

# Analysis of Labor Market Inequality and Income Welfare: An Economic Comparative Study Graph between North Sumatra and West Sumatra Provinces

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## Keywords:

Labor Market,  
Income,  
Human  
Development  
Index.

## Abstract

The analysis of inequality in labor and income welfare aims to determine how much inequality occurs in the labor market and income between North Sumatra Province and West Sumatra Province. The method in data collection uses secondary method by obtaining data through the Central Bureau of Statistics (BPS). Data analysis is explained through descriptions measured through 1) Expert labor index. 2) Skilled labor index. 3) Human development index. 4) Productive age worker index. 5) Net income index. This research results in inequality that. 1) West Sumatra Province has higher inequality than North Sumatra Province in Expert Labor . 2) West Sumatra Province has more skilled labor than North Sumatra Province. 3) West Sumatra Province dominates the Human Development Index more than North Sumatra Province. 4) The Productive Age Worker Index is more in North Sumatra Province than West Sumatra Province with the inequality value dominating superior. 5) The Net Income Index in North Sumatra Province is superior to West Sumatra Province. Researchers suggest the government to be more responsive regarding inequality and community welfare, especially in direct policies.

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## 1. Introduction

Welfare income is structured in Economics which refers to social welfare. Income welfare are studies that discuss the level of satisfaction with income, the welfare of individuals or groups regarding the income or income received. In depth, income welfare consists of income distribution, social inequality, and an individual's ability to earn income. In further analysis, the level of welfare income can be measured using a number of indicators; such as the Human Development Index (HDI), Population Age Productive Employment Index, and Net Income Index. Income Welfare also has relevance to economic policy, especially public policy, this is because every public policy or social government that is created will have an impact on the redistribution of minimum and maximum wages. Apart from that, inequality of power at work is also a relevant variable for measuring income welfare because differences in the number and location of the work energy

market will influence the amount of work power itself.

Based on the Central Statistics Agency's report regarding income and wages, if measured from the education index, the greater the level of education, the greater the wages earned by workers. The average wage for diploma IV workers/college graduates in February 2022 reached 4.34 million rupiah, while the monthly wage for elementary school graduate workers was 1.78 million rupiah. In other words, the average wage income and wages earned by workers with different levels of education will also earn different wages. In this report, the difference in return on the amount of labor and human capital that can be used to increase production capacity is measured and finds elements of differences in inequality between field work and welfare income between provinces. What the graph of relevant economic indicators measures against income.

**Table 1****Human Development Index (3 Years )**

PROVINCE	2020	2021	2022
North Sumatra	71.77	72.00	72.71
West Sumatra	72.38	72.65	73.26

Source : Central Statistics Agency Human Development Index

Human Development Index is one of the possible factors measuring well-being income because it can be measured as level of social and economic development in an area. Human Development Index which includes life expectancy number, income per capita, access to education. Can become rejected measuring well-being income Because income will influence number hope life someone, increasingly big level well-being income so the more there are big hopes too living and income in the area the.

**Table 2****Index Resident Aged Productive Working (3 Years )**

PROVINCE	2020	2021	2022
North Sumatra	6,950,342	7,029,733	7,314,577
West Sumatra	2,661,480	2,584,119	2,694,607

Source : Central agency Statistics

The productive age population index is the number of people of working age, namely >15 years with employment status which includes being self-employed, trying to be an auxiliary worker, employee, free agricultural worker, and free non-agricultural worker. This index is an indicator that can measure inequality in income welfare because at working age you will receive income.

**Table 3****Index Income Clean Based on Field Employment ( Thousand rupiah) / 3 Years**

PROVINCE	2020	2021	2022
North Sumatra	1.398.0	1,455.6	1,791.7
West Sumatra	1407.9	1404.2	1,689.6

Source : Central Statistics Agency

The net income index based on field work is an income analysis on a thousand rupiah scale to find out how much net income a resident in an area has. Net income is the income obtained after deducting taxes and deductions for costs that must be made. The net income index can be an indicator to measure income inequality or income welfare between one region and another, especially in terms of field work in the economic sector.

Energy market employment which is an independent variable in this research is a benchmark for inequality between a region and another country, in this research it is North Sumatra and West Sumatra. The labor market is a place or object where workers and workers meet to work together to obtain services and income. Conditions These are the conditions in which the demand and supply of electricity work and the factors that influence them are important. In energy market work, this research took a sample of the construction work field. Because it is an industrial center that determines economic activity between North Sumatra and West Sumatra, there are several indicators that can measure the signs of energy market work, including; Expert labor and skilled workers work.

Based on the Central Statistics Agency, through the results of the August 2022 Sakernas, it shows that there has been an increase in the population of productive age by 3.57 million people compared to 2021. However, the number of the workforce has decreased compared to February 2022, namely from 144.01 million people to 143.72 million soul. in August 2022. When viewed based on place of residence, in August 2021-August 2022, the percentage of unemployed people in rural areas with an education level of Never One School and Primary Level, tends to be higher than the percentage of urban residents with the same level of education with a percentage sign is 0.43 percent in rural areas and 0.09 percent in urban areas. However, in terms of high secondary education level, the urban unemployment percentage is higher

with a percentage of 49.32 percent, compared to only 48.59 percent in villages.

**Table 4**  
**Expert Power Index (3 Years)**

PROVINCE	2018	2019	2020
North Sumatra	4,518	4,143	3,733
West Sumatra	9,920	8,914	8,470

Source : Central Statistics Agency

Index power expert is index a measurement that refers to a list of individuals who have expertise and knowledge special in something field certain in matter this is in the field construction . Individuals included in index own Specific superior skills and become part important in professional institutions and area That Alone . In index This in 2021 no found or code error at the Central Statistics Agency , so that the index data replaced with period the same 3 years .

**Table 5**  
**Skilled Personnel Index (3 Years)**

PROVINCE	2018	2019	2020
North Sumatra	11,677	14,640	14,795
West Sumatra	21,643	26,136	27,353

Source : Central Statistics Agency

Skilled Personnel Index is index measurement that refers to information individual who owns Skills specifically in various field . Differentiator between power experts and energy skilled is in *skill*. Where's the power? expert tend more strong in the field *soft skills* and energy skilled more strong in the field *hard skills* . In index This The same as in the index power expert that No data found in 2021 or data error so that writer replace data with period the same 3 years . By overall data obtained from the Central Statistics Agency is the initial data that becomes hypothesis For know how much big level inequality power work and welfare income . Next is the data accumulated and analyzed with method study

For produce knowledge new related inequality that occurs . With use the amount of data it has difference between North Sumatra province with inner West Sumatra period time three year as formulation problem happen inequality related variable study .

## 2. Literature Review

### 2.1 Inequality

Inequality is a broader concept than poverty, because basically the design for measuring inequality is a design for measuring population at large, right? only residents live below the poverty line (Khandker, Koolwal and Samad, 2010). Inequality is not only measured through the average distribution, but also through other aspects. According to (Khandker, Koolwal and Samad, 2010), the simplest way to measure inequality is to divide the population into fifths (quintiles) from poorest to richest and the reporting level or proportion of income (or expenditure) increases. For each level

Inequality in Indonesia tends to increase from year to year, proving that poverty alleviation and economic growth are not in line with reducing inequality in income distribution. According to (Tambunan, 2014), inequality in income distribution between high and low income communities is a major problem that developing countries still face. According to (Oxfam, 2017), Indonesia is one of the most unequal countries in the world, where the assets of the four richest people in Indonesia are equivalent to the assets of 100 million poor people in this country. Therefore, inequality in income distribution is a big problem that cannot be ignored. Existing inequality cannot be eliminated but can be reduced to a level that allows a person to accept a particular system so that harmony within the system is maintained in development (Supriantoro, 2005).

### 2.2 Energy market Work

Sari (2015) The labor energy market is a market where workers get wages, employers get willing workers, and wages are determined.

Energy market jobs can be local or national (or even international) and include energy market interactions over smaller jobs with different qualifications, skills and geographic locations. They depend on the exchange of information between employers and job seekers regarding wages, working conditions, level of competition and job location.

The employment energy market brings together all the activities of actors who bring together job seekers by offering jobs or responding to supply and demand for labor (Sumarsono, 2009). The Karya Energy Market can be understood as a market that brings together sellers and buyers of works. Job sellers in this market are people who are looking for work (Labor Owners), and buyers are people in organizations who need workers. The Job energy market is held with the aim of coordinating meetings between Job seekers and people or organizations that need Labor.

**2.3 Economic Growth**

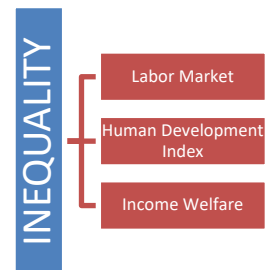
According to Koncoro (2004), economic growth will have a direct or indirect impact on regional inequality. Inequality in income distribution is an imbalance in economic development between regions within one region, which will ultimately lead to inequality in per capita income between regions. Furthermore, according to Kuncoro (2013), in reality income inequality often gives rise to jealousy and violence in society which often occurs in various regions in Indonesia. Abundant sources of electric power in nature will guarantee the welfare of society if existing regulations are beneficial to society. However, the opposite is true: inequality occurs everywhere.

**1. Research Methods**

The article in this research uses a qualitative descriptive research method with a graphic perspective that depicts the economy and then compares it to obtain a comparison of inequality. The research data collection technique uses secondary methods where data

is obtained from the relevant regional Central Statistics Agency (BPS). by studying. This research uses qualitative methods by prioritizing quality in the data obtained and maximizing analysis with graphs depicted economically. This research article was prepared using a literature review method by taking references from journals that have relevant variables. To develop returns using qualitative descriptive methods.

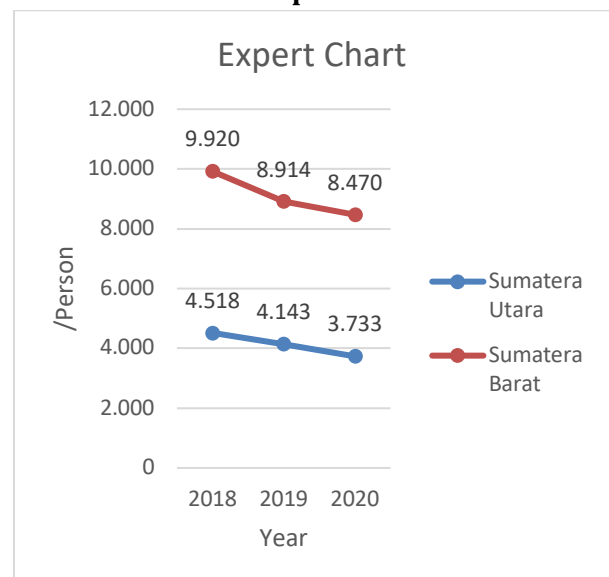
**2. Results and Discussion**



**4.1 Labor Market Inequality**

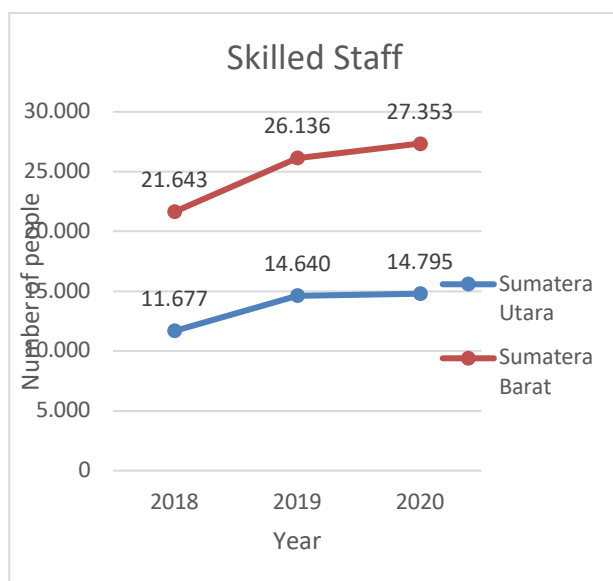
Understanding the power market Work is activity meet him among seekers Work with the person giving it Work or the person who opened it vacancy work . ( Sumarsono, 2009). In other words, the power market Work is center between demand and supply worker . In study This writer take reference power Work through number offer power shared work into two classifications that is power Work experts and energy Work skilled with chart economy as as follows :

**Graph 1**  
**Experts**



From graphic data on can seen that West Sumatra dominates have a power market Work in matter power expert more superior compared to North Sumatra. If analyzed in a way individual seen that power expert on both province the experience decline . North Sumatra experienced a decrease that does not constant with a gentle trend line . North Sumatra has a power market Work highest in the period study namely 2018 and the lowest in 2020. Meanwhile, West Sumatra also experienced the same decline No dominant with a descending trend line No steep . However although experience impairment power experts who are in West Sumatra still superior compared to North Sumatra, with number highest in the period research in 2018 and the lowest in 2020. With analysis graph , can seen that power market inequality Work specifically power expert in the field construction experience inequality . Inequality This proven with mark power experts in West Sumatra Province who have mark tall even double from North Sumatra. Inequality This happen Because lack of power expert or lack of offer to power experts in North Sumatra Province so mark chart experience inequality .

**Graph 2**  
**Skilled Staff**



From graphic data on can analyzed that inequality happens to energy skilled between North Sumatra and West Sumatra provinces .

This matter seen from amount power skilled per person in the remote province of West Sumatra more Lots compared to North Sumatra. If analyzed one by one , total power skilled at each province experience increase . In North Sumatra province the increase amount power skilled happen in a way significant , with period 3 years time amount power skilled in West Sumatra province was the lowest in 2018 and the number power skilled highest in 2020. In West Sumatra Province the increase amount power skilled also experienced the same thing significant , with period 3 years time amount power skilled Keep going increase , with number amount power skilled highest in 2020 and amount power skilled Lowest existed in 2018. If accumulated inequality power skilled happen dominant between North Sumatra and West Sumatra provinces , p This also proven by the figure per person is twice as high as in the province of West Sumatra compared with North Sumatra province .

### Well-being Income

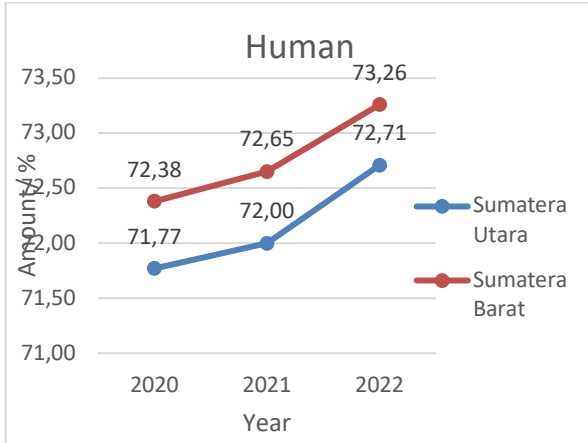
Well-being income can be measured through analysis many income everyone in the province the . Analysis This can be measured through Human Development Index , Index Age productive work as well as Index Income clean Human Development Index

HDI in development economy plays 2 roles ; (1) as tool understanding new about prosperity and popularization number development man or Human Resources ( 2) as an alternative for measure level development comparison between time on each area especially on GDP per capita . (Elizabeth 2007). By top theory the researcher take HDI overview for measure description inequality health income man between North Sumatra Province with West Sumatra, as following :



**Graph 3**

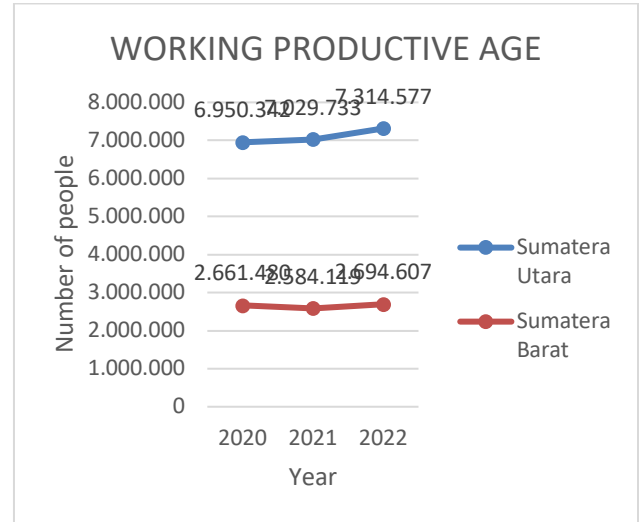
**Human Development Index (3 Years )**



Based on the economic curve graph of the Human Development Index, it can be analyzed that the Human Development Index of West Sumatra province is superior to that of North Sumatra province. Even though the sign and percentage graphs are not too far apart, the trend line in West Sumatra Province is above North Sumatra. This means that the HDI of North Sumatra is still lagging behind that of West Sumatra. If measured individually, the charts for North Sumatra and West Sumatra have increased. North Sumatra Province had the lowest HDI in 2020 with a percentage of 71.77 and the highest HDI in 2022 with a value of 72.71%. This index is below West Sumatra Province with the lowest percentage of only 72.38% and the highest index reaching 73.26%. If measured based on theory, this inequality assumes differences in human resources proven in the labor market index in the previous discussion.

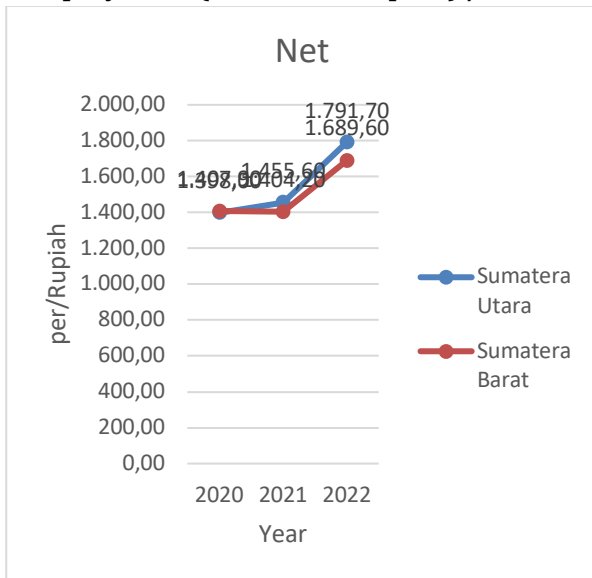
**Graph 4**

**Index Resident Aged Productive Working ( 3 Years )**



The index graph shows that the working age population in North Sumatra Province is far superior to that in West Sumatra Province. If analyzed individually, North Sumatra Province experienced a significant increase in the population of working productive age, with data from 2020 as the year with the lowest index figure and 2022 as the year with the highest index for the working population of productive age. Meanwhile in West Sumatra Province the highest index occurred in 2022 and the lowest in 2021. In West Sumatra Province over the 3 year period the number of productive working age experienced fluctuations, as evidenced by a decrease in the index in 2021 and an increase in returns in 2022. In the income index This welfare is measured by the number of workers of productive age who work in their field of work. North Sumatra itself has a superior value in the working productive age, this is all obtained from working in one's own business, collaborating with other people, or working for a company. This inequality affects the number of net opinions in subsequent analysis.

**Graph 5**  
**Index Income Clean Based on Field**  
**Employment ( Thousand rupiah) / 3 Years**



Based on the economic index graph, net production income for the two provinces experienced a similar and significant increase in net income. If measured from the previous productive age employment index, North Sumatra Province was superior to West Sumatra, this is relevant to the next study graph which shows that North Sumatra's net income is superior. If measured one by one, Sumatra Province experienced a significant increase, where in 2020 it was the lowest index, in 2022 it was the highest index.

Meanwhile, in West Sumatra Province, the permissive income index moves relevant to the working age workforce, where the movement of the index fluctuates, where in 2021 it will experience a decline and then rise again in 2022. However, in terms of income and welfare income as a whole is a comparison of inequality, North Sumatra province is superior even though the numbers are not very constant compared to West Sumatra province. This means that even though the labor market in West Sumatra Province is superior, especially in skilled labor, if the workforce is still inferior to North Sumatra Province, then the income will be much different. This is because the economic turnover in North Sumatra Province will be superior because

more people are working, especially people of productive age.

## 5. Closing

### 5.1 Conclusion

Based on the overall data and discussion through method analysis, the author draws several conclusions based on economic data graphs over a 3 year period, namely:

1. Based on the expert analysis graph between North Sumatra Province and West Sumatra Province. Produce experts on inequality of power in North Sumatra Province which is under West Sumatra Province. This is supported by the West Sumatra trend line data which dominates high.
2. Based on the power skill analysis graph between North Sumatra Province and West Sumatra Province. Resulting in a higher inequality of skilled workers in the trend line data in West Sumatra Province compared to North Sumatra Province.
3. Based on the analysis graph of the Human Development Index between North Sumatra Province and West Sumatra Province. Produces a human development inequality index that is the same as the previous results that West Sumatra Province still dominates with a higher index value than North Sumatra Province
4. Based on graphic analysis of the number of people of working productive age between North Sumatra Province and West Sumatra Province. Dominance inequality is lower in West Sumatra Province, where although the North Sumatra index fluctuates, the values and figures increase. It is still higher than North Sumatra province.
5. By analyzing the Net Income graph between North Sumatra Province and West Sumatra Province. From the inequality graph, the dominance of the higher value index is in North Sumatra Province, and the value index and index size also have the same trend line movement as the population of productive working age.

## 5.2 Suggestions

Based on whole results and discussion of the analysis power market inequality work , writer make a solution suggestion to government as owner power policy highest For maximizing amount field work and do filterization For power experts and energy skilled people who have the opportunity to do so compete and reduce level unemployment as well as add level income public something area .

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