# THE GAP ANALYSIS OF DEVELOPMENT BETWEEN REGENCY OR CITY IN THE PROVINCE OF NORTH SUMATRA FOR THE PERIOD 2004-2008

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***Abstract***

*One of the main functions of the government of North Sumatra Province is how to reduce the gap between the district / city in the province of North Sumatra. A regional disparity is the ratio of real per capita income among regions with per capita real income of the province. This study aims to analyze the development gap among districts / cities in North Sumatra. In addition, this study also analyzes the Klasen typology at each district / city in North Sumatra. The data's that used in this study are secondary data from BPS report, North Sumatra in Figures 2004-2008 period. Data were analyzed using descriptive methods to illustrate how the levels of inequality and Klasen typology each district / city in North Sumatra. To see the inequality index formula used Williamson (Vw) and to see Klasen typology by dividing the area into developed areas, developed pressure, developed and underdeveloped. The research result shows that there is no gap between districts / cities in North Sumatra, where the index values approaching Williamson zero, and Medan is the only city that has a value field Williamson index of 0.314, while other areas close to zero.*

*The districts / cities in North Sumatra has a category 4 classes according to Klasen typology the developed areas, developed pressure, developed and underdeveloped regions. The Medan city including developed areas and has the highest disparity of 0.314.The implication of this research is the need to accelerate policy development with the help of the central government.*

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*Keywords:The gap between regions and typologi Klasen*

## INTRODUCTION

The Development within the country are not always evenly distributed spatially. The gap between regions is often a serious problem at hand. Some areas have rapid growth, while other regions experienced slower growth. These areas do not experience the same progress caused by the lack of resources they have. Besides of that so many investors who want to invest in an area that has met its facilities

because it will facilitate his efforts and make easier. It effected the area that have not reached the facilities would be lagging behind.

The development in the province of North Sumatra which took a comprehensive and sustainable has increased the community's economy. The Achievement of development outcomes are strongly felt society is an aggregate of the development of the 25 districts / cities in North Sumatra which can not be separated from efforts jointly between government and society. Potential areas and natural wealth can be seen as a comparative advantage for the region, but on the other hand various constraints such as human resources, and capital resources to take advantage of this potential still faced by policy makers both at the provincial level and at the level of the district / city. As a result, the general condition of the economy has not reached a level distribution of income, and still found the same flaws, including gaps between districts / cities in the achievement levels of the economy.

An economic and social disparity in the province of North Sumatra is also an impact on social mobility that is less favorable to the presence of migrants. The Migration flows moving from the area that the lower levels of the economy heading into the area economy a higher level. The problem posed by migration flows are slums, crime, provision of adequate employment, the environment and others. The problem is certainly not easily resolved and can be a barrier to economic growth. Therefore, efforts to address the economic disparity between the district / city in the province of North Sumatra's time be intensified.

Data from the BPS or The Central Statistics Agency of North Sumatra Province in 2004-2008 suggests that GDP growth in the district / city varies as in Table 1.1.

According to Table 1.2 shows that revenue among districts / cities vary greatly, this because it is supported by the potential differences between regions possessed good natural resources, the potential of human resources and infrastructure.

Given the differences in the economic growth potential of the region will also vary between regions, as well as investment and income PAD. Besides, there will be non-economic disparities such as education, health care, bureaucracy and services. The image is much needed by the district / city in the province of North Sumatra regional development planning in order to set priorities, particularly in the era of regional autonomy in which the district / city given the widest opportunity to determine the direction of development policy to achieve economic growth high but also followed by the low income gap.

Similarly, there are many people whose income is very little above the poverty line. The "nearly poor" is very vulnerable to changes in economic conditions such as rising price of primary commodities or decrease economic growth. Therefore the problem of poverty still remains to be taken seriously because the purpose of the construction of the Indonesian nation is a whole person. The difference in the percentage level and the amount of poverty in each district / city in the Province of

North Sumatra will impact the welfare differences between regions that will ultimately lead to disparities between regions will increase.

**METHODOLOGY**

Equality Index for some economists says the Inequality Index Inter-Regional Development (Regional Inequality) who first introduced by JG Williamson, 1965. Index often referred to as an expert with the Williamson Index. The emergence of Equity Index was initially just to test the correctness of Kuznets hypothesis (Kuznets 1955) where as a result of the long-term effects of economic growth will be a change in the distribution of income between regions. According to Kuznets secular behavior of regional income disparities follow a pattern that an inverted U-shaped (U-Shaped).

From the research result of Williamson, it was found that countries that have high regional income disparities are on income countries being. Instead the developed countries with high economic growth rate have smaller income disparities.

To calculate regional income disparities by using the following formula:

$$V_w = \frac{\sqrt{\sum_{i=1}^{n} (y_i - \overline{y})^2 \frac{f_i}{n}}}{\overline{y}}, 0 < V_w < 1$$

y = per capita income counties / cities

y = per capita income Province

f = Population district / city

n = Population Province

The classification of area often used to look at the characteristics of each region by using Klasen typology as an approach to divide the construction area on 4 classifications each have different characteristics from one another.

The first, called the fast-growing area (Rapid growth region), this region is experiencing a rapid growth rate is generally above the average level of the region as a whole. Generally, the area of the region has reached a relatively high growth rate. Usually the area as this is considered to have the potential to develop, in the classification by weight 4.

Secondly, the area grew depressed, this area has the potential to grow enough, but this potential has not been cultivated. The phenomenon often appear in this area is still relatively low growth rate but the regional per capita income is relatively low. Perhaps because of infrastructure and facilities are very limited cause potential can not be exploited. These are generally referred to by the local people hope, this classification of areas like weight 3.

Third, a fast developing area, this area is essentially the same as both of the above areas, which has considerable potential for growth when it was already high rate of economic growth, while regional income per capita is relatively low. It is estimated that during the relatively long assumed this area have the opportunity to grow, this classification of areas like weight 2.

Fourth, an underdeveloped area, where the growth rate is difficult to be improved and the potential is less. Usually, in addition to the rate of economic growth is very low. Regional per capita income is still very low, as this region classification weight 1.

Regional grouping criteria Klasen typology classification can be described as follows:

**Table 3.** Classification of districts / cities based on criteria

| r \ y | $y_i > \bar{y}$ | $y_i < \bar{y}$ |
|---|---|---|
| $r_i > \bar{r}$ | Advanced andfastgrowingarea | Rapidlygrowing area |
| $r_i < \bar{r}$ | Developed regionsbutdepressed | Less developedregions |

r = rate of growth of GDP in the county / city
y = per capita income counties / cities
= GDP growth rate average
= The average per capita income

One of the researches that have been done is Mudrajad Kuncoro (2004).His research entitled "Economic Growth and the gap between Sub: Case Banyumas regency, Central Java." The research is contained in a book entitled Autonomy and Regional Development. "(2004). Mudrajad Kuncoro attempt to measure economic growth and disparities between districts. The background of the study is because the fact that according to the typology of Banyumas area includes counties that remains or log in quadrant IV, which per capita income and economic growth is still below the per capita income and economic growth in Central Java Province. Banyumas economic growth as one of the indicators of success of development as measured by gross regional domestic product (GDP) over the next five years (1996-2000) have fluctuated especially in 1998 a decline in GDP due to the economic crisis. Economic growth rate in 1996 more than 4%, in 1998 fell to minus 6.8% in 2000 even though the economy was positive 4.03% growth over 1993 constant prices.

The purpose of this study is to classify the sub-based economic growth and GDP per capita, to calculate the gap inter-district, and to prove the hypothesis about the U-inverted Kuznets. To achieve these goals the tool used is regional typology,

Williamson gap index, Theil entropy index of inequality, trends and Pearson correlation. Regional typology analysis tool used to determine the classification of areas based on two key indicators, economic growth and income per capita gross regional domestic area. With regional typology in Banyumas district is divided into four sub-classifications that are rapidly advancing rapidly growing, sub-advanced but depressed, a fast-growing district, and the district is relatively remote.

Theil entropy concept of distribution is basically an application of the concepts of information theory to measure the economic disparity and concentration of the industry. Entropy index offers an inside edge on regional per capita income and income inequality, international imbalances, as well as the distribution of the world's gross domestic product. In the observation period 1993-2000 occurred trend increase in inequality, both indices were analyzed by Williamson and Theil entropy. This gap is due to the spatial concentration of economic activity.

The Kuznets hypothesis of the inverted U-shaped gap prevailing in Banyumas. It is evident from the trends and Pearson correlation. The relationship of growth with inequality indices Williamson and Theil entropy for the case of Banyumas during the period 1993-2000 demonstrated validity Kuznets hypothesis. The implication, in their policy development, district and provincial governments should pay attention to the spatial dimension, unlike the previous time a-spatial approach (space less). In practice, always be trade-off pulling each other, between strategy economic growths with income distribution area.

To analyze the level of disparities among districts / cities Williamson index model was used with the following formulation:

$$V \neg w = \frac{\sqrt{\sum_{i=1}^{n}(y_i - \bar{y})^2 \frac{f_i}{n}}}{\bar{y}}, 0 < V_w < 1$$

Vw = gap index
yi = per capita income Regency / City.
y = Per capita income Province
fi = The population of the district / city
n = number of residents of the province.

Regional grouping criteria Klasen typology as follows:

**Tabel 4.** Regional Grouping Criteria Klasen Typology

| r \ y | $y_i > \bar{y}$ | $y_i < \bar{y}$ |
|---|---|---|
| $r_i > \bar{r}$ | Advanced andfastgrowingarea | Rapidlygrowing area |

| | | |
|---|---|---|
| $r_i < \bar{r}$ | Developed regionsbutdepressed | Less developedregions |

$r_i$ = rate of growth of GDP in the cointry / city
$y_i$ = per capita incomecounties/cities
$\bar{r}$ = GDPgrowth rateaverage
$\bar{y}$ = The averageper capita income

**Analysis of inter-regional disparities**

Analysis of regional disparities is to see if the district / city in North Sumatra have equitable income or not. One of the tools to be able to decrease the gap between regions is the higher government policies are like the Central Government and the Provincial Government of North Sumatra. To calculate the index of inequality (disparity) between the regions used the concept Williamson index (VW).

Based on Table 4.6. below the average for the past 5 years of research data from 25 districts / cities in North Sumatra province have Vw of 0.046. Vw value is relatively small, because Vw approaching 1 rate, it means there is a gap and a value close to 0, it means there is no gap between regions in North Sumatra. Medan has the largest value of VW, The City where per capita income is much higher fields than other areas in North Sumatra. In other words, only the city field gap with other regional average. While most small areas Gap Index is Tanjung Balai, which means revenue Tanjung Balai is almost the same as the average income of North Sumatra. When viewed from 2004 - 2008 period the District / city in North Sumatra each year have consistently similar regional disparities index, or the changes are not significant. Thus there is no significant change in the index gap between districts / cities in North Sumatra.

**Analysis Typologi Klasen**

Klasen typology Analysis is an analysis to determine a district / city in North Sumatra, including developed areas, areas developed pressure, developed regions and underdeveloped areas. Developed areas are areas that have greater economic growth and per capita income of the province is also greater than the province. The Developed region in North Sumatra is Medan only. Consistently for 5 years Medan is developed regions.

Developed regions are depressed areas that have per capita GDPs greater than that of the province but economic growth is lower than the province. These categories are Toba Samosir regency, Labuhan Batu, Asahan and Karo.

Economic growth in developing regions is higher than the growth of the province, but per capita income is lower than the province. To these category are the Serdang Bedagai for 2004 to 2006. Nias, Mandailing Natal for 2008, Kab. Mandailing Natal, Humbang Hasundutan, Serdang Bedagai, Siantar City and Padang Sidempuan in 2005, Kab. Dairi, South Nias, West Pakpak, Samosir, Serdang Bedagai and Binjai City in 2004.

The underdeveloped regions have regional economic growth and per capita income is lower than the province. Almost all districts / cities in Sumatra have this category except Medan City and other areas. The Medan City is very dominating the economy of North Sumatra, it is also evident from the average LQ sizable sector compared to other areas.

**The relationship between disparity and Typologi Klasen.**

The relationship between disparity and Klasen typologi look like table 4.8. The Medan City which has the highest disparity of 0.314 is included in the advanced area type. Meanwhile, other areas belonging to the advanced areas of distressed and underdeveloped areas.

## CONCLUSIONS AND SUGGESTIONS

### Conclusion

LQ analysis is a very important analysis to determine the sector or non-base basis, although there are still many weaknesses. While the disparity analysis is to look at the gap between regions in the area and Klasen typology a simple analysis of the category of a region if the region forward, forward pressure, rapidly developing and underdeveloped. Based on the above analysis and explanation concluded:

a. Districts / cities in North Sumatra has an average LQ per year consistently and relatively no changes.

b. Districts had average LQ per year is less than one, so it has almost no basis sector except in agricultural sector. While the City has an average LQ greater than one and have a reliable basis sector to drive the economy, especially in the industrial and services sectors. Medan has the greatest LQ values in almost all sectors except agriculture and mining, so as to move the economy of Medan.

c. There is no gap between regions in North Sumatra, where the town of Tanjung Balai has the smallest gap index and the index of Medan has the biggest gap.

d. There are 4 Klasen typology in North Sumatra which is a Medan as Advanced area, the advanced depressed areas are Toba Samosir regency, Labuhan Batu, Asahan, Karo and Tanjung Balai City. While the developed areas are Pematang Siantar and Binjai City. While other areas considered underdeveloped regions.

e. The relationship between typologi Klasen, leading sectors and disparities have a positive relationship, but was not statistically significant. Thus there is no significant relationship between Klasen Typology, disparities and key sectors between the areas in the province of North Sumatra.

**Suggestions**

a. LQ analysis showed consistency from year to year on commodities, while the counties are the leading sectors of agriculture, and then there should be government policy to increase the yield of the agricultural sector to industrial products that will increase the added value for the community.

b. There are no income gaps between regions in North Sumatra, does not mean per capita income of each region have increased, but the result of the per capita income of the district / city average is relatively small. Therefore need government policies to motivate and facilitate the utilization of the sectors that have sector basis in order to maximize output.

c. Average per capita income of the city is relatively the same as the county except the city of Medan, therefore progress also depends on the progress of the city district, so it is necessary in the construction of policy adapted to the surrounding area.

**REFERENCES**


Appleyard. R Dennis and Jr.. Field. J. Alfred (2001) International Economic. McGrow-Hill International Edition. New York.

Barro, Robert J, and Xavier Sala-i Martin, (1995), Economic Growth, McGraw-Hill, Inc.., New York.

Brandson, William.H. (1998) Macro Economic Theory and Policy.Third, Edhuper Harves Row Publishers, Singapore.

Central Bureau of Statistics. , 2009. North Sumatra in Figures.Various Editions. Medan.

Jhingan, ML 2000. Economic Development and Planning. PT Raja Grafindo Persada. Jakarta.

Kuncoro, Mudrajad. , 2004. Autonomy and Regional Development: Reform, Planning, Strategies, and Opportunities. Publisher. Jakarta.

Mangkoesoebroto, Guritno. , 2001. Public Economics. BPFE.Yogyakarta.

Sirojuzilam, 2008. Disparity of Regional Economic Planning. Nation Library Press. Medan.

Sjafrizal, 2008. Regional Economics: Theory and Application.Baduose Media. Padang.

Sukirno, Sadono. , 2006. Economic Development: Process, Problems, and Policy Association. Second Edition. PT Bumi script.Jakarta.

Todaro, Michael P. 1983. Economic Development in the Third World.Miscellaneous:

Aminuddin and Drs.Mursid. Ghalia Indonesia.Jakarta.

Noegroho, Yoenanto Sinung and Lana Soelistianingsih. , 2007.Income Disparity Analysis Regency / City in the province of Central Java and Factors - Factors Affecting Regional Economic Growth. Regional Economic Journal, Depok.

Wijayanti, Diana, Regional Development Gap Analysis: Indonesia, 1992 - 2001, Journal of Development Economics: Economic Studies Developing Countries thing: 129-142.

## APPENDIX

**Table 1.** GDP Growth in North Sumatra ProvinceBased on the constant price of year 2000

| Nu | Districts/Cities | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| 1. | Nias | 5,13 | -3,33 | 4,70 | 6,64 | 6,70 |
| 2. | Mandailing Natal | 5,47 | 5,86 | 6,14 | 6,44 | 6,50 |
| 3. | Tapanuli Selatan | 3,15 | 3,38 | 5,79 | 4,39 | 4,90 |
| 4. | Tapanuli Tengah | 5,70 | 5,36 | 5,68 | 6,23 | 5,76 |
| 5. | Tapanuli Utara | 4,74 | 5,04 | 5,44 | 6,03 | 5,74 |
| 6. | Toba Samosir | -16,04 | 4,95 | 5,17 | 5,53 | 5,60 |
| 7. | Labuhan Batu | 3,80 | 4,14 | 5,33 | 6,71 | 5,84 |
| 8. | Asahan | 4,94 | 3,00 | 4,44 | 4,45 | 4,69 |
| 9. | Simalungun | 2,72 | 3,11 | 4,76 | 5,31 | 4,64 |
| 10. | Dairi | 5,83 | 5,34 | 4,28 | 5,03 | 4,59 |
| 11. | Karo | 3,31 | 4,70 | 4,96 | 5,13 | 5,21 |
| 12. | Deli Serdang | 4,03 | 4,97 | 5,45 | 5,74 | 5,82 |
| 13. | Langkat | 1,01 | 3,47 | 2,88 | 4,91 | 5,08 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 14. | Nias Selatan | 7,16 | -2,12 | 3,99 | 4,83 | 5,50 |
| 15. | Humbang Hasundutan | 5,71 | 5,65 | 5,77 | 6,06 | 5,84 |
| 16. | Pakpak Barat | 6,66 | 5,92 | 5,66 | 5,95 | 5,86 |
| 17. | Samosir | 7,85 | 3,03 | 4,02 | 4,59 | 5,00 |
| 18. | Serdang Bedagai | 6,05 | 5,91 | 6,22 | 6,25 | 6,12 |
| 19. | Sibolga | 4,76 | 4,01 | 5,22 | 5,53 | 5,85 |
| 20. | Tanjung Balai | 5,95 | 4,11 | 3,54 | 4,01 | 3,99 |
| 21. | Pematang Siantar | 2,50 | 5,77 | 5,96 | 5,12 | 5,72 |
| 22. | Tebing Tinggi | 5,53 | 4,39 | 5,33 | 5,98 | 6,04 |
| 23. | Medan | 7,29 | 6,98 | 7,76 | 7,78 | 6,75 |
| 24. | Binjai | 8,17 | 5,28 | 5,32 | 5,68 | 5,35 |
| 25. | Padang Sidempuan | 4,63 | 4,91 | 5,49 | 6,18 | 6,09 |
| | **Sumatera Utara** | **5,74** | **5,48** | **6,20** | **6,90** | **6,39** |

Source: BPS, North Sumatra 2004-2008 (Data Processed)

**Table 2.**GDP per capita District / City of North Sumatra ProvinceOver 2000 Constant Prices 2004-2008

| NO | Districts/Cities | PDRB (Rupiah) | | | | |
|---|---|---|---|---|---|---|
| | | 2004 | 2005 | 2006 | 2007 | 2008 |
| 1. | Nias | 3.717.144 | 3.524.455 | 3.688.279 | 3.928.527 | 4.182.887 |
| 2. | Mandailing Natal | 3.718.628 | 3.864.014 | 3.827.747 | 4.036.725 | 4.237.091 |
| 3. | Tapanuli Selatan | 3.967.584 | 4.124.559 | 4.436.092 | 4.479.129 | 4.671.000 |
| 4. | Tapanuli Tengah | 3.037.506 | 3.148.611 | 3.162.049 | 3.270.357 | 3.363.036 |
| 5. | Tapanuli Utara | 4.593.627 | 4.809.865 | 5.066.911 | 5.223.677 | 5.444.352 |
| 6. | Toba Samosir | 8.190.000 | 8.527.447 | 8.414.648 | 8.870.010 | 9.228.691 |
| 7. | Labuhan Batu | 7.208.710 | 7.365.989 | 7.480.311 | 7.823.209 | 8.112.613 |
| 8. | Asahan | 9.931.462 | 9.535.741 | 9.823.117 | 10.621.808 | 10.903.710 |
| 9. | Simalungun | 5.177.504 | 5.292.447 | 5.444.628 | 5.699.142 | 5.916.134 |
| 10. | Dairi | 5.985.671 | 6.254.208 | 6.367.513 | 6.658.987 | 6.882.874 |
| 11. | Karo | 7.953.427 | 8.224.137 | 7.968.385 | 8.167.326 | 8.366.736 |
| 12. | Deli Serdang | 6.836.814 | 7.007.613 | 7.097.625 | 7.272.460 | 7.465.316 |
| 13. | Langkat | 5.790.730 | 5.898.438 | 5.808.584 | 6.013.174 | 6.226.965 |
| 14. | Nias Selatan | 3.615.511 | 3.471.119 | 3.838.639 | 4.010.626 | 4.217.115 |
| 15. | Humbang | 4.738.093 | 4.989.924 | 5.285.913 | 5.566.810 | 5.836.540 |
| 16. | Hasundutan | 3.392.620 | 3.564.234 | 3.735.792 | 3.559.128 | 3.553.367 |
| 17. | Pakpak Barat | 6.232.274 | 6.370.414 | 6.647.601 | 6.923.956 | 7.250.918 |
| 18. | Samosir | 5.556.284 | 5.746.192 | 5.927.942 | 6.165.679 | 6.417.618 |
| 19. | Serdang Bedagai | 6.189.477 | 6.331.930 | 6.428.893 | 6.692.413 | 6.978.611 |
| 20. | Sibolga | 7.345.543 | 7.468.769 | 7.551.912 | 7.684.976 | 7.808.879 |
| 21. | Tanjung Balai | 6.450.770 | 6.735.841 | 6.989.419 | 7.308.632 | 7.656.684 |
| 22. | Pematang Siantar | 6.248.169 | 6.460.242 | 6.691.874 | 7.018.280 | 7.354.831 |
| 23. | Tebing Tinggi | 11.748.852 | 12.411.650 | 13.174.001 | 14.090.603 | 14.906.171 |
| 24. | Medan | 6.266.053 | 6.439.516 | 6.605.547 | 6.868.205 | 7.109.527 |
| 25. | Binjai | 4.406.377 | 3.963.041 | 4.080.163 | 4.255.904 | 4.434.607 |
| | Padang Sidempuan | | | | | |
| | **Sumatera Utara** | **6.873.420** | **7.130.696** | **7.383.039** | **7.775.393** | **8.140.606** |

Source: BPS, North Sumatra 2004-2008 (Data Processed)

**Table 5.** The analysis of Inter-regional disparities

| Nu | Regency/City | 2004 | 2005 | 2006 | 2007 | 2008 | rata -rata |
|---|---|---|---|---|---|---|---|
| 1 | Nias | 0.0868 | 0.0957 | 0.0936 | 0.0919 | 0.0897 | 0.092 |
| 2 | Mandailing Natal | 0.0812 | 0.0811 | 0.0871 | 0.0867 | 0.0864 | 0.085 |
| 3 | Tapanuli Selatan | 0.0948 | 0.0951 | 0.0918 | 0.0945 | 0.0946 | 0.094 |
| 4 | Tapanuli Tengah | 0.0846 | 0.0846 | 0.0877 | 0.0895 | 0.0912 | 0.088 |
| 5 | Tapanuli Utara | 0.0481 | 0.0469 | 0.0447 | 0.047 | 0.0474 | 0.047 |
| 6 | Toba Samosir | 0.0225 | 0.0222 | 0.0162 | 0.0162 | 0.0153 | 0.018 |
| 7 | Labuhan Batu | 0.0135 | 0.0092 | 0.0173 | 0.0017 | 0.0097 | 0.009 |
| 8 | Asahan | 0.1057 | 0.0972 | 0.0947 | 0.1047 | 0.0973 | 0.1 |
| 9 | Simalungun | 0.0641 | 0.0667 | 0.0677 | 0.0686 | 0.0699 | 0.067 |
| 10 | Dairi | 0.0189 | 0.0179 | 0.02 | 0.0208 | 0.0223 | 0.02 |
| 11 | Karo | 0.0252 | 0.0246 | 0.013 | 0.0083 | 0.0046 | 0.015 |
| 12 | Deli Serdang | 0.0019 | 0.0062 | 0.0139 | 0.0234 | 0.0303 | 0.015 |
| 13 | Langkat | 0.0442 | 0.0485 | 0.0604 | 0.0641 | 0.0665 | 0.057 |
| 14 | Nias Selatan | 0.0724 | 0.0785 | 0.0703 | 0.0705 | 0.0697 | 0.072 |
| 15 | Humbang Hasundutan | 0.0348 | 0.0334 | 0.0312 | 0.0311 | 0.0309 | 0.032 |
| 16 | Pakpak Barat | 0.0269 | 0.0265 | 0.0259 | 0.0298 | 0.0316 | 0.028 |
| 17 | Samosir | 0.0093 | 0.011 | 0.0101 | 0.0111 | 0.011 | 0.01 |
| 18 | Serdang Bedagai | 0.042 | 0.0424 | 0.0431 | 0.0455 | 0.0465 | 0.044 |
| 19 | Sibolga | 0.0084 | 0.0095 | 0.011 | 0.0119 | 0.0122 | 0.01 |
| 20 | Tanjung Balai | 0.0076 | 0.0053 | 0.0025 | 0.0013 | 0.0046 | 0.004 |
| 21 | Pematang Siantar | 0.0084 | 0.0076 | 0.0073 | 0.0082 | 0.008 | 0.008 |
| 22 | Tebing Tinggi | 0.0096 | 0.0099 | 0.0098 | 0.0101 | 0.01 | 0.01 |
| 23 | Medan | 0.2889 | 0.301 | 0.3172 | 0.3272 | 0.3337 | 0.314 |
| 24 | Binjai | 0.0122 | 0.0135 | 0.0146 | 0.0162 | 0.0176 | 0.015 |
| 25 | Padang Sidempuan | 0.0428 | 0.0533 | 0.0537 | 0.0544 | 0.0547 | 0.052 |
| number of northern Sumatra | | 0.0502 | 0.0515 | 0.0522 | 0.0534 | 0.0539 | 0.052 |

**Table 6.** Klasen Typology Analysis

| Nu | Regency/City | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|---|
| 1 | Nias | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped | Developed |
| 2 | Mandailing Natal | Underdeveloped | Developed | Underdeveloped | Underdeveloped | Developed |
| 3 | Tapanuli Selatan | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped |
| 4 | Tapanuli Tengah | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped |
| 5 | Tapanuli Utara | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped |
| 6 | Toba Samosir | Advanced Depressed | Underdeveloped | Advanced Depressed | Advanced Depressed | Advanced Depressed |
| 7 | Labuhan Batu | Advanced Depressed | Advanced Depressed | Advanced Depressed | Advanced Depressed | Underdeveloped |
| 8 | Asahan | Advanced Depressed | Advanced Depressed | Advanced Depressed | Advanced Depressed | Advanced Depressed |
| 9 | Simalungun | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped |
| 10 | Dairi | Developed | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped |
| 11 | Karo | Advanced Depressed | Advanced Depressed | Advanced Depressed | Advanced Depressed | Advanced Depressed |
| 12 | Deli Serdang | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped |
| 13 | Langkat | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped |
| 14 | Nias Selatan | Developed | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped |
| 15 | Humbang Hasundutan | Underdeveloped | Developed | Underdeveloped | Underdeveloped | Underdeveloped |
| 16 | Pakpak Barat | Developed | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped |
| 17 | Samosir | Developed | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped |
| 18 | Serdang Bedagai | Developed | Developed | Developed | Underdeveloped | Underdeveloped |
| 19 | Sibolga | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped |
| 20 | Tanjung Balai | Advanced | Advanced Depressed | Advanced Depressed | Underdeveloped | Underdeveloped |
| 21 | Pematang Siantar | Underdeveloped | Developed | Underdeveloped | Underdeveloped | Underdeveloped |
| 22 | Tebing Tinggi | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped |
| 23 | Medan | Advanced | Advanced | Advanced | Advanced | Advanced |
| 24 | Binjai | Developed | Underdeveloped | Underdeveloped | Underdeveloped | Underdeveloped |
| 25 | Padang Sidempuan | Underdeveloped | Developed | Underdeveloped | Underdeveloped | Underdeveloped |

**Table 7**.Relations between disparity and Typologi Klasen

| No | Regency/City | Vw | Klasen Typology |
|---|---|---|---|
| 1 | Nias | 0.092 | Underdeveloped |
| 2 | Mandailing Natal | 0.085 | Underdeveloped |
| 3 | Tapanuli Selatan | 0.094 | Underdeveloped |
| 4 | Tapanuli Tengah | 0.088 | Underdeveloped |
| 5 | Tapanuli Utara | 0.047 | Underdeveloped |
| 6 | Toba Samosir | 0.018 | Advanced Depressed |
| 7 | Labuhan Batu | 0.009 | Advanced Depressed |
| 8 | Asahan | 0.100 | Advanced Depressed |
| 9 | Simalungun | 0.067 | Underdeveloped |
| 10 | Dairi | 0.020 | Underdeveloped |
| 11 | Karo | 0.015 | Advanced Depressed |
| 12 | Deli Serdang | 0.015 | Underdeveloped |
| 13 | Langkat | 0.057 | Underdeveloped |
| 14 | Nias Selatan | 0.072 | Underdeveloped |
| 15 | Humbang Hasundutan | 0.032 | Underdeveloped |
| 16 | Pakpak Barat | 0.028 | Underdeveloped |
| 17 | Samosir | 0.010 | Underdeveloped |
| 18 | Serdang Bedagai | 0.044 | Underdeveloped |
| 19 | Sibolga | 0.010 | Underdeveloped |
| 20 | Tanjung Balai | 0.004 | Advanced Depressed |
| 21 | Pematang Siantar | 0.008 | Developed |
| 22 | Tebing Tinggi | 0.010 | Underdeveloped |
| 23 | Medan | 0.314 | Advanced |
| 24 | Binjai | 0.015 | Developed |
| 25 | Padang Sidempuan | 0.052 | Underdeveloped |
| | Sumatera Utara | | |

Source: BPS, North Sumatra 2004-2008 (Data Processed)