ECONOMIC GROWTH AND PERCAPITA INCOME DISTRIBUTION: CASE STUDY OF EAST JAVA PROVINCE

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Abstract

The objective of this paper is of twofold. First, it analyzes the disparity distribution of percapita income among regions in East Java Province. Second, it analyzes the correlation beetwen economic growth and disparity distribution of percapita income among regions in East Java Province. It uses Williamson disparity index and Pearson correlation to analyze the data. In the period of 2001-2007, the disparity index shows that distribution of percapita income among regions in East Java Province is getting unbalanced and the correlation beetwen economic growth and disparity distribution of percapita income among regions in East Java Province is positive and significant.

Keywords: Income per capita, disparity, economic growth
JEL classification numbers: O16, O18, O49

INTRODUCTION

Economic growth is one of the most important goals in economic development. This helps to meet the raise in economic needs as the result of the increase in population size. Therefore, sustainable economic growth is precondition to the process of economic development. This can be achieved by increasing the total output or Gross Domestic Bruto (Syafriont, 2010).

Percapita gross domestic product (PGDP) is the value of gross domestic product divided by the population size. It reflects three measures, namely level of wealth achieved by a conutry at a certain year, description about the speed of economic development, and discrepancy of economic performances across countries (Sukirno, 2006).

Higher PGDP can be achieved if the GDP grows faster than its population size. Besides this economic growth, another target in economic development in any country is to equally distribute the output of economic development to all people in the society. To achieve such goal, the government need to arrange policies, both fiscal and monetary policies, in such a way that people in all level of income are benefited from the process of economic development.

Another important target of economic development is to create job opportunities. The economic development in a given country not only should increase the percapita gross domestic product, but also to make sure that the share of people life under poverty line decreases.

The next target is to create job opportunities, which is important in reducing the unemployment level. This target is important, since social problems are mostly emerged from the high level of unemployment. To achieve such a goal, the government has to make sure that the growth of job opportunities created is higher than that of labor forces (Sukirno, 2006).

Yudhoyono has stressed out the importance of national development strategy which is pro-growth, pro-job, and pro-poor. Pro-growth strategy means that all programs or activities are directed to achieve high economic growth. This strategy is important in boosting added value, especially in agricultural sector, which supports most

people in developing countries, such as Indonesia.

With this strategy, it is hope that various activities related to agricultural sector, such as industry and services, will grow as well. Eventually, it is hope that job opportunities are created. As more people are involved in production process, more people will have spending power, so the economy as a whole will increase. The main goal of pro-job strategy is to release people from their poverty trap (Effendi, 2010).

Economic growth and income distribution are two of most important goals to be achieved in an economic development process. According to Munawar Ismail (in Abipraja, 2002), the relationship between economic growth and income distribution remains a controversy until this recent day. Some scholars argue that income distribution can not be achieved along with the high economic growth, while some others suggest that both can be achieved at the same time. Thee Kian Wie (in Abipraja, 2002) said that high economic growth and income distribution are not always in a negative relationship, even though it is true that in most developing countries, economic growth is always accompanied by higher uneven income distribution. However, there are some exception, such as that of South Korea and Taiwan, where high economic growth is accompanied by a high measure of income distribution.

The history has said that economic development in developed countries is accompanied by more equally income distribution, while that of developing countries are not. In some developing countries, development activities provide benefits only to some group of people. This kind of developments may bring modernization into an economy, but it fails to provide the ultimate goal, namely to provide higher standard of living for common people (Sukirno, 2006).

At the early state of Indonesian development, it was not easy to achieve both goals, namely high economic growth and high level of income distribution, at the same time, due to the funds availability. To meet such situation, the economic development was first focused on some key sectors in Java. It was hoped that the strategy will be followed by the growth of other sectors, as the result of the trickle down effect (Tambunan, 1996).

Latter in the era of Soeharto, the second president of Indonesia Republic, the government choose the unbalanced economic strategy. According to Hirschman (1958), unbalanced development strategy is more appropriate to developing countries as those countries are lack of capital and other resources to invest in all sectors and all regions at the same time.

In such situation, investment need to be focused on some key sectors and industries, and the benefit can be used to funds the development in other sectors. Therefore, the process of economic development will evolve from the unbalanced to balanced economic development. In another perspective, the development will spill over from one sector to the others and from one region to the others.

Different from Hirschman, Rosenstein-Rodan (1961) suggests that big investment in all area at the same time (big push or balanced growth strategy) will increase investment, which is the most efficient to the whole economy. This kind of investment will create markets to all industries, which is important in cutting the vicious circle of poverty in less develop countries.

The focus of development in East Java province is on fostering economic growth, maintaining income distribution, and empowering local people (East Java Province and BPS, 2008).

Regional government is a subsystem in province development, which belongs to the bigger system, namely Indonesian development. The economic development reflects aspiration, potential, prob-

lems and needs of people in the region. In an attempt to enhance regional economic growth, we need to map resources and potential in each region. The government has work hand-in-hand with people in the region in such a way that not only the growth of economic achieved, but job opportunities also created for the labor force (East Java Province and BPS, 2008).

Economic development in each region bring about different results, depends on the resources and infrastructure in the regions. This has led to discrepancies not only across sectors, but also across region (spatial), especially those of between cities and non cities.

Sectoral uneven economic development can be seen from the distribution of added value percentage produced by each economic sector. A study by Suparta (2008) in East Java Province shows that there are three dominant economic sectors and six non dominant economic sectors. The three dominant sectors are trade, hotel, and restaurant with average of added value distribution of 28.25 percent, industrial sectors with that of 27.68 percent, and agricultural sector with that of 17.96 percent.

The six non dominant sectors are services, transportation and communication, financial, rental and company service, construction, mining, electricity, gas and water, with the average added value of 8,34 percent, 5,67 percent, 4,93 percent, 3,57 percent, 1,97 percent and 1,64 percent, respectively.

Suparta (2008) also measures the variance of those statistics from 2001 to 2006, which shows a positive trend. He suggests that the economic development has become more unequal during the time period (Table 1).

Table 1: Variation in Added Value across Economic Sectors in East Java Province

Year	Variance
2002	111.39
2003	113.34
2004	115.64
2005	117.45
2006	119.02

Source: Suparta, 2008.

Economic development performance in each region is reflected in their Percapita Regional Gross Domestic Product (PGRDP). Major economic activities in most countries are concentrated in certain regions which have an impact on the disparity of income across regions. The impact is worsened by the work of multiplier, so that the income disparity across regions is getting bigger from time to time.

Economic development disparity across regions is reflected by the different of percapita income across those regions. One of the measures to the disparity is by the so called disparity index. Suparta (2005) reports the disparity across regions in East Java as in Table 2.

Table 2: Disparity Index in East Java Province (1998-2001)

Year	Kabupaten + City of	Kabupaten	City of
1998	106.22	55.43	86.92
1999	102.90	53.60	85.72
2000	101.65	54.35	84.63
2001	101.48	54.83	82.88

Source: Suparta, 2005.

Smaller disparity index (city plus district) shows that percapita income distribution across regions in East Java Province from 1998 to 2001 is getting more evenly distributed. This is also the case for percapita income distribution across cities from 1998 to 2001. The more even percapita income distribution across regions from 1998 to 1999 is reflected by the tendency of their disparity index to be smaller. However, from 1999 to in 2001, the disparity index slightly increased.

The most even percapita income distribution is that of across district (Kabupaten, in Indonesia), followed by that of between cities. The most uneven percapita income distribution is that of across kabupaten and cities.

Economic development discrepancy across regions represented by the variability in their percapita income can be analyzed using relative comparison analysis among regions, compare mean analysis with one-sample t test method and non-parametric test using chi-square. Suparta (2009) analyzed the difference between percapita regional gross domestic product in East Java Province in 2007 and suggests that from its 38 regions, there exist 31 regions or 81.58 percent of them are below the average. It means, there are only 18.42 percent of them are above the average.

Hypothesis testing on the difference between percapita gross domestic products in East Java Province in 2007 using chi-square result in chi-square value of 15.158 with significance level of 0.000, which is of course lower than 0.05. It can be inferred that there is a significant evidence to support the hypothesis that there exist the discrepancy between regions with higher and lower than the percapita regional gross domestic product.

Based on one-tailed t test, from the 31 regions which has percapita gross domestic product (PGRDP) lower than the average of PGRDP, there exist nine regions with PGRDP which are very different from the average of PGRDP. From seven regions with PGRDP bigger than the average of PGRDP, there exist 3 regions with PGRDP significantly different from the average, while the other 4 regions have the PGRDP which are not different from the average.

Economic discrepancy across regions has caused people to migrate to the more prosper region, mostly from one less to more job opportunities. The economic policy therefore needs to be directed towards harmonizing economic development across these regions. Special attentions are crucial for some remote regions, with less access to resources and other regions.

The discrepancy of economic development across regions is caused by the in optimality of the use resources in the production process. Another reason for the discrepancy is the lack infrastructure provided by the government to support the investment conducted by business people.

In an effort to reduce the discrepancy of economic development across regions, the government needs to impose both the appropriate economic and non economic policies. This might work as those policies will create stability in economic growth.

In conducting the economic development, the government applies the strategy of increasing economic growth and focuses on micro business institutions and the fulfillement of common people rights.

The aforementioned description motivates this paper to analyze disparity of percapita income distribution among regions in East Java Province. Furthermore, this paper will also analyze the relationship between economic growth and percapita income distribution disparity in the province.

METHODS

This paper analyzes disparity of percapita income distribution across regions in East Java Province using time series data from 2001-2007. It also analyzes the relationship between economic growth and disparity of percapita income distribution across regions

in East Java Province. The data are from Bereau of Central for Statistics (Badan Pusat Statistik), East Java Province. The data analyzed are percapita Regional Gross Domestic Product and population size of each region (kabupaten/city), as well as economic growth in the province level.

To analyze the disparity in percapita income distribution across regions, the paper uses disparity index using weighted coefficient developed by Williamson as follows:

$$IW = \frac{\sqrt{\sum_{i=1}^{38}(y_i - \bar{y})^2 \frac{P_i}{P}}}{\bar{y}} \times 100, \qquad (1)$$

where:

IW = Williamson index or disparity index

$\bar{y}$ = mean of percapita GRDP in East Java

y_i = percapita GRDP in each region

$\frac{P_i}{P}$ = proportion of district to province population size in East Java Province

The higher the index, the higher the discrepancy of development across regions is, and vice versa. To analyze the relationship between economic growth and this disparity index, the paper uses product moment correlation analysis using SPSS software package. To test the relationship between economic growth with disparity index, the paper uses *t* and *r* tests.

RESULTS DISCUSSION

The data analyzed in this paper is percapita regional gross domestic product (per capita GRDP) based on current price in 38 regions (kabupaten plus cities) in East Java Province, consisits of 29 kabupaten and 9 cities, and data on economic growth in the province.

Table 3 shows percapita GRDP based on current price in the region for the period of 2001-2007. In the period, all regions experience the increase of percapita GRDP, but it varies across regions. The data on the table are listed from those with the highest to the smallest using 2001 as the benchmark.

There are five cities with percapita GRDP of higher than that of the province, namely city of Kediri, Surabaya, Malang, Mojokerto and Probolinggo (Table 4). The other four have percapita GRDP of less than that of the province. The non-city (kabupaten) exist in the province are 29 kabupaten. From all of them, only two who have percapita GRDP higher than that of the province, namely Kabupaten Gresik and Kabupaten Sidoarjo. Therefore, in the period of 2001-2007 there are seven regions with percapita GRDP which are higher than that of the province. Moreover, during the period, the sequence of kabupaten based on the value of percapita GRDP remains the same. The sequence, from the highest to the lowest percapita GRDP, is City of Kediri, City of Surabaya, City of Malang, Kabupaten Sidoarjo, Kabupaten Gresik, City of Mojokerto and City of Probolinggo.

The sequence is influenced by the development of manufacture industries conducted by the regions, as this provide higher added value compared to that of primary industries and agriculture sector. Other factors influenced such differences are the development in trade, hotels and restaurant which are higher in the leading regions.

The regions which percapita lower than that of the province, which are 31 regions in total, have a lot of changes in their sequence. The lowest five regions are Kabupaten Pamekasan, Kabupaten Pacitan, Kabupaten Bondowoso, Kabupaten Trenggalek, and Kabupaten Sampang. These five regions are commonly characterized by the dominance of agriculture sector, while the land in the area is not fertile.

From 32 regions with percapita GRDP higher than that of the province, the sequence is keep changing every year. Regions with significant increase in position are City of Madiun (from rank 12 to 9) as

the increase in its manufacturing sector. Other regions experiencing the same thing are City of (from rank 16 to 13), Kabupaten Tuban (from rank 17 to 14), Kabupaten Bojonegoro (from rank 24 to 20), Kabupaten Ngawi (from 33 to 30), and Kabupaten Bondowoso (from 36 to 34). Most of the increase in position is influenced by the performance in manufacturing sector, mining industries, as well as trade, hotel, and restaurant businesses.

Table 3: Percapita GRDP based on Current Price in East Java Province Regions, 2001-2007 (in IDR)

No	Kabupaten/City of	2001	2002	2003	2004	2005	2006	2007
1	Kab. Pacitan	2367054	2656068	2931497	3158631	3636857	3939410	4382223
2	Kab. Ponorogo	2972501	3317952	3606690	3957368	4554165	5260707	5902008
3	Kab. Trenggalek	2571433	2788663	2985204	3200512	3594813	4173087	4678876
4	Kab. Tulungagung	5805961	6612531	7331288	8170674	9501490	11034623	12425952
5	Kab. Blitar	3869844	4350205	4892066	5486115	6390506	7452193	8473920
6	Kab. Kediri	3515148	3873240	4280370	4806798	5487730	6438973	7301054
7	Kab. Malang	4649427	5239715	5744860	6303279	7314212	8640609	9724101
8	Kab. Lumajang	4610913	5147716	5701377	6362382	7489871	8930921	9966343
9	Kab. Jember	3632233	4082499	4515987	5030145	5888686	6988880	7859855
10	Kab. Banyuwangi	5131881	5669750	6222147	6846653	8039895	9747088	11047313
11	Kab. Bondowoso	2459097	2746152	3043552	3371288	3934274	4712866	5278966
12	Kab. Situbondo	4398287	5055095	5626518	6274175	7370605	8758863	9855535
13	Kab. Probolinggo	4830974	5445197	6089289	6797060	7794009	9235064	10366175
14	Kab. Pasuruan	3658765	4186116	4554195	5084933	5913821	6893705	7781301
15	Kab. Sidoarjo	12237659	13684415	15095741	17209796	19859131	21639519	24225436
16	Kab. Mojokerto	4866985	5480522	6049453	6786468	7861921	9127630	10190369
17	Kab. Jombang	4039655	4480818	4970571	5483721	6349440	7637836	8535400
18	Kab. Nganjuk	3377895	3817408	4225636	4668427	5389920	6461607	7313328
19	Kab. Madiun	3277887	3792756	4159339	4540268	5220567	5995025	6682561
20	Kab. Magetan	4020589	4573978	5038290	5570444	6474680	7612049	8519770
21	Kab. Ngawi	2935732	3339076	3688801	4063024	4619604	5422497	6092177
22	Kab. Bojonegoro	3717366	4226294	4709915	5192166	5998790	7512801	8835603
23	Kab. Tuban	4504647	5104196	5727276	6464724	7552908	8950688	10226489
24	Kab. Lamongan	3136762	3467567	3839504	4240087	4858688	5246163	5877511
25	Kab. Gresik	10955989	12599220	13906959	15322086	17890461	20743471	23496342
26	Kab. Bangkalan	3036335	3411747	3778341	4077161	4700917	5313404	5830853
27	Kab. Sampang	2749530	3068585	3321612	3590765	4118778	4399958	4789960
28	Kab. Pamekasan	2352657	2642861	2902088	3158904	3621444	4172975	4615107
29	Kab. Sumenep	4229563	4644838	5177577	5649435	6567657	7418610	8177974
30	City of Kediri	78924273	85878127	100470120	114025434	135790940	158053364	171621700
31	City of Blitar	4250998	4804004	5298954	5855760	6820390	7984592	8954615
32	City of Malang	12709044	14179692	15601122	17609286	20892111	24635119	27761270
33	City of Probolinggo	7255156	8408559	9374705	10643645	12539058	14706920	16579768
34	City of Pasuruan	4515318	5193896	5792967	6466362	7503721	8935329	10335050
35	City of Mojokerto	8174963	9658545	10971250	12407682	14515799	15602829	17641236
36	City of Madiun	4846673	5753253	6519908	7397238	8693004	9984741	11475365
37	City of Surabaya	22279177	26008757	29385276	33392131	39618187	45012771	51608615
38	City of Batu	5206234	5930633	6569387	7499533	8714132	10233126	11450675
	Jatim	6563551	7435411	8302750	9301338	11002813	12557193	14153550

Source: Statistics of East Java.

Table 4: Percapita GRDP Rank based on Current Price in East Java Province, 2001-2007

No	Kabupaten/City of	2001	2002	2003	2004	2005	2006	2007
1	City of Kediri	1	1	1	1	1	1	1
2	City of Surabaya	2	2	2	2	2	2	2
3	City of Malang	3	3	3	3	3	3	3
4	Kab. Sidoarjo	4	4	4	4	4	4	4
5	Kab. Gresik	5	5	5	5	5	5	5
6	City of Mojokerto	6	6	6	6	6	6	6
7	City of Probolinggo Province of Jawa Timur	7	7	7	7	7	7	7
8	Kab. Tulungagung	8	8	8	8	8	8	8
9	City of Batu	9	9	9	9	9	9	10
10	Kab. Banyuwangi	10	11	11	11	11	11	11
11	Kab. Mojokerto	11	12	13	13	12	13	15
12	City of Madiun	12	10	10	10	10	10	9
13	Kab. Probolinggo	13	13	12	12	13	12	12
14	Kab. Malang	14	14	15	17	18	18	18
15	Kab. Lumajang	15	16	17	16	16	16	16
16	City of Pasuruan	16	15	14	14	15	15	13
17	Kab. Tuban	17	17	16	15	14	14	14
18	Kab. Situbondo	18	18	18	18	17	17	17
19	City of Blitar	19	19	19	19	19	19	19
20	Kab. Sumenep	20	20	20	20	20	24	24
21	Kab. Jombang	21	22	22	23	23	20	21
22	Kab. Magetan	22	21	21	21	21	21	22
23	Kab. Blitar	23	23	23	22	22	23	23
24	Kab. Bojonegoro	24	24	24	24	24	22	20
25	Kab. Pasuruan	25	25	25	25	25	26	26
26	Kab. Jember	26	26	26	26	26	25	25
27	Kab. Kediri	27	27	27	27	27	28	28
28	Kab. Nganjuk	28	28	28	28	28	27	27
29	Kab. Madiun	29	29	29	29	29	29	29
30	Kab. Lamongan	30	30	30	30	30	33	32
31	Kab. Bangkalan	31	31	31	31	31	31	33
32	Kab. Ponorogo	32	33	33	33	33	32	31
33	Kab. Ngawi	33	32	32	32	32	30	30
34	Kab. Sampang	34	34	34	34	34	35	35
35	Kab. Trenggalek	35	35	36	36	38	36	36
36	Kab. Bondowoso	36	36	35	35	35	34	34
37	Kab. Pacitan	37	37	37	38	36	38	38
38	Kab. Pamekasan	38	38	38	37	37	37	37

Source: Data estimation.

From Table 5, City of Surabaya is a city with the highest population, followed by Kabupaten Malang, Kabupaten Jember, Kabupaten Sidoarjo and Kabupaten Banyuwangi. The five regions with the least population are City of Mojokerto, City of Blitar, City of Madiun, City of Pasuruan and City of Batu.

Table 5: Population Size in Kabupaten/City of 2001-2007

No	Kabupaten/City of	2001	2002	2003	2004	2005	2006	2007
1	Kab. Pacitan	532726	535674	538392	542556	546150	549768	553865
2	Kab. Ponorogo	864424	866995	869359	875448	880701	885968	892527
3	Kab. Trenggalek	663790	667582	671076	677185	682465	687786	691207
4	Kab. Tulungagung	949197	954853	960067	968983	976691	984460	992248
5	Kab. Blitar	1100663	1105902	1110726	1121716	1131222	1140809	1144528
6	Kab. Kediri	1454244	1464954	1474840	1493209	1509135	1525231	1531187
7	Kab. Malang	2322699	2331120	2338865	2368372	2393959	2419822	2442422
8	Kab. Lumajang	987939	993971	999533	1009349	1017839	1026400	1034334
9	Kab. Jember	2205492	2219175	2231793	2248968	2263794	2278718	2293740
10	Kab. Banyuwangi	1526870	1533679	1539948	1552867	1564026	1575265	1580441
11	Kab. Bondowoso	700692	704831	708646	714835	720183	725571	727790
12	Kab. Situbondo	613778	617570	621067	626600	631382	636200	638537
13	Kab. Probolinggo	1017365	1027181	1036262	1048616	1059322	1070137	1081063
14	Kab. Pasuruan	1381027	1401079	1429716	1443550	1464297	1485342	1496474
15	Kab. Sidoarjo	1592385	1638669	1682278	1738285	1787771	1838666	1869350
16	Kab. Mojokerto	938758	954161	968502	989965	1008740	1027871	1041269
17	Kab. Jombang	1152962	1163083	1172439	1187178	1199958	1212876	1233279
18	Kab. Nganjuk	1015318	1022050	1028260	1041812	1053569	1065459	1073126
19	Kab. Madiun	653421	655243	656918	660873	664282	667709	667841
20	Kab. Magetan	621738	621222	620750	621160	621511	621862	622966
21	Kab. Ngawi	833944	837072	839949	846355	851884	857449	860029
22	Kab. Bojonegoro	1195706	1204542	1212700	1226691	1238811	1251051	1263411
23	Kab. Tuban	1061529	1069618	1077088	1087121	1095795	1104538	1107691
24	Kab. Lamongan	1221528	1229000	1235890	1249867	1261972	1274194	1281176
25	Kab. Gresik	1026488	1043747	1059822	1081800	1101000	1120541	1142817
26	Kab. Bangkalan	864279	875584	886077	907651	926560	945863	965568
27	Kab. Sampang	812575	823498	833640	855405	874512	894046	914016
28	Kab. Pamekasan	722148	731487	740154	755331	768587	782076	795801
29	Kab. Sumenep	1016812	1024843	1032260	1045501	1056985	1068595	1076592
30	City of Kediri	251697	251872	252033	253287	254367	255452	258734
31	City of Blitar	122683	123027	123344	124203	124944	125689	127338
32	City of Malang	756294	762155	767567	773703	779002	784337	791970
33	City of Probolinggo	196591	198493	200252	203056	205490	207953	210446
34	City of Pasuruan	172840	174859	176730	179587	182072	184591	185507
35	City of Mojokerto	110100	111087	111999	114339	116383	118464	119051
36	City of Madiun	169595	169536	169481	170260	170931	171605	173447
37	City of Surabaya	2633067	2647283	2660381	2681092	2698972	2716971	2720156
38	City of Batu	170030	173763	177256	181631	185467	189384	192059
	Jatim	5633394	35930460	36216060	36668407	37070731	37478719	37794003

Source: Statistics of East Java.

City of Surabaya as the capital city of the province and also as the industrial district provides more job opportunities compared to the other regions. This has made this region attracts more people and labor force from the nearby regions.

From Tables 3 and 5, percapita GRDP in City of Kediri is higher than that of City of Surabaya. This happened because the population size in City of Kediri is smaller than that of City of Surabaya.

Table 6: Disparity Index and Economic Growth, 2001-2007

Year	Disparity Index (IW)*			Economic Growth (%)**
	Kabupaten + City of	Kabupaten	City of	
2001	112.50	55.13	98.02	3.76
2002	111.97	55.78	96.18	3.80
2003	114.45	56.09	97.81	4.78
2004	115.81	57.91	97.93	5.83
2005	117.26	58.36	98.42	5.84
2006	116.88	53.65	97.78	5.80
2007	115.39	56.10	97.35	6.05

Source: * Data estimation. ** Statistic of East Java.

Based on the analysis on disparity index presented in Table 6, it can be seen that percapita income distribution across regions in 2002 has become more equal compared to that of 2001, indicated by the decreasing disparity index. During the period of 2003-2005, the index increases significantly, before decreasing during the period of 2006-2007. Overall, the index in 2007 is higher than that of 2003, indicating that the percapita income distribution is getting more unequal.

Disparity index across cities behaves the same way as the index across regions (kabupaten plus cities). This means that percapita income distribution across cities has become more equal during the first period, becomes less equal in 2003-2005, and becomes more equal during the period of 2006-2007, but overall, the index in 2007 is higher than that of 2003, indicating that the percapita income distribution is getting more unequal.
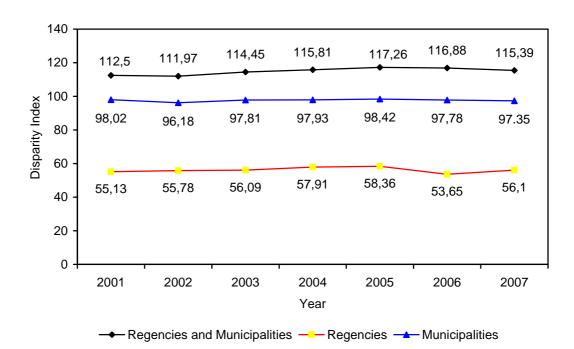
Disparity index for kabupaten from 2001-2005 increase that is signals the tendency towards unequal income distribution across kabupaten. However, in 2006, the index decreases significantly, even lower than that of 2001, indicating more equal income distribution, before it increases again in 2007.

The high disparity index fore regions (kabupaten + cities) compared to that of cities in isolation and kabupaten in isolation suggesting the high discrepancy across kabupaten in one side and cities on the other side.

Comparing disparity within cities in one side and disparity within kabupaten on the other side, the former is higher than the later. It means that the income discrepancy within cities is higher than that of within kabupaten.

The disparity index in the province can be easily understood by looking at the figure, constructed from the data in the table, such as that of Figure 1. The figure shows the lowest disparity index belongs to non-cities (namely belongs to Kabupaten), which indicates that those regions have more equal income distribution than that of cities. The condition for the cities are on the opposite, namely they have more unequal percapita income distribution. If we combine both cities and kabupaten, as we guessed, the group has the most unequal percapita income distribution. This stems from the very different performance of economic development between kabupaten and cities area.

Table 7 shows the difference between disparity index within cities and within kabupaten. The increasing discrepancy between disparity index within cities and that of within kabupaten suggests the increase in percapita income distribution across cities in one side and that of across kabupaten, as have been witnessed in 2003, 2005 and 2006. However, the discrepancy is lower in 2002, 2004 and 2007.

Source: Data estimation.

Figure 1: Development of Disparity Index

In 2002, the difference in disparity index for cities and that of kabupaten decreases. This was caused by a decrease in city's index and an increase in kabupaten's index. In 2004, the difference increases, where the index in cities is higher than that of kabupatens. In 2004, the difference decreases, before increases in 2005, especially the sharp increases in 2006, caused by decrease in cities disparity index. However, the difference is sharply decreases in 2007, as the result of the big increases in kabupaten's disparity index.

Table 7: Disparity Index in Cities and Kabupaten, East Indonesia Province

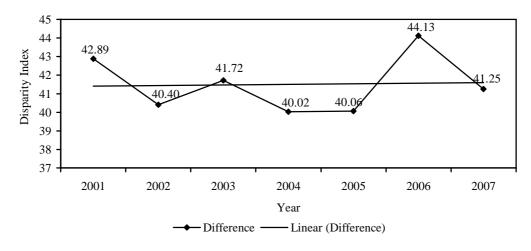| Year	Difference
2001	42.89
2002	40.40
2003	41.72
2004	40.02
2005	40.06
2006	44.13
2007	41.25

Source: Data estimation.

From Figure 2, we can see that the disparity index is constant in the long run. It means that there is no difference across time. However, we can see some fluctuation in the figure. The lowest are in 2004 and 2005, with the highest in 2006. The slight increase in the long run disparity index curve might need a test, wither t or r tests.
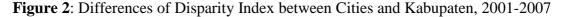
To analyze the relationship between disparity index in cities and in kabupaten, the paper uses product moment methods, using SPSS software package. It is found that from 2002-2007 the correlation coefficient is 0,044, showing no correlation between both index. In fact, the t and r test showing that the relationship is not significant, as suggested by the probability level of 0,926, which is much bigger than 0,05 (5%).

Table 6 shows the positive trend in economic growth in the province, with an insignificant interruption in 2006. This can be clearly shown in Figure 3. The correlation between economic growth and year, as

suggested by the product moment correlation coefficient of 0.916, is very strong. This means that we can hope an increase of economic growth in the years to come. The *t* test shows a significant relationship, as shown by the probability of 0.004, which much lower than 0.05.

Based on the data on Table 6, there are three conditions that have been achieved from the economic activities in the province. First, in 2003 to 2005, there has been an increase in economic development followed by an increase in disparity index. This means that the increase in eco-

nomic development has been followed by the more unequal income distribution. Second, in 2006, there has been a decrease in both economic development and percapita income distribution. This means that the decrease in economic growth has been accompanied by the increase in percapita income distribution. Third, in both 2002 and 2007, there has been an increase in economic development followed by the decrease in disparity index. This means that during two periods, the economic growth has been followed by the more equal percapita income distribution.
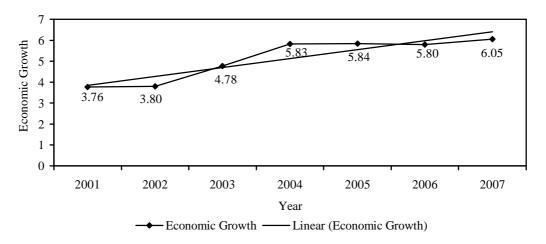

Source: Data estimation.

Figure 2: Differences of Disparity Index between Cities and Kabupaten, 2001-2007

Figure 3: Economic Growth in East Java Province, 2001-2007

To analyze the relationship between economic growth and disparity index, the author calculates the correlation using product moment method in SPSS software package. It can be shown that the correlation coefficient is 0,932, suggesting that the correlation between economic growth and disparity index in East Java Province from 2001-2007 is positive and strong. It means that the higher the economic growth, the higher the disparity index is.

To test the relationship between economic growth and disparity index, the author uses t and r tests. The data analysis shows the significant level of 0,002, suggesting that there is a significant relationship between economic growth and disparity index.

The relationship between economic growth and disparity index is positive and significant, showing that the economic development process has been imbalance. This means that the good performance in economic development is accompanied by the tendency of income distribution to more unequal.

CONCLUSIONS

From 2001-2007 there 31 regions (kabupaten or cities) or 81.58 percent of regions with percapita GRDP lower than the average in the province, and there are 7 regions or 18,42 percent regions with percapita GRDP higher than the average.

Economic development process in East Java Province from 2001-2007 has shows the distribution of economic development outputs which are measured by the percapita GRDP which the tendency of becoming more unequal. This has the relationship with the potential ones by each region, which make the priority and focus of economic development is different from one region to the others.

Based on the hypothesis testing on correlation, it is found that the relationship between economic growth and disparity index of percapita income distribution is

positive, showing that high economic growth is not accompanied by the equal income distribution across regions. Therefore, activities in economic development are not yet meet the framework of economic development in East Java Province.

Economic development by focusing on industrial sector as the leading sector will accelerate percapita income growth. This strategy will accelerate the creation of job opportunities which is very important in cutting the unemployment level. To develop the industrial sector especially that of manufacturing sector, we have to select strategic regions without sacrificing agricultural area.

Another way to enhance percapita income growth is by spreading the economic development process into the whole regions and economic sectors. This strategy will also increase job opportunities in the whole economy. One thing might be of helps is that we love our own products, as have been campaigned by many countries, even the developed ones.

However, the increase in percapita GRDP is not a guarantee that people in general are wealthier. Another variable need to be consider is the income distribution that accompanying the development process. We have to make sure that income distribution is of equal, so that most people enjoy the outputs of the economic development, not only a bunch of rich and powerful people in the economy.

Percapita GRDP as a measure of economic development need also consider whether the region is a city or non-city. People with the same level of income will probably be happier if they live in rural area, as living cost and standard are lower than that of in cities.

The development of infrastructure initiated by the government such as the famous Suramadu Bridge will enhance economic activities which eventually increase percapita income in Surabaya and Madura, as well as area nearby the regions.

Industrial development with medium and big scales in industrial districts will cause urbanization. This has created various social problems. However, urbanization does not have to be avoided. What we need to do is organize them in such a way to minimize its negative effects (Gill, 2009).

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