification is based on LQ calculations. Agriculture category when the LQ value obtained is more than 1. There are 14 municipal districts classified as agricultural base or around 51.85%, and 13 city districts with non-agricultural classification or around 48.15%. Of the 13 city districts included in the non-agricultural category there are 10 regions (8 cities and 2 districts) that have an average education above the national average and there are 3 districts (Karawang, Bogor, and Purwakarta) that have an average education in below the national average. While of the 14 urban districts classified as agricultural, only Banjar City has education above the national average, the remaining 13 districts have an education average below the national average. Even though in rural areas their education is still relatively low, the rural Gini ratio is lower than that in cities.

Table 4 Classification of Agricultural and Non-Agriculture Basis in West Java

Regency/city	Agricultural	LQ	Educational Conditions
Bogor	0	0.6223	Less
Sukabumi	1	2.6344	Less
Cianjur	1	3.9235	Less
Bandung	0	0.9133	Good
Garut	1	4.4791	Less
Tasikmalaya	1	4.4119	Less
Ciamis	1	2.7863	Less
Kuningan	1	2.7560	Less
Cirebon	1	1.8376	Less
Majalengka	1	3.0430	Less
Sumedang	1	2.3770	Less
Indramayu	1	2.0652	Less
Subang	1	3.2091	Less
Purwakarta	0	0.8051	Less
Karawang	0	0.4871	Less
Bekasi	0	0.1534	Good

Regency/city	Agricultural	LQ	Educational Conditions
Bandung Barat	1	1.5711	Less
Pangandaran	1	3.1796	Less
Bogor City	0	0.0903	Good
Sukabumi City	0	0.4527	Good
Bandung City	0	0.0157	Good
Cirebon City	0	0.0395	Good
Bekasi City	0	0.0717	Good
Depok City	0	0.1658	Good
Cimahi City	0	0.0280	Good
Tasikmalaya City	0	0.6466	Good
Banjar City	1	1.6389	Good

Source: BPS, processed

Note: 0 non agriculture, 1 agriculture.

Good: above the national average, Less: below the national average

Various dimensions of the HDI for West Java are shown in Table 5. The first dimension is about life expectancy, where the value is relatively not significantly different for West Java. For example, in 2017, the highest life expectancy is 74.63 years for Bekasi City, and the lowest is 68.71 years for Tasikmalaya Regency.

Each regency / city experienced an increase in life expectancy from 2016 to 2017 with an average increase of 0.11%. The highest increase occurred in Tasikmalaya Regency (0.248%) and the lowest in Bandung City (0.027%). Although Tasikmalaya Regency has the lowest life expectancy but has the highest increase.

The second dimension of HDI is education which is measured by the average length of schooling. The increase in average length of schooling in West Java was 2.35%. The average length of schooling is very large, there are 16 districts which are still below the average length of schooling in West Java Province. The highest score was in 2016 the Cimahi City area and the lowest was Indramayu Regency. In 2017 there were two regions with the highest scores namely Cimahi City and Bekasi City, with an average length of school of 10.93 years. While the lowest remains in Indramayu Regency with an average length of school of 5.97 years. This means that in Cimahi City and Bekasi Regency the average is senior high school, while in Indramayu Regency the average is still an elementary school. Nevertheless, the average length of schooling in Indramayu Regency experienced the highest increase from the previous year at 7.37% while the lowest was in Bandung at 0.09%.

Table 5 Human Development Index and Various Dimension Factors in West Java

Regency / city	Life expectancy		Average length of school		IPM	
	2016	2017	2016	2017	2016	2017
Bogor	70.65	70.70	7.83	7.84	68.32	69.13
Sukabumi	70.14	70.26	6.74	6.79	65.13	65.49
Cianjur	69.39	69.49	6.61	6.92	62.92	63.70
Bandung	73.10	73.13	8.50	8.51	70.69	71.02
Garut	70.76	70.84	6.88	7.28	63.64	64.52
Tasikmalaya	68.54	68.71	6.94	7.12	63.57	64.14
Ciamis	70.90	71.07	7.55	7.59	68.45	68.87
Kuningan	72.76	72.88	7.34	7.35	67.51	67.78
Cirebon	71.43	71.49	6.41	6.61	66.70	67.39
Majalengka	69.22	69.39	6.89	6.90	65.25	65.92
Sumedang	71.96	72.00	7.72	7.98	69.45	70.07
Indramayu	70.72	70.86	5.56	5.97	64.78	65.58
Subang	71.61	71.71	6.58	6.83	67.14	67.73
Purwakarta	70.34	70.42	7.42	7.74	68.56	69.28
Karawang	71.60	71.64	6.94	7.34	68.19	69.17

Regency / city	Life expectancy		Average length of school		IPM	
	2016	2017	2016	2017	2016	2017
Bekasi	73.24	73.30	8.81	8.82	71.83	72.63
Bandung Barat	71.82	71.87	7.63	7.74	65.81	66.63
Pangandaran	70.40	70.56	7.07	7.37	65.79	66.60
Bogor City	72.95	73.01	10.28	10.29	74.50	75.16
Sukabumi City	71.90	71.95	9.28	9.52	72.33	73.03
Bandung City	73.84	73.86	10.58	10.59	80.13	80.31
Cirebon City	71.83	71.86	9.87	9.88	73.70	74.00
Bekasi City	74.55	74.63	10.78	10.93	79.95	80.30
Depok City	74.01	74.04	10.76	10.84	79.60	79.83
Cimahi City	73.59	73.61	10.89	10.93	76.69	76.95
Tasikmalaya City	71.37	71.48	8.63	9.03	70.58	71.51
Banjar City	70.33	70.39	8.19	8.59	70.18	70.81

Source: BPS

West Java has a Human Development Index with considerable deviations. The same is true for the average length of schooling, there are 16 districts that are still below the West Java HDI score. The highest increase in HDI value from the previous year occurred in Karawang Regency by 1.44% while the smallest in Bandung City was 0.22%. The highest HDI value occurred in Bandung City, and the lowest in Cianjur Regency.

From Figure 1 there appears to be a change in the type of region from 2016 and 2017. This shows an increase in the national average but cannot be offset by changes in the area of West Java. "Underdeveloped" regions which in 2016 there were 9 districts became 11 districts in 2017. Likewise, for the "developing potential" areas in 2016 there were only one to two districts in 2017. The regencies included in the "underdeveloped" areas were Bogor, Purwakarta, Pangandaran, Garut, Tasikmalaya, Majalengka, Sukabumi, Cianjur, Indramayu, Cirebon and Ciamis. Cirebon and Ciamis Regencies are two regencies that have shifted from "developed constrained" regions. While the "developing potential" areas are Banjar City and Tasikmalaya City. The City of Tasikmalaya has switched from before as an "advanced" region.

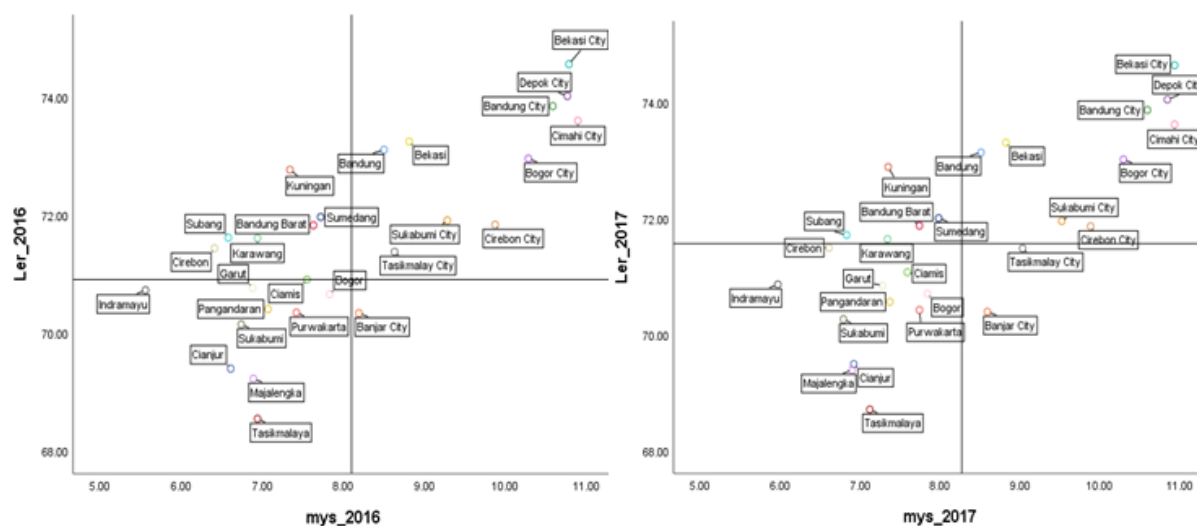


Figure 1. Typology of the West Java Region Based on Average Length of School and Life Expectancy

Changes in regional placement occur because of an increase in national life expectancy from 70.9 to 71.56. Likewise, for the average length of school from 8.1 to 8.27.

The average increase in national life expectancy by 0.93% while West Java is only 0.11%. The average length of national schooling rose by 2.1% and West Java by 2.35%.

Based on this analysis it can be concluded that health in West Java in general is still relatively poor compared to the development of Indonesia as a whole. Although life expectancy in West Java has increased, the increase is not proportional to the increase in Indonesia's average. Changes in the typology of this area are due to the greater increase in the level of health of the people of West Java compared to the increase nationally.

Education in West Java, although experiencing a significant increase compared to the national increase, there are 14 regions (52%) in West Java whose education improvement is below the national increase. In this case shows the existence of educational inequality in West Java.

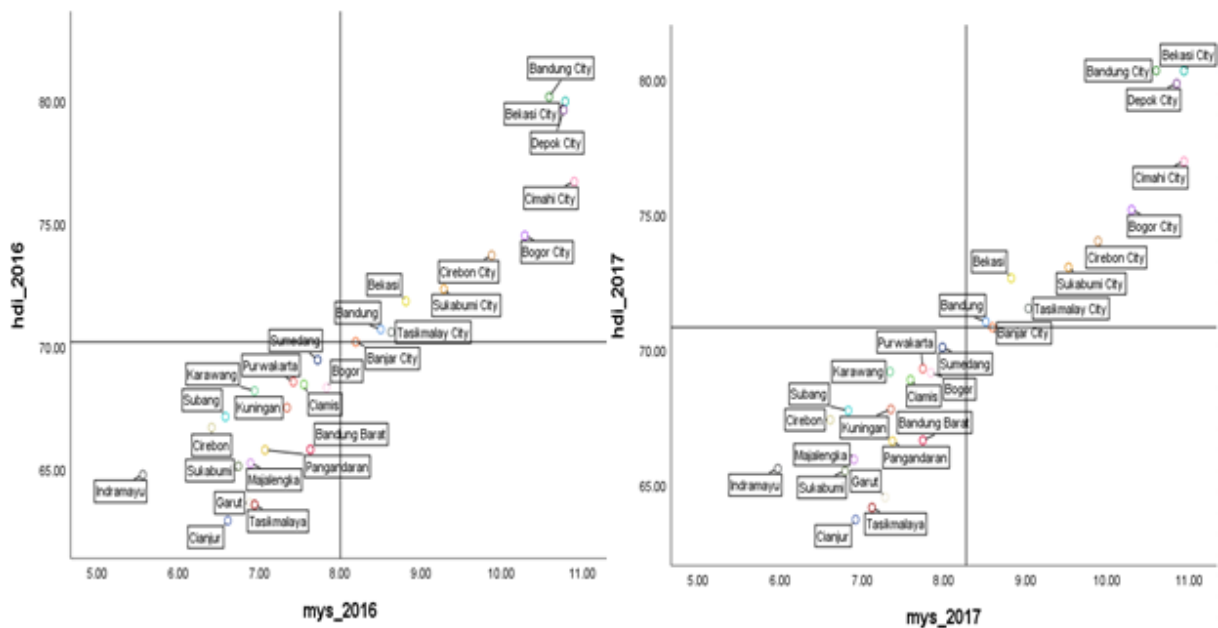


Figure 2. Typology of the West Java Region Based on the Human Development Index and Average Length of School

When seen in Figure 2, although there is a shift from the national average, the regional typology from 2016 to 2017 is relatively unchanged. Unlike before, there are only two types of formation areas from the HDI indicator and the Average Length of School. The pattern of this type of region shows that the average length of school is high, the HDI score is high. This is because the HDI value is calculated from the average length of school as one indicator. If you want to get an increase in HDI it is necessary to improve the quality of education by increasing the average length of school.

There are 11 regencies / cities that are classified as "developed" regions and 16 regencies are classified as "underdeveloped" regions. Which includes "developed" areas are all categories of cities in West Java with the addition of two districts namely Bekasi Regency

and Bandung Regency. Whereas classified as "underdeveloped" areas are all regencies in West Java except Bekasi and Bandung regencies.

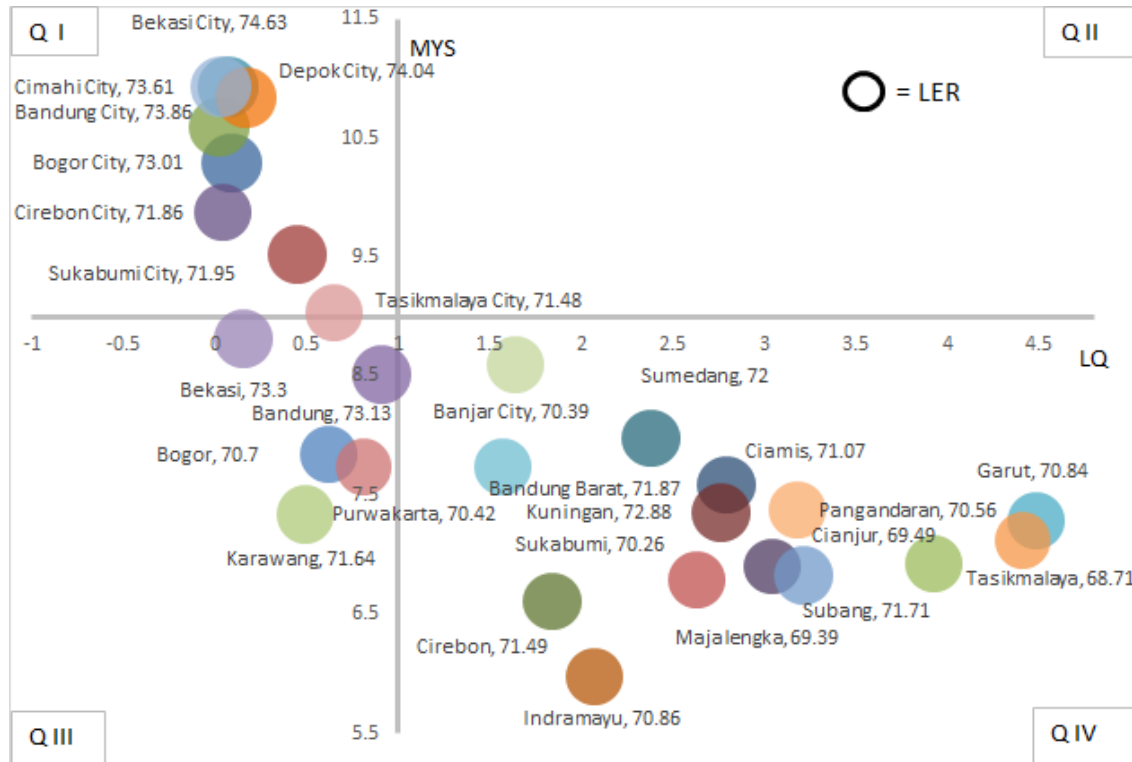


Figure 3. Regional Typology Based on Three Indicators (Average Length of School, Agriculture / Non-Agriculture, and Life Expectancy)

Subsequent typological analysis of the region involves three indicators directly, namely life expectancy, average length of schooling and LQ that describe the categories of agriculture and non-agriculture. The horizontal axis is LQ, the vertical axis is the average length of school, and the value of life expectancy is symbolized by circles and grades. Using 2017 data, the results of the analysis are shown in Figure 3. There are four quadrants from the results of typology in this area, only there are no regions included in the quadrant II criteria.

Categories of cities in West Java are generally non-agricultural bases except the city of Banjar which is still an agricultural-based region. On the other hand, district categories generally enter quadrant IV which is an area with an agricultural basis except for a number of regencies that have switched from agriculture to non-agriculture (quadrant III) such as Bekasi, Bandung, Bogor, Purwakarta, and Karawang.

The average education in quadrant I is 10.25 years, quadrant III is 8.05 years and quadrant IV is 7.11 years. Basic education in Indonesia is education consisting of elementary school and junior high school which is completed in 9 years. So only the first quadrant on average has completed basic education, while the other quadrants on average have not completed basic education.

It can be seen that there are relations between regions on the basis of agriculture and non-agriculture, the average length of schooling, and the average life expectancy. Quadrant I is a region with a non-agricultural basis and on average has completed basic education has a higher life expectancy of 73.06 compared to other regions that have not completed basic

education. The average life expectancy for quadrant III was 71.84, and quadrant IV was 70.82 years.

Education disparity between women and men is also still felt in West Java. This can be seen from the average length of schooling for women and men who differ significantly. Inequality mainly occurs in districts, especially in rural areas. Therefore, it is necessary to see how the regional typology is seen from the data of men and women. The author uses 2017 data published by BPS (BPS Provinsi Jawa Barat, 2018).

If we make typology analysis based on gender, we will get differences in the grouping of regions. The indicators used are the average length of school, LQ, and life expectancy. From the results of the separation of data between men and women, it turns out there are differences that occur between the average of each quadrant. The average length of schooling for men is greater than that of women for all quadrants. In quadrant I, the average length of schooling is 10.56 years for men and 10.18 years for women. Quadrant III, the average length of schooling was 8.48 years for men and 7.86 years for women. Quadrant IV, the average length of schooling for men was 7.62 while for women it was 6.84. The average difference between male and female schools increases as the quadrant increases. Difference in quadrant one is 0.38 years, quadrant III is 0.62 years, while quadrant IV is 0.78 years. Figure 4 shows the results of the regional typology for men and Figure 5 for women.

Differences appear for male and female data in quadrant grouping or classification. In quadrant I as many as 9 regions for male data, and 6 regions for women. This shows the imbalance of education of men and women in three regions namely Sukabumi City, Tasikmalaya City, and Bekasi Regency. In these three areas men have successfully completed basic education, but for women on average have not yet succeeded in completing basic education (9 years).

Figures 4 and 5 show that the higher the average length of school, the greater the life expectancy. There is something interesting in the results of the picture study, for example in all quadrants, the average life expectancy of women is greater than that of men. In quadrant I the average life expectancy of men is 71.13 years while women are 75.41 years. Quadrant III, the average life expectancy of men is 6.48 years while women are 73.68 years. Quadrant IV, the average life expectancy of men is 68.81 years while women are 72.72 years.

Based on Figure 4 which is a regional typology for men, there are 9 regions that are in quadrant I (Bekasi City, Depok City, Bandung City, Cimahi City, Bogor City, Cirebon City, Sukabumi City, Tasikmalaya City, and Bekasi Regency), 4 regions in quadrant III (Bandung, Bogor, Purwakarta, and Karawang regencies), and 14 regions in Quadrant IV (Banjar City, Sumedang Regency, Bandung Barat, Kuningan, Ciamis, Cianjur, Pangandaran, Sukabumi, Cirebon, Subang, Majalengka, Indramayu, Tasikmalaya, and Garut).

Figure 5 for women, there are 7 regions classified as Quadrant I (Bekasi City, Cimahi City, Bandung City, Depok City, Bogor City, Cirebon City and Sukabumi City), 6 Quadrant III regions (Tasikmalaya City, Bekasi Regency, Bandung, Purwakarta, Bogor, and Karawang) and 14 in Quadrant IV (Banjar City, Sumedang Regency, West Bandung, Kuningan, Sukabumi, Ciamis, Majalengka, Cirebon, Cianjur, Tasikmalaya, Subang, Garut, and Indramayu).

Inequality can be seen from the analysis of the results of regional typologies. These results are consistent with what was stated by researchers earlier that one of the factors of

regional inequality in West Java is because there are differences in the quality of human resources (Aprianoor & Mukhtiali, 2015).

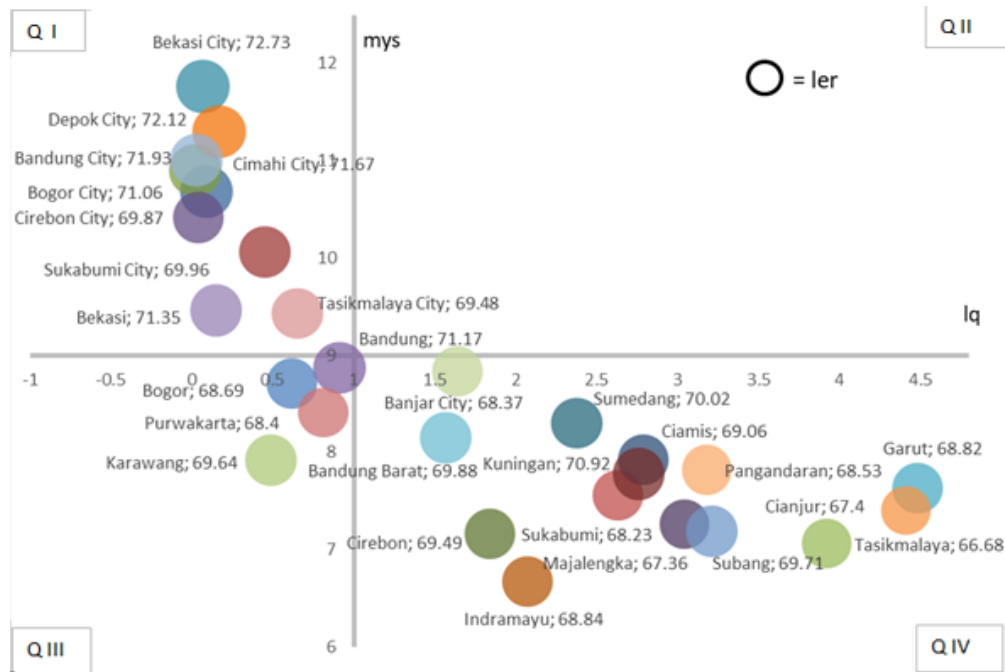


Figure 4. West Java Regional Typology for Men Based on Average School Year, LQ, and Life Expectancy in 2017

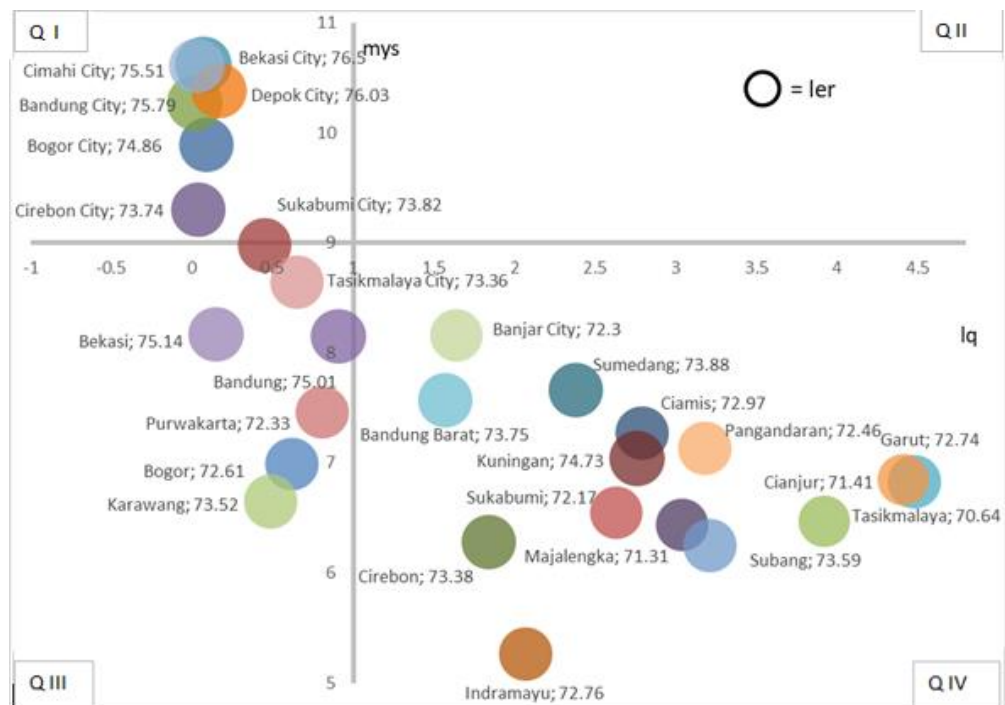


Figure 5. Typology of the West Java Region for Women Based on Average School Years, LQ, and Life Expectancy in 2017

CONCLUSION

There is an imbalance of education in West Java, most districts in West Java are in underdeveloped areas except Bandung and Bekasi regencies. While almost all cities in West Java are in the developed regions category except Banjar City and Tasikmalaya, which are in Quadrant III. Inequality in education is also seen when dividing regions into agriculture and non-agriculture. Non-agricultural regions tend to have higher education compared to agriculture. In addition, educational disparities also occur in the male and female categories. For the category of men included in Quadrant I as many as 9 districts / cities while for women there are only 7 districts / cities. There is a relationship between education and health which is reflected by life expectancy. Regions with high education rates tend to have higher life expectancies. Reducing inequality in education in West Java can be done by the government by improving the condition of education in the regions in quadrant IV. So, the priority for improving the condition of education is the area in quadrant IV then III if using a regional typology based on the category of average length of school, life expectancy, and LQ scores. This research is limited with secondary data which are macro data. This research is also limited to seeing the quality of education between districts / cities. In-depth research is needed to reduce inequality in education and health in West Java, and find out what factors are causing the typology of the area. In addition, it is necessary to use micro data to be able to describe reality on the ground.

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