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by Fabiola B Saroinsong 32

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Development Priorities Based on Sectoral Analysis to Reduce Disparity in Indonesia

Recky H.E. Sendouw[1*], Fabiola B. Saroinsong[2], Jeane Mantiri[3]

[13] State Administration Study Program Faculty of Social Sciences Universitas Negeri Manado Indonesia
[2]Forestry Faculty of Agricultural Universitas Sam Ratulangi Manado Indonesia
*Corresponding author. Email: reckyhes@yahoo.com

ABSTRACT

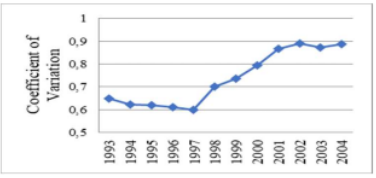
In determining development priorities, especially those related to improve income disparities between provinces, several studies examine income disparities using data on provinces in Indonesia. However, these studies pay less attention to the sectoral role of income disparities between the provinces. In fact, the preliminary research was found, if the research only focuses on the provincial level, not for national level, without focusing on sectoral data, it will cause errors in decision making and priorities in development. Using 8 sector data namely Agriculture, Manufacturing, Utilities, Construction, Trade, Transportation, business and social sectors between 2005-2012. This study aims to observe whether the sectoral analysis at the provincial level has the same or different results as the sectoral analysis at national level. The result of the study: Data sectoral at a national level does not describe the conditions at the provincial level sectoral analysis, at the provincial level or even at a lower level is needed in the formulation of national development policies work effectively. The disparity between provinces in Indonesia tends to widen. To reduce disparities between provinces, a more pro-provincial policy is needed whose conditions are below the national average.

Keywords: *Disparity, Development, Sectoral, Province, Indonesia*

1. INTRODUCTION

Economic inequality or disparity is one of the problems continue to be faced by many countries, especially countries with large populations and large areas. Indonesia is one of the countries which have two criteria mentioned. Therefore, it can be assumed Indonesia faces internal problems of disparities.

Sendouw (2010) in his research shows. According to him, if we look at the trend of income disparity between provinces, it can be concluded there was a decline in 1993-1997, but then changed direction to the trend of increasing inequality from 1997 to 2004 (Figure 1).



Source: Sendouw (2010)

Figure 1. Income disparities between provinces

Table 1. Share of Value-added and Labor by Sector

Sector	1993		1997		2004	
	Value-added	Labor	Value-added	Labor	Value-added	Labor
Agriculture	19.53	49.79	20.81	44.74	18.81	43.81
Manufacturing	24.99	11.49	27.52	12.08	27.98	11.94
Utilities	1.29	0.20	1.23	0.18	1.90	0.25
Construction	7.43	3.80	5.93	4.27	5.94	4.90
Trading	19.24	16.85	20.93	19.20	20.52	20.63
Transportation	7.63	3.91	6.68	4.72	7.36	5.91
Business	8.76	0.75	7.95	0.76	7.56	1.21
Social	11.11	13.20	8.94	14.04	9.93	11.34
Total	100.00	100.00	100.00	100.00	00.00	100.00

Based on the above trend, Sendouw (2010) examines the share of value-added and the share of sectoral workforce at the national level and the provincial level.

Table 1 shows at the national level, manufacturing is the sector that has the largest contribution because the manufacturing sector has the largest share of value-added. However, at the provincial level, it turns out that agriculture is the most dominant sector for both value-added and labour. This shows that public policymaking as seen at the national level will experience distortion because if viewed at the national level, the manufacturing sector is very dominant in terms of its value-added share. However, as seen at the provincial level, it turns out that the manufacturing sector is only dominant in 7-8 provinces. Meanwhile, in most other provinces, the agricultural sector is still very dominant in value-added and labour.

The question which arises over time, are the sectoral conditions at the national level still different from the provincial sector? This is important due to decentralization already underway, in terms of determining development priorities and determining the budget, especially for large projects, it is still determined by the central government. The problem is some of these policymakers' set priorities by considering statistics at the national level. It is feared this condition cause errors in determining the priority of development in an area.

This study intends to answer three concerns by analysing at the sectoral level per province for development priorities to reduce disparities between provinces can be right on target.

2. LITERATURE REVIEW

In terms of determining development priorities, several studies focus on regional disparities and various contributing factors in various countries, including Indonesia, and use data at the provincial level. For example, Ge. 2006 which describes the increasing disparity between regions in China, or Miller and Genc (2005) who apply absolute beta-convergence concludes that in the 1969-1997 period, convergence occurred in the United States at different rates.

Meanwhile, research on development priorities and disparities in Indonesia has been carried out by,

Akita (1988) estimated the coefficient of variation (CV's) for the Gross Regional Domestic Product (GRDP) data at the provincial level excluding oil and gas, for data from 1975 to 1983. He found that the CVs of the provinces in Indonesia was in the range of 0.443 to 0.481. CVs tended to increase in the period 1975-1979 but decreased in the period 1979-1983. This indicates a decrease in the gap between provinces.

In line with the studies mentioned, Resosudarmo and Vidyattama (2006), using GRP per capita GRDP data from 1993 to 2002, conclude there is conditional convergence between provinces in Indonesia. However, this previous study taken less attention to the sectoral role in income disparities between provinces and the role of reducing the disparity (convergence). Whereas in the preliminary research, found that if seen at the provincial and national (aggregate) levels, without considering the sectoral side, we could draw wrong conclusions, which resulted in the determination of development priorities being mistargeted, because it turns out that the aggregate trend at the national level is not always the same. The same as the condition when viewed from a sectoral perspective.

3. RESEARCH METHODS

This study is a quantitative study that uses data at the provincial level in Indonesia as the unit of analysis. For this research, we use GRDP data from 9 sectors in each province as follows: Agriculture (including forestry and fisheries), Mining, Manufacturing, utilities (Electricity, water, and gas), Construction, Trade (wholesales, retail, restaurant, and hotels), Transportation (storage and communication), business (real estate and business services), and social sector (Education). Continuing the previous research conducted by Sendouw (2010), this empirical analysis is based on data from 2005-2012 taken from the Central Statistics Agency, BPS. The reason for using 2005-2012 data is before 1993-2004 has been published and the data above 2013 has different criteria for the distribution of value-added per sector. The difference in the data used by Sendouw (2010) here is the addition of mining data. The reason for using mining GRDP data is because after regional autonomy was implemented, the mining sector's profit-sharing to producing regions became larger and more significant compared to the era before regional autonomy was implemented.

4. RESULTS AND DISCUSSION

4.1. National vs Provincial Data

In this study, the first thing to know is how the condition of the value-added per sector is seen nationally and per province.

Table 2. Value-added by Sector

Value Added by Sector in 2012									
Province	1	2	3	4	5	6	7	8	9
Aceh	26,105	9,945	8,356	486	10,750	16,181	10,129	2,748	10,375
North Sumatera	76,838	4,635	77,485	3,150	23,596	67,027	32,855	26,442	39,061
West Sumatera	25,470	3,187	12,279	1,043	7,420	20,377	17,388	4,959	18,056
Riau	85,355	166,820	90,089	838	33,229	51,365	9,375	13,183	18,820
Riau Islands	3,989	6,677	43,371	532	7,152	17,952	4,030	4,452	2,412
Jambi	21,563	12,627	7,924	672	3,582	11,460	4,622	3,748	6,437
South Sumatera	34,163	43,983	41,519	1,001	16,628	28,132	10,268	7,648	22,955
Bangka Belitung Islands	6,423	5,399	6,718	243	2,843	6,578	1,186	953	4,114
Bengkulu	9,400	1,012	1,062	127	917	4,589	1,956	1,173	3,883
Lampung	51,928	2,904	22,481	796	4,856	22,930	16,684	8,892	13,169
[illegible]a	968	5,182	172,335	10,234	126,274	228,043	114,229	305,618	140,811
West Java	111,047	17,588	338,968	24,170	41,721	226,850	73,802	27,913	87,702
Banten	16,728	228	97,799	8,142	7,914	40,958	20,151	8,301	12,977
Central Java	104,311	5,243	182,715	5,649	33,353	112,909	32,951	19,993	59,359
Yogyakarta	8,355	380	7,609	728	6,186	11,457	4,904	5,876	11,536
East Java	153,940	20,876	271,596	13,555	45,551	304,498	57,090	50,497	83,598
Bali	14,137	660	7,471	1,704	4,351	25,373	12,299	5,663	12,284
West Nusa Tenggara	12,832	9,229	1,948	253	4,117	8,302	3,808	2,873	6,318
East Nusa Tenggara	12,672	484	528	150	2,539	6,238	2,004	1,508	9,126
West Kalimantan	18,005	1,498	12,756	354	8,094	17,040	5,500	3,626	8,097
Central Kalimantan	15,607	5,558	3,902	382	3,090	11,864	4,580	3,392	7,510
South Kalimantan	14,662	17,921	6,865	435	4,554	12,395	6,697	3,924	8,440
East Kalimantan	26,571	197,670	98,654	1,120	12,487	36,766	16,652	12,123	17,464
North Sulawesi	7,846	1,776	3,564	360	8,129	8,306	5,679	3,021	8,517
Gorontalo	3,001	119	508	56	731	1,144	937	1,145	2,727
Central Sulawesi	18,376	3,696	3,364	335	4,052	6,194	3,606	2,419	9,063
South Sulawesi	39,617	8,962	19,408	1,439	9,071	28,748	12,983	11,803	27,828
West Sulawesi	6,834	128	1,039	66	591	1,881	291	802	2,775
Southeast Sulawesi	11,171	2,838	2,327	360	3,217	6,985	3,288	2,184	4,231
Mollucas	3,283	88	520	58	222	3,292	1,148	459	2,400
North Mollucas	2,415	321	865	38	232	1,769	530	263	484
Papua	9,933	36,175	1,489	142	9,528	5,280	5,032	2,339	7,478
West Papua	5,342	2,810	23,105	127	3,135	2,832	2,044	798	3,012
Total	958,887	596,619	1,570,619	78,745	450,112	1,355,715	498,698	550,738	673,019
Note:									
1 = Agriculture, Forestry and Fisheries									
2= Mining									
3= Manufacturing									
4= Electricity, Water and Gas									
5= Construction									
6= Wholesales, retail trade, restaurant and hotels									
7= Transportation, storage and comunications									
8= Finance, Insurance, real estate and business services									
9= Community, social and personal services									

Table 2 shows the calculation results for the provincial level as well as the total value added which is a national picture in 2012. Nationally (total column) shows the value-added from manufacturing sector is still dominant, as found in 1993, 1997 and 2004.

but if we look at the provincial level, it turns out from the 33 provinces which the data taken were only 10 provinces whose manufacturing was dominant compared to other sectors in the province. The 10 provinces with the most dominant manufacturing sector are North Sumatra, Riau, Riau Islands, Bangka Belitung Islands, West Java, Banten, Central Java, East Java, East Kalimantan, and West Papua.

This is not much different from the data in 1993, 1997, and 2004 which shows there are 7-8 Provinces whose manufacturing sectors are dominant. In 2012 increased to 10 provinces, but 2 additional provinces, such as the Riau Archipelago which is a division of Riau Province, and Banten which is an expansion area of West Java Province, which is indeed a very dominant manufacturing sector since 1993, it can be concluded that the provinces that dominant in the manufacturing sector have remained relatively the same since 1993.

4.2. Disparities between Provinces

There are many ways to observe disparities between regions. One of the ways can be used is as described below. After it has been proven that sectoral data at the national level do not reflect the conditions in most of the provinces in Indonesia, then we will look at the disparity between provinces in Indonesia in 2012 as illustrated in Figure 2.

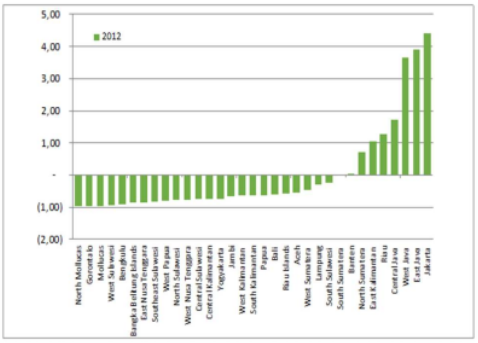


Figure 2. Value Added Disparities between Provinces in 2012

Figure 2 is generated from the following calculations: Value-added from each province is added up to get the Total Value Added or it can also be referred to as the National Value Added. Furthermore, the National Value Added is divided by 33 which is the number of provinces included in this study, resulting in an average National Value Added. Then the value-added for each province is reduced by the average National Value Added and the result is divided by the average National Value Added. With this calculation, a zero value indicates the same condition as the national average value, while a negative value indicates a condition that is below the national average value, and on the contrary, a positive value indicates a condition above the national average. From Figure 2 it can be seen that there are 9 Provinces out of 33 total 33 Provinces in this study which are in a condition above the national average, while the rest, 24 Provinces are below the national average. The Province of the Special Capital Region of Jakarta is the province with the largest Value Added, while North Maluku is the province with the smallest Value Added.

Although it cannot be directly compared with the results of Sendouw's (2010) research due to the different types of data and the number of provinces, in general, it can be concluded the gap between provinces in Indonesia is widening. One example that shows this widening gap in Jakarta. If in 2004 (Sendouw, 2010) the value was no more than twice the national average, but in 2014 Jakarta the value was almost 5 times the national average. Another interesting thing from this result except for Yogyakarta, the provinces in Java Island are all above

the national average. This shows the dominance of Java over other provinces outside Java.

5. CONCLUSION

The conclusions that can be drawn from this research are:

Data on sectoral at the national level does not describe conditions at the provincial level, it means sectoral analysis at the provincial level or even at a lower level is needed in the formulation of national development policies to work effectively.

The disparity between provinces in Indonesia tends to widen. To reduce disparities between provinces, a more pro-provincial policy is needed whose conditions are below the national average.

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