

MARINE FISHERIES SECTOR ECONOMIC POTENTIAL AND COASTAL AREA DEVELOPMENT DISPARITIES NORTH SOUTH EAST JAVA

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Abstract

As an ecosystem, the coastal areas provide a highly productive natural resources and to manage the areas need considering ecological principles to reduce the negative consequences that harm the continuity of its overall development. The issue is how the economic potential of marine fisheries and North South East Java coastal development disparities? Purpose of the study is mapping the economic potential of marine fisheries and North South East Java coastal development disparities. Potential and the role of marine fisheries sector is still not optimal in the economic structure in East Java. There is a largedisparity in the development of North-South coastal areas in East Java. Expected role of local government to further encourage the growth of marine fisheries sector better in the future.

Keywords: *Economic Potential, Marine Fisheries, Disparities.*

Introduction

Indonesia has an area consisting of 70% of the ocean and it is an archipelago with an area of waters estimated at 5.8 million km² and the long of coastline of 81.000 km². The potency of fishery resources is still quite large approximately 6.1 million tons per year and only 57 percent utilized. With the sea area of 5.8 million km², Indonesia actually has the potency of marine fishery resources are considerable in terms of both quantity and variety. This potency has a high economic value, for the economic value of marine fish reach Rp. 8.07 billion [7].

Such great potency and has significance in the context of the nation's economy, planning and sustainable management of coastal areas is an absolute requirement. The planning and management functions do not only has the physical dimension to preserve and sustainability of fishery resources and natural systems but also has a social dimension [4].

The development approach that emphasizes on macro economic growth is likely to result in development disparities between regions is quite large. Investment and resource are absorbed and concentrated on the growth centers, while the rear areas experiencing excessive resource depletion. The development disparities of the north coast of East Java

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with the South coast of East of Java cause some problems adverse the development process.

The development disparities between regions in one side takes the form of poor distribution and allocation of resource use which creates inefficiencies and the region economic systems are not optimal. The development disparities between regions yield a relationship structure between the regions, forming interactions that weaken to each other. The rear region to be weak due to excessive resource depletion (backwash) resulted in a net flow and the accumulation of value added in the developments centers in a massive and an excessive manner. The development disparities of inter-regional led regional development capacity to be sub-optimal, it also nullify the growth potency of the aggregate development from the interaction of inter-regional development that synergistic and mutually reinforcing [5].

The research objective was to analyze: the quality of marine fishery resources from the comparisons between sectors, the sectoral share and local share, the index of specialization, location quota, the local growth rate and sectoral competitiveness toward the development disparity of coastal areas of North and South of East Java.

Method

The location of the research was established in the coastal region of East Java Province. The northern coastal regions are presented by the coastal region of Paciran district and Brondong district. The southern coastal areas presented by the Panggul, Watulimo and Munjungan district. The mapping of the region's economic potential is the process of formulating the supporting information for the government in formulating a policy, which is based on framework of scientific logic and the real condition of the field [6].

(1) The ratio between Two Variables of Each Location

$$R_{i,j1,j2,t} = \frac{x_{i,j1,t}}{x_{i,j2,t}} \cdot \alpha; \quad R_{i,j1,j2,t} \geq 0$$

The existence of x_{j2} in the location of i is in abundance relative to the existence of x_{j1} (atau or existence x_{j1} XFL in the location of i is scarce relative to the existence of x_{j2}).

(2) Sectoral share of Each Location (%)

$$pS_{i,j,t} = \frac{x_{i,j,t}}{\sum_j x_{i,j,t}} \cdot 100; \quad 0 \leq pS_{i,j,t} \leq 100$$

The value of $pS_{i,j,t}$ approaching 100% indicates that t , for location of i , y sector is a dominant sector relative to other sectors..

(3) Sectoral Share of Aggregates Region / PSAW (%)

$$pSA_{j,t} = \frac{\sum_i x_{i,j,t}}{\sum_i \sum_j x_{i,j,t}} \cdot 100; \quad 0 \leq pSA_{j,t} \leq 100$$

The value of $pSA_{j,t}$ approaching 100% indicates that t , in the aggregate region, sector j is the dominant sector relative to other sectors..

(4) Local Share of Each Sector (%)

$$pL_{i,j,t} = \frac{x_{i,j,t}}{\sum_i x_{i,j,t}} \cdot 100; \quad 0 \leq pL_{i,j,t} \leq 100$$

The value of $pL_{i,j,t}$ approaching 100% indicates that t , for sector j , location of i is more dominant location relative to other locations.

(5) Local Share of Aggregate Sector / PLAS (%)

$$pLA_{i,t} = \frac{\sum_j x_{i,j,t}}{\sum_i \sum_j x_{i,j,t}} \cdot 100; \quad 0 \leq pLA_{i,t} \leq 100$$

The value of $pLA_{i,t}$ approaching 100% indicates that t , in the aggregate sector, location of i is more dominant relative to other locations.

(6) Specialization Index of Each Location (ISTL)

$$cS_{i,t} = \frac{1}{2 \times 100} \cdot \sum_j |pS_{i,j,t} - pSA_{j,t}|; \quad 0 \leq cS_{i,t} \leq 1$$

The value of $cS_{i,t}$ close to 1 indicates that t , the location of i is more concentrated (specialized) in certain sectors.

(7) Localization Index of Each Sector / ILTS

$$cL_{j,t} = \frac{1}{2 \times 100} \cdot \sum_i |pL_{i,j,t} - pLA_{i,t}|; \quad 0 \leq cL_{j,t} \leq 1$$

The value of $cL_{j,t}$ close to 1 indicates that t , sector j is more concentrated (located) at certain locations.

(8) Quota Location

$$LQ_{i,j,t} = \frac{pS_{i,j,t}}{pSA_{j,t}}$$

The value of $LQ_{i,j,t}$ greater than 1 shows that t , the location of i is more concentrated on sector j (or, more concentrated sector j at location of i).

(9) Local Growth Rate of Each Sector (%)

$$IDE_{i,t} = \frac{1}{m} \cdot \exp\left(-\sum_j (pS_{i,j,t} \cdot \ln pS_{i,j,t})\right) \cdot 100; \quad \frac{100}{m} \leq IDE_{i,t} \leq 100$$

The value of $IDE_{i,t}$ approaching 100 indicates that year t , the location of i have more high diversity (diversity) sector.

(10) Local Growth Rate of Aggregate Sector / LPLAS

$$LPLS_{i,j,t_0,t_1} = \left(\frac{x_{i,j,t_1}}{x_{i,j,t_0}} - 1\right) \times \frac{1}{(t_1 - t_0)} \times 100$$

The value of $LPLS_{i,j,t_0,t_1}$ approaching 100 indicate that the period of t_0 to t_1 the location growth i for sector j is high. Location of i is a location that is fast growing sector j . Negative figures shows the negative growth, namely a decrease (decay).

(11) Sectoral Growth Rate of Aggregate Region / LPSAW

$$LPL_{i,t_0,t_1} = \left(\frac{\sum_j x_{i,j,t_1}}{\sum_j x_{i,j,t_0}} - 1\right) \times \frac{1}{(t_1 - t_0)} \times 100$$

The value of LPL_{i, t_0, t_1} approaching 100 indicates that the period of t_0 to t_1 , the growth rate of location of i in the aggregate sector j is high. Location of i is the location in which the growth the sector aggregate is fast.

(12) Aggregate Growth Rate of Sector-Region / LPASW

The $LPW_{j, t_0, t_1} = \left(\frac{\sum_i x_{i,j,t_1}}{\sum_i x_{i,j,t_0}} - 1 \right) \times \frac{1}{(t_1 - t_0)} \times 100$ rates that in the period of t_0 to t_1 , the growth rate of sector j in the aggregate area is high. Sector j is the sector in which the growth of the aggregate area is fast.

(13) Sectoral Competitiveness of Aggregat Region / DSAW

The $PS_{j, t_0, t_1} = \left(\frac{\sum_i \sum_j x_{i,j,t_1}}{\sum_i \sum_j x_{i,j,t_0}} - 1 \right) \times \frac{1}{(t_1 - t_0)} \times 100$ rates that the period of t_0 to t_x , the sector aggregate growth rate in the aggregate region is high. The growth of the analyzed region is fast.

(14) Local Competitiveness of Each Sector

$$PS_{j, t_0, t_1} = LPS_{j, t_0, t_1} - LPW_{j, t_0, t_1}$$

The value of PS_{j, t_0, t_1} positive (>0) indicates that the period of t_0 to t_1 , the sector growth rate of j is faster relative to the aggregate growth rate of the aggregate sector. Sector j is a competitive sector (competitive) in the analyzed region. Negative number indicates the sector j is not a competitive sector.

The Results

GDP value on the north coastal are Paciran and Brondong district, foregoing observations in nearly all sectors in 2000, 2004 and 2007 have increased significantly. The structure of GDP in 2000, the district of Paciran was dominated by the agricultural sector of 0.0136% , then trade of 0.0065% and services sector of 0.0029%. In the Brondong district, the agricultural sector still dominates of 0.0205%, trade of 0.0098% and Services sector of 0.0044%. In 2004 and 2007 was still dominated by agriculture, trade and services,

the marine fishery sector is far below the value of other fishery. In District of Paciran, marine fishery sector during the year of observation 2000, 2004 and 2007 was on ranked ninth above the electricity, gas, water and mining sectors. During the year 2000-2004 has increased from Rp. 1.289 million to Rp. 2.919 million and in 2007 to Rp. 4.142 million. Brondong district declined from Rp. 2.386 millions in 2000 to Rp. 2.268 millions in 2003 and decreased to Rp. 2.179 million in 2007.

GDP value of coastal Southern include Panggul district, and the Munjungan, and Watulimo district almost in nearly all sectors during the observation in 2000, 2004 and 2007 have increased significantly. GDP structure in the Panggul district in 2000, the GDP was dominated by the agriculture sector (0.0361%) followed by the services sector (0.0202%) and trade (0.0179%), in 2004 and in 2007 was still dominated by agriculture, services and trade. The same is seen in the district of Munjungan and Watulimo. The marine fishery sector is well above the value of other fishery. In district of Panggul, the marine fishery sector during the year of observation 2000, 2004 and 2007 was ranked eighth above the mining sector, electricity, gas, water and other fishery sector. In 2000-2004, the marine fishery has increased from Rp. 1 714 million to Rp. 2 013 million and in 2007 to Rp. 2 237 million.

Tabel 1. GDP Value of Coastal North Southern (in million Rp)

No	Sub District	Sector										
		"Agr"	"plaut"	"pl"	"Min"	"Ind"	"Lga"	"Kon"	"Dag"	"Ang"	"Keu"	"Jsa"
I. Wilayah Pesisir Utara th 2000												
	"Paciran"	38344	1289	5775	129	5132	1184	2835	18240	1429	2841	8156
	"Brondong"	58023	2386	8303	195	7765	1792	4289	27601	2163	4299	12342
II. Wilayah Pesisir Utara th 2004												
	"Paciran"	84471	2919	13078	437	12071	2071	7261	47199	3372	8140	18669
	"Brondong"	59840	2268	10158	310	8551	1467	5143	33436	2388	5766	13225
III. Wilayah Pesisir Utara th 2007												
	"Paciran"	119066	4142	18555	669	17276	2736	10580	68918	4828	12114	26553
	"Brondong"	61202	2179	11550	396	9141	1223	5784	37812	2558	6867	13887
IV. Wilayah Pesisir Selatan th 2000												
	"Panggul"	40351	1714	180	667	8032	385	5549	20042	6830	6925	22511
	"Munjungan"	29185	1291	79	482	5809	279	4014	14496	4940	5008	16282
	"Watulimo"	33704	1538	44	557	6709	322	4635	16741	5705	5784	18803

V. Wilayah Pesisir Selatan th 2004												
	"Panggul"	45637	2013	191	838	9417	493	6614	24409	7665	7483	24775
	"Munjungan"	33008	1507	87	606	6811	357	4784	17654	5544	5412	17920
	"Watulimo"	38119	1791	50	700	7866	412	5524	20388	6402	6250	20694
VI. Wilayah Pesisir Selatan th 2007												
	"Panggul"	49601	2237	200	966	10456	574	7412	27683	8291	7901	26473
	"Munjungan"	35876	1670	93	699	7563	415	5361	20023	5996	5715	19148
	"Watulimo"	41431	1981	54	807	8734	480	6191	23123	6925	6600	22113

Source : PDRB Kab Kota Se Jawa Timur, (analyzed, 2009).

"Agr"	=	"Agriculture "
"plaut"	=	" Sea Fishery "
"pl"	=	" Other Fishing "
"Min"	=	" Mining "
"Ind"	=	" Manufacturing "
"Lga"	=	" Electricity, gas and water supply "
"Kon"	=	" Construction "
"Dag"	=	" Trade, Hotels & Restaurants "
"Ang"	=	" Transport & Communications "
"Keu"	=	" Finance, leasing & services press "
"Jsa"	=	" the services' "

Tabel 2. GDP Value of Coastal North Southern (%)

No	Sub District	Sector										
		"Agr"	"plaut"	"pl"	"Min"	"Ind"	"Lga"	"Kon"	"Dag"	"Ang"	"Keu"	"Jsa"
I. Wilayah Pesisir Utara th 2000												
	"Paciran"	0.0136	0.0005	0.0020	0.0000	0.0018	0.0004	0.0010	0.0065	0.0005	0.0010	0.0029
	"Brondong"	0.0205	0.0008	0.0029	0.0001	0.0027	0.0006	0.0015	0.0098	0.0008	0.0015	0.0044
II. Wilayah Pesisir Utara th 2004												
	"Paciran"	0.0261	0.0009	0.0040	0.0001	0.0037	0.0006	0.0022	0.0146	0.0010	0.0025	0.0058
	"Brondong"	0.0185	0.0007	0.0031	0.0001	0.0026	0.0005	0.0016	0.0103	0.0007	0.0018	0.0041
III. Wilayah Pesisir Utara th 2007												
	"Paciran"	0.0335	0.0012	0.0052	0.0002	0.0049	0.0008	0.0030	0.0194	0.0014	0.0034	0.0075
	"Brondong"	0.0172	0.0006	0.0032	0.0001	0.0026	0.0003	0.0016	0.0106	0.0007	0.0019	0.0039
IV. Wilayah Pesisir Selatan th 2000												
	"Panggul"	0.0361	0.0015	0.0002	0.0006	0.0072	0.0003	0.0050	0.0179	0.0061	0.0062	0.0202
	"Munjungan"	0.0261	0.0012	0.0001	0.0004	0.0052	0.0002	0.0036	0.0130	0.0044	0.0045	0.0146
	"Watulimo"	0.0302	0.0014	0.0000	0.0005	0.0060	0.0003	0.0041	0.0150	0.0051	0.0052	0.0168

V. Wilayah Pesisir Selatan th 2004											
"Panggul"	0.035 7	0.001 6	0.000 1	0.000 7	0.007 4	0.000 4	0.005 2	0.019 1	0.006 0	0.005 9	0.019 4
"Munjungan"	0.025 8	0.001 2	0.000 1	0.000 5	0.005 3	0.000 3	0.003 7	0.013 8	0.004 3	0.004 2	0.014 0
"Watulimo"	0.029 8	0.001 4	0.000 0	0.000 5	0.006 2	0.000 3	0.004 3	0.015 9	0.005 0	0.004 9	0.016 2
VI. Wilayah Pesisir Selatan th 2007											
"Panggul"	0.035 4	0.001 6	0.000 1	0.000 7	0.007 5	0.000 4	0.005 3	0.019 8	0.005 9	0.005 6	0.018 9
"Munjungan"	0.025 6	0.001 2	0.000 1	0.000 5	0.005 4	0.000 3	0.003 8	0.014 3	0.004 3	0.004 1	0.013 7
"Watulimo"	0.029 6	0.001 4	0.000 0	0.000 6	0.006 2	0.000 3	0.004 4	0.016 5	0.004 9	0.004 7	0.015 8

Source : PDRB Kab Kota Se Jawa Timur (analyzed, 2009).

The Mapping Analysis of The Economic Potential Of Coastal Areas As Follows:

(1) The ratio between Two Variables of Each Location

In the northern coastal region, the ratio scores of marine fishery with other sectors under one is the agriculture, fishery, manufacturing, construction, trade, transport, finance and services. The value ratios above one are the mining sector and electricity sector, gas and water, both in 2004 and 2007. The southern coastal areas, the ratio scores of marine fishery with other sectors under one are the agricultural sector, processing industry, construction, trade, transport, finance and services. The value ratios above one are another fishery, mining and electricity sectors-gas-water, both in 2004 and 2007.

The various ratio of marine fishery sector with other fishery sectors is different. On the North Coast region, the ratio value below one (0.223) means the marine fishery sector is scarce relative to the existence of other fishery, the South coast is worth over one (between 10.521 to 36.598) means marine fishery are abundant relative to the existence of other fishery.

Tabel 3. The Ratio Between Two Variables of Each Location (in million Rp)

No	Nama Kec	Ratio between Sector										
		R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	Ket
I. Wilayah Pesisir Utara th 2004												
	"Paciran"	0.035	0.223	6.676	0.242	1.410	0.402	0.062	0.866	0.359	0.156	
	"Brondong"	0.038	0.223	7.320	0.265	1.546	0.441	0.068	0.949	0.393	0.171	
II. Wilayah Pesisir Utara th 2007												
	"Paciran"	0.035	0.223	6.196	0.240	1.514	0.392	0.060	0.858	0.342	0.156	
	"Brondong"	0.036	0.189	5.506	0.238	1.781	0.377	0.058	0.852	0.317	0.157	
III. Wilayah Pesisir Selatan th 2004												
	"Panggul"	0.044	10.521	2.402	0.214	4.082	0.304	0.082	0.263	0.269	0.081	
	"Munjungan"	0.046	17.325	2.486	0.221	4.226	0.315	0.085	0.272	0.278	0.084	
	"Watulimo"	0.047	35.989	2.559	0.228	4.349	0.324	0.088	0.280	0.287	0.087	
IV. Wilayah Pesisir Selatan th 2007												
	"Panggul"	0.045	11.196	2.315	0.214	3.897	0.302	0.081	0.270	0.283	0.085	
	"Munjungan"	0.047	17.963	2.389	0.221	4.021	0.311	0.083	0.278	0.292	0.087	
	"Watulimo"	0.048	36.598	2.455	0.227	4.132	0.320	0.086	0.286	0.300	0.090	

Source : PDRB Kab Kota Se Jawa Timur (analyzed, 2009)

R1	=	"Rasio Perikanan Laut - Pertanian "
R2	=	"Rasio Perikanan Laut - Perikanan Lainnya
R3	=	"Rasio Perikanan Laut - Pertambangan
R4	=	"Rasio Perikanan Laut - Industri Pengolahan
R5	=	"Rasio Perikanan Laut - Listrik, gas dan air bersih
R6	=	"Rasio Perikanan Laut - Konstruksi
R7	=	"Rasio Perikanan Laut - Perdagangan, Hotel & Restoran
R8	=	"Rasio Perikanan Laut - Pengangkutan & Komunikasi
R9	=	"Rasio Perikanan Laut - Keuangan, persewaan & jasa pers
R10	=	"Rasio Perikanan Laut jasa-jasa

(2) Sectoral share of Each Location (%)

The sectoral share value of each location in the northern coastal region in 2004 and 2007, most of them is still dominated by the agricultural sector, it is indicated by the percentage of the agricultural sector is relatively larger, compared to other sectors. The primary sector (agriculture and mining) still dominate the structure of the GDP region (51 to 52%), although the trend of the primary sector declining but still relatively larger in terms of employment and production. Industrial sector (manufacturing and construction) contributed 10 to 11%, the utility sector (electricity, gas, water, transport & communications) accounted for 5 to 6% and the services sector ranged between 13 to 14%. The marine fishery sector contributes only 1.5% and other fishery 6.5% -7.5%.

Sectoral share value of each location in the southern coastal region in 2004 and 2007, largely dominated by the agricultural sector. Primary sector (agriculture and mining) still dominate the structure of the GDP (36 to 37%). Industrial sector (manufacturing and construction) contributed 11-12%, the utility sector (electricity, gas, water, transport & communications) accounted for 10-11% and service sector ranged from 25 to 26%.

Tabel 4. Sectoral Share of Each Location (%)

No	Sub District	Sector										
		"Agr"	"plaut"	"pl"	"Min"	"Ind"	"Lga"	"Kon"	"Dag"	"Ang"	"Keu"	"Jsa"
I. Wilayah Pesisir Utara th 2004												
	"Paciran"	42.302	1.462	6.549	0.219	6.045	1.037	3.636	23.636	1.688	4.076	9.349
	"Brondong"	41.977	1.591	7.126	0.217	5.999	1.029	3.608	23.455	1.675	4.045	9.277

II. Wilayah Pesisir Utara th 2007												
	"Paciran"	41.714	1.451	6.500	0.234	6.052	0.959	3.707	24.145	1.692	4.244	9.303
	"Brondong"	40.107	1.428	7.569	0.259	5.990	0.802	3.790	24.779	1.676	4.500	9.101
III. Wilayah Pesisir Selatan th 2004												
	"Panggul"	35.231	1.554	0.148	0.647	7.270	0.381	5.106	18.843	5.917	5.777	19.126
	"Munjungan"	35.231	1.609	0.093	0.647	7.270	0.381	5.106	18.843	5.917	5.777	19.126
	"Watulimo"	35.231	1.656	0.046	0.647	7.270	0.381	5.106	18.843	5.917	5.777	19.126
IV. Wilayah Pesisir Selatan th 2007												
	"Panggul"	34.981	1.578	0.141	0.682	7.374	0.405	5.227	19.524	5.847	5.572	18.670
	"Munjungan"	34.981	1.628	0.091	0.682	7.374	0.405	5.227	19.524	5.847	5.572	18.670
	"Watulimo"	34.981	1.673	0.046	0.682	7.374	0.405	5.227	19.524	5.847	5.572	18.670

Sumber : PDRB Kab Kota SeJawa Timur (analyzed, 2009).

(3) Sectoral Share of Aggregates Region / PSAW (%)

Tabel 5. Sectoral Share of Aggregates Region (%)

No	Nama Kec	Nama Sektor										
		"Agr"	"plaut"	"pl"	"Min"	"Ind"	"Lga"	"Kon"	"Dag"	"Ang"	"Keu"	"Jsa"
I. Wilayah Pesisir Utara th 2004												
		42.287	0.160	7.882	0.219	6.043	1.037	3.635	23.628	1.688	4.075	9.346
II. Wilayah Pesisir Utara th 2007												
		40.717	0.178	7.725	0.259	6.061	0.828	3.822	24.974	1.696	4.519	9.221
III. Wilayah Pesisir Selatan th 2004												
		35.231	0.415	1.286	0.647	7.270	0.381	5.106	18.843	5.917	5.777	19.126
IV. Wilayah Pesisir Selatan th 2007												
		34.981	0.421	1.298	0.682	7.374	0.405	5.227	19.524	5.847	5.572	18.670

Source: PDRB Kab Kota SeJawa Timur, (analyzed, 2009).

In 2004 the northern coastal region dominated by agricultural sector of 42.287%, trade of 23.628% and services sector of 9.346%. In 2007, agriculture still dominates 40.717%, trade of 24.974% and services sectors of 9.221%. The agricultural sector in 2007 despite dominating but has decreased, so did the services sector has decreased. The trade sector experienced an increase of 1.354%. The marine fishery sector contributed 0.16% in 2004 and 0.178% in 2007. The southern coastal areas dominated by agriculture in 2004 of 35.231%, service of 19.126% and trading of 18.843%. In 2007, agriculture still dominates of 34.981%, trade of 19.524% and services sectors of 18.670%. The agricultural sector in 2007 although it still dominates but has decreased, so did the services sector has decreased. The trade sector experienced an incline of 0.681%.

(4) Local Share of Each Sector (%)

In 2004, the marine fishery sector in the northern coastal region, 56% contributed by the district of Paciran and 44% by the district of Brondong and in 2007, it changed to 66% by the district Paciran and district of Brondong is only 34%. In the northern coastal region contributes 10.525% in the agricultural sector in 2004 and increased to 12.451% in 2007. For other fishery sector in 2004 reached 9.092% to 10.955% in 2007.

In 2004, the marine fishery sector in south coastal areas, 37% contributed by district of Panggul, 33% district of Watulimo, and 28% district of Munjungan and despite in 2007, it changes but not too large. In coastal areas contribute 25.956% of agricultural sector in 2004 as well as in 2007. Other fishery sector in 2004 reached 2.986% down to 1.900% in 2007.

Tabel 6. Local Share of Each Sector (%)

No	Nama Kec	Nama Sektor										
		"Agr"	"plaut"	"pl"	"Min"	"Ind"	"Lga"	"Kon"	"Dag"	"Ang"	"Keu"	"Jsa"
I. Wilayah Pesisir Utara th 2004												
	"Paciran"	6.161	56.282	5.117	6.161	6.161	6.161	6.161	6.161	6.161	6.161	6.161
	"Brondong"	4.364	43.718	3.975	4.364	4.364	4.364	4.364	4.364	4.364	4.364	4.364
II. Wilayah Pesisir Utara th 2007												
	"Paciran"	8.224	65.531	6.755	7.251	8.015	9.295	7.786	7.761	8.007	7.538	8.098
	"Brondong"	4.227	34.469	4.205	4.292	4.241	4.156	4.256	4.258	4.242	4.273	4.235
III. Wilayah Pesisir Selatan th 2004												
	"Panggul"	10.133	37.897	1.164	10.133	10.133	10.133	10.133	10.133	10.133	10.133	10.133
	"Munjungan"	7.329	28.377	0.529	7.329	7.329	7.329	7.329	7.329	7.329	7.329	7.329
	"Watulimo"	8.464	33.726	0.303	8.464	8.464	8.464	8.464	8.464	8.464	8.464	8.464
IV. Wilayah Pesisir Selatan th 2007												
	"Panggul"	10.133	37.994	1.100	10.133	10.133	10.133	10.133	10.133	10.133	10.133	10.133
	"Munjungan"	7.329	28.356	0.512	7.329	7.329	7.329	7.329	7.329	7.329	7.329	7.329
	"Watulimo"	8.464	33.650	0.298	8.464	8.464	8.464	8.464	8.464	8.464	8.464	8.464

Source: *PDRB Kab Kota SeJawa Timur, (analyzed, 2009).*

(5) Local Share of Aggregate Sector / PLAS (%)

The local share value of aggregate sector in the north coastal region, the highest value is in the district of Paciran about 6 to 8% in the aggregate sector, district of Paciran is more dominant relative to other locations in terms of GDP in the economic structure of the northern coastal region. Southern coastal areas, district of Panggul about 10%.

Tabel 7. Local Share of Aggregate Sector (%)

No	Sub District	PLAS
I. Wilayah Pesisir Utara th 2004		
	"Paciran"	6.159
	"Brondong"	4.397
II. Wilayah Pesisir Utara th 2007		
	"Paciran"	8.027
	"Brondong"	4.291
III. Wilayah Pesisir Selatan th 2004		
	"Panggul"	10.133
	"Munjungan"	7.329
	"Watulimo"	8.464
IV. Wilayah Pesisir Selatan th 2007		
	"Panggul"	10.133
	"Munjungan"	7.329
	"Watulimo"	8.464

Source: *PDRB Kab Kota SeJawa Timur, (analyzed, 2009)*.

(6) Specialization Index of Each Location (ISTL)

Tabel 8. Specialization Index of Each Location

No	Sub District	Specialization Index
I. Wilayah Pesisir Utara th 2004		
	"Paciran"	0.013
	"Brondong"	0.014
II. Wilayah Pesisir Utara th 2007		
	"Paciran"	0.025
	"Brondong"	0.013
III. Wilayah Pesisir Selatan th 2004		
	"Panggul"	0.011
	"Munjungan"	0.012
	"Watulimo"	0.012
IV. Wilayah Pesisir Selatan th 2007		
	"Panggul"	0.012
	"Munjungan"	0.012
	"Watulimo"	0.013

Source: *PDRB Kab Kota SeJawa Timur, (analyzed, 2009)*.

The specialization index value of each location that is far below the value 1 is below the value of 0.5 means that all locations of coastal areas have not specialized in the development of specific sectors. The coastal development and the concept has not focused on the development concept and not relying on any development that is felt most superior.

(7) Localization Index of Each Sector / ILTS

The highest value of the localization index of each sector in 2004, in the northern coastal region is 0.894 means the marine fishery sectors are concentrated on certain location is the marine fishery sector, while almost all sectors of the spread in various locations. In 2007, only the marine fishery sector is concentrated in certain locations, but compared to 2004, then in 2007 the concept of agglomeration begin to grow although the localization index is still too small.

Tabel 9. Localization Index of Each Sector

No	Sub Distric	Sector										
		"Agr	"plaut	"pl"	"Min	"Ind	"Lga	"Kon	"Dag	"Ang	"Keu	"Jsa
I. Wilayah Pesisir Utara th 2004												
		0.000	0.894	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
II. Wilayah Pesisir Utara th 2007												
		0.006	0.877	0.015	0.021	0.001	0.035	0.007	0.008	0.001	0.014	0.002
III. Wilayah Pesisir Selatan th 2004												
		0.000	0.741	0.239	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IV. Wilayah Pesisir Selatan th 2007												
		0.000	0.741	0.240	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Source: *PDRB Kab Kota SeJawa Timur, (analyzed, 2009).*

(8) Quota Location

Tabel 10. Quota Location

No	Sub District	Sector										
		"Agr	"plaut	"pl"	"Min	"Ind	"Lga	"Kon	"Dag	"Ang	"Keu	"Jsa
I. Wilayah Pesisir Utara th 2004												
	"Paciran"	1.000	9.138	0.831	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	"Brondong"	0.993	9.943	0.904	0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993
II. Wilayah Pesisir Utara th 2007												
	"Paciran"	1.024	8.163	0.841	0.903	0.999	1.158	0.970	0.967	0.998	0.939	1.009
	"Brondong"	0.985	8.032	0.980	1.000	0.988	0.968	0.992	0.992	0.988	0.996	0.987

III. Wilayah Pesisir Selatan th 2004												
	"Panggul"	1.000	3.740	0.11 5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	"Munjungan"	1.000	3.872	0.07 2	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	"Watulimo"	1.000	3.985	0.03 6	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
IV. Wilayah Pesisir Selatan th 2007												
	"Panggul"	1.000	3.749	0.10 9	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	"Munjungan"	1.000	3.869	0.07 0	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	"Watulimo"	1.000	3.976	0.03 5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Source: PDRB Kab Kota SeJawa Timur, (analyzed, 2009).

In 2004 and 2007, the northern coastal region is more concentrated to the marine fishery sector, and not concentrated on other fishery sectors. This fact indicates that the development carried base on the development and production of marine fishery sector has not led to the development of secondary and tertiary sectors.

(9) Local Growth Rate of Each Sector (%)

Tabel 11. Local Growth Rate of Each Sector (%)

No	Sub District	Sector										
		"Agr"	"plaut"	"pl"	"Min"	"Ind"	"Lga"	"Kon"	"Dag"	"Ang"	"Keu"	"Jsa"
I. Wilayah Pesisir Utara th 2004												
	"Paciran"	30.07 4	31.614	31.61 4	59.73 4	33.80 8	18.71 5	39.03 5	39.69 2	33.96 8	46.62 7	32.22 3
	"Brondong"	0.783	-1.243	5.585	14.66 8	2.530	- 4.535	4.978	5.285	2.606	8.532	1.789
II. Wilayah Pesisir Utara th 2007												
	"Paciran"	13.65 2	13.960	13.96 0	17.62 4	14.37 2	10.70 3	15.24 0	15.33 9	14.40 1	16.27 4	14.07 8
	"Brondong"	0.759	-1.308	4.565	9.244	2.298	- 5.540	4.151	4.363	2.360	6.361	1.669

III. Wilayah Pesisir Selatan th 2004												
	"Panggul"	3.275	4.364	1.573	6.410	4.312	7.013	4.796	5.447	3.056	2.015	2.514
	"Munjungan"	3.275	4.196	2.511	6.410	4.312	7.013	4.796	5.447	3.056	2.015	2.514
	"Watulimo"	3.275	4.122	3.312	6.410	4.312	7.013	4.796	5.447	3.056	2.015	2.514
IV. Wilayah Pesisir Selatan th 2007												
	"Panggul"	2.896	3.716	1.480	5.102	3.678	5.477	4.024	4.472	2.723	1.865	2.285
	"Munjungan"	2.896	3.593	2.282	5.102	3.678	5.477	4.024	4.472	2.723	1.865	2.285
	"Watulimo"	2.896	3.538	2.925	5.102	3.678	5.477	4.024	4.472	2.723	1.865	2.285

Source: *PDRB Kab Kota SeJawa Timur, (analyzed, 2009).*

The northern coastal region, district of Paciran in 2004, almost all sectors is worth positive mean the growth rate of the sector could still be improved, especially the mining sector (59.734%), financial sector (46.627%) and trade (39.692%). The marine fishery sector of 31.614% means the growth rate has been high, so it still can be improved its development. In 2007, the rate of growth in all sectors remains positive even if its value has decreased from 13 to 14%. Distric of Brondong, the negative sector is the marine fishery sector (-1.243%) and electricity-gas-water (-4.535%) means that its growth slows.

(10) Local Growth Rate of Aggregate Sector / LPLAS

The Northern coastal region, in 2004 Paciran district, the local growth rate of sector aggregate is positive (33.488%). it means the rate of growth of the sector can still be improved the development. In 2007, the growth rate remains positive, even though its value has decreased or slowed to about 14%. Unlike the foregoing district, Brondong district, in 2004 the local growth rate of sector aggregate is positive (2.592%). In 2007, the growth rate remains positive even though its value is around 2%.

Table 12. Local Growth Rate of Aggregate Sector

No	Sub District	LPLAS
I. Wilayah Pesisir Utara th 2004		
	"Paciran"	33.488
	"Brondong"	2.592
II. Wilayah Pesisir Utara th 2007		
	"Paciran"	14.314
	"Brondong"	2.349
III. Wilayah Pesisir Selatan th 2004		
	"Panggul"	3.611
	"Munjungan"	3.611
	"Watulimo"	3.611

IV. Wilayah Pesisir Selatan th 2007		
	"Panggul"	3.155
	"Munjungan"	3.155
	"Watulimo"	3.155

Source: PDRB Kab Kota SeJawa Timur, (analyzed, 2009).

(11) Sectoral Growth Rate of Aggregate Region / LPSAW

In 2004, the Northern coastal, the highest value of Sectoral Growth Rate of Aggregate Region is the mining sector (16.567%) and the marine fishery sector (10.282%) and the financial sector (10.137%). In 2007, these three sectors still dominate despite the growth rate is lower than in 2004. In the Southern Region, in 2004, the highest value of Sectoral Growth Rate of Aggregate Region is the electricity, gas and water sector (7.013%), mining (6.410%) and trade (5.447%) as well in 2007 despite a lower growth rate compared to 2004.

Tabel 13. Sectoral Growth Rate of Aggregate Region

No	Sub District	Sector										
		"Agr"	"plaut"	"pl"	"Min"	"Ind"	"Lga"	"Kon"	"Dag"	"Ang"	"Keu"	"Jsa"
I. Wilayah Pesisir Utara th 2004												
LPSAW 2000-2004	2.017	10.282	2.771	16.567	3.849	-3.555	6.413	6.736	3.927	10.137	3.071	
II. Wilayah Pesisir Utara th 2007												
LPSAW 2004-2007	1.867	7.286	2.495	9.964	3.335	-4.145	5.104	5.306	3.394	7.213	2.735	
III. Wilayah Pesisir Selatan th 2004												
LPSAW 2000-2004	3.275	4.234	4.056	6.410	4.312	7.013	4.796	5.447	3.056	2.015	2.514	
IV. Wilayah Pesisir Selatan th 2007												
LPSAW 2004-2007	2.896	3.621	3.490	5.102	3.678	5.477	4.024	4.472	2.723	1.865	2.285	

Source: PDRB Kab Kota SeJawa Timur, (analyzed, 2009).

(12) Aggregate Growth Rate of Sector-Region / LPASW

Tabel 14. Aggregate Growth Rate of Sector-Region

No	Sub District	LPASW
I	Wilayah Pesisir Utara th 2004	3.701
II	Wilayah Pesisir Utara th 2007	3,224
III	Wilayah Pesisir Selatan th 2004	3,611
IV	Wilayah Pesisir Selatan th 2007	3,155

Source: PDRB Kab Kota SeJawa Timur, (analyzed, 2009).

(13) Sectoral Competitiveness of Agregat Region / DSAW

The Northern coastal region, in 2004, the highest value of sectoral competitiveness of aggregate region is the mining sector (12.866%) and the marine fishery sector (6.580%) as well as the financial sector (6.436%). Sectors that do not have the competitiveness is the electricity-gas-water sector (-7.257%), agriculture (-1.684%) and other fishery (-0.0930%) and services sector (-0.630%). In 2007, the three sectors seem dominate the sector though with the lower growth rate when it was compared to 2004. The Southern coastal areas, in 2004, the highest value of sectoral competitiveness of aggregate region is electricity, gas and water sector (3.402%) and mining sectors of 2.799% and 1.836% of trade sector. The sector that do not have the competitiveness is the financial sector of -1.596%, -1.097% service sector, transport sector of -0.556% and agriculture -0.336%. In 2007, these three sectors still dominate despite the lower growth rate compared to 2004.

Tabel 15. Sectoral Competitiveness of Agregat Region

No	Sub District	Sector										
		"Agr"	"plaut"	"pl"	"Min"	"Ind"	"Lga"	"Kon"	"Dag"	"Ang"	"Keu"	"Jsa"
I. Wilayah Pesisir Utara th 2004												
DSAW 2000-2004		-1.684	6.580	-0.930	12.866	0.147	-7.257	2.712	3.034	0.226	6.436	-0.630
II. Wilayah Pesisir Utara th 2007												
DSAW 2004-2007		-1.357	4.061	-0.729	6.740	0.111	-7.369	1.880	2.082	0.170	3.989	-0.489
III. Wilayah Pesisir Selatan th 2004												
DSAW 2000-2004		-0.336	0.623	0.444	2.799	0.701	3.402	1.185	1.836	-0.556	-1.596	-1.097
IV. Wilayah Pesisir Selatan th 2007												
DSAW 2004-2007		-0.260	0.466	0.334	1.947	0.523	2.321	0.869	1.317	-0.433	-1.291	-0.871

Source: PDRB Kab Kota SeJawa Timur, (analyzed, 2009).

(14) Local Competitiveness of Each Sector

In the northern coastal region in 2004 and 2007, the marine fishery sector in the Paciran district has a positive values, it means the district has a competitive advantage to be developed. Unlike in the Brondong district, the marine fishery sector has a negative value. Other fishery in the northern coastal region still is positive, especially in Paciran district. In the southern coastal region in 2004 and 2007, the marine fishery sector is positive only in the Panggul district. Unlike in the District Munjungan and Watulimo, and other fishery have a negative value for all regions.

Table 16. Local Competitiveness of Each Sector

No	Sub District	Fishery Sector	Non-Fishery Sector
I. Wilayah Pesisir Utara th 2004			
	"Paciran"	21.332	28.842
	"Brondong"	-11.524	2.814
II. Wilayah Pesisir Utara th 2007			
	"Paciran"	6.675	11.466
	"Brondong"	-8.593	2.071
III. Wilayah Pesisir Selatan th 2004			
	"Panggul"	0.130	-2.482
	"Munjungan"	-0.038	-1.544
	"Watulimo"	-0.113	-0.743
IV. Wilayah Pesisir Selatan th 2007			
	"Panggul"	0.095	-2.009
	"Munjungan"	-0.028	-1.544
	"Watulimo"	-0.083	-0.743

Source: *PDRB Kab Kota SeJawa Timur, (analyzed, 2009)*.

Conclusions

1. The economy potency of marine fisheries sector are very large but it are not reflected in the economy structure of the East Java province
2. There are the development disparity in the North South coast of East Java.

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