1 Introduction

The caliber of human resources is one of the variables that contribute to progress. For competent human resources to be used as initial funding for human development, the government requires them to carry out development. Human resources can be made to be of higher quality in terms of character, social welfare, education, and health by implementing sustainable development planning. Since human development is usually acknowledged as a criterion within the government to determine the effectiveness of a respectable quality of life in a village, district/city, province, or country, education, health, and the economy are required to accomplish quality development. A Human Development Index is necessary to increase the attainment of quality development [1].

The HDI takes a three-pronged strategy to construct high standards of living, including education, longevity, and healthy living, as well as a respectable standard of living. The process of a nation’s human development must be carried out by the government to identify quality human resources. Good human capital is necessary to carry out the process of quality human development. When managing a nation’s economic resources, human capital is a key indicator. If the quality of economic growth improves, on the other hand, human capital improves and improves in quality [2].
sees a growth in poverty each year, which has an adverse effect and may lead to social inequality. Lack of an economy, rising poverty, a lack of job opportunities, and poor access to healthcare and education are the causes of social inequality. The scarcity of daily necessities can be used to gauge the extent of poverty. The widespread poverty in the West Java Province has a detrimental effect on development. A decrease in human resources reveals how severe poverty is, which is detrimental to human growth. Because the rise in dependent poverty is a factor that impedes human development. The reliance in question is a cost borne by the government in the form of budgets for reducing poverty [3].

There are both good and negative effects of HDI on poverty. Increasing the number of individuals who work and earn high earnings, will have a good effect if poverty in West Java Province declines as the HDI grows. People are now able to meet their necessities thanks to the growth in income, and many of them have jobs, which has lowered the poverty rate [4]. The imbalance of high-quality human resources is the root cause of poverty in the West Java Province. Discrimination, a technological lag, poor health, and education, as well as heredity, are all factors contributing to the loss of human resources. These elements will harm the residents of West Java Province if they keep getting worse. Low productivity due to low-quality human resources can have an impact on particular regions’ low pay [5].

It is possible to view the population’s employment rate as a contributing component to the HDI [6]. The productivity of those who work can therefore rise if there are more people working. The HDI in the West Java Province city of Banjar has been declining, and in 2021 it will undergo a significant fall that will have an influence on the city. The density of the population helps absorb labor so that the skills required and the kind of technology used to acquire goods and services can increase the number of people working in a certain location. West Java Province sees a growth in population density every year so that it can offer benefits for the local community and provide more jobs for them [7].

West Java Province’s minimum wage has raised annually. In light of this, it may be inferred from Todaro’s argument that rising salaries in the West Java Province each year increase the number of people who are employed. Bogor Regency, Bogor City, Purwakarta, and Bekasi City are among the cities and regencies with high minimum wages each year; Banjar City has the lowest wage. Unfair wage disparities will lead to unequal income distribution in some places, which might allow one region and another to have ongoing gaps and prevent the minimum wage from covering basic living expenses [8]. If the source of earnings declines, it will affect the welfare of human resources and raise the level of poverty [4]. The human development index declines in economic development because the minimum wage affects how well the impoverished can meet their basic requirements.

Every year, as the population grows, the influence of community needs grows as well, leading to increased public consumption and employment [9]. The dense population has both beneficial and negative effects on the West Java Province. The increase of employment prospects in these areas will be impacted positively. As a result, the quality of local human resources can be improved by the presence of people. Additionally, because many individuals travel to other locations in search of a job, the negative effects
of population density result in significant unemployment. We can infer that growing
the population will help the community’s workforce. However, unemployment will be
minimal if the labor force expands according to the expansion of the population. On the
other hand, imbalanced job possibilities may result in a rise in unemployment as well,
which would have an impact on the HDI [10].

The Cianjur district only had an increase of 5–8% every year from 2019 to 2021,
which was about the same percentage value as the other areas. The cities of Depok,
Bekasi, and Bandung all see significant growth each year. Although the environment
has a substantial positive impact on people’s welfare, prosperity will be challenging to
accomplish if the population is not dispersed equally. If West Java’s population con-
tinues to grow each year, it may surpass other districts in terms of its human development
index (HDI). To attain communal welfare, as indicated by population growth. The Pop-
ulation is a factor in determining productivity, hence population expansion represents an
economic opportunity [2]. The effects of poverty, employment rates, minimum wages,
and population size on the HDI in the West Java Province from 2017 to 2021 will be
examined in this study based on the information provided above.

2 Theoretical Background and Hypotheses Development

2.1 Human Advancement

Human development can be measured by looking at factors like health, education, and
purchasing power. Higher levels of acquired health, education, and purchasing power
have a favorable effect on development goals [11]. An income approach to attain accept-
able human development, average expenditure per capita can be used to predict people’s
purchasing power for various fundamental necessities [12]. Human development can be
used to better economic policy.

2.2 Human Development

In order to achieve the objectives that will be attained by improving the quality of
development, human development is a process of altering the fundamental quality of
human life. The criterion for raising living standards through communal prosperity,
or what is sometimes called the HDI. Community welfare is a component of high-
quality human resources that can help to accelerate the process of human development.
The people growth, especially the creation of qualified human resources, can directly
increase government sustainability [13]. Therefore, it may be claimed that increasing
human resources requires the production of quality human resources. The success of
development objectives in accomplishing the objective of high-quality human resources.
Raising the bar for human resources improves the environment’s wellness. If a region
can continue to experience equitable income distribution and quick economic growth, it
will produce high-caliber human resources [14].
2.3 Human Development Index

The HDI serves as a gauge for how well a community is doing at improving its basic standard of living. The HDI is typically used to classify nations as developed, developing, or underdeveloped as well as to evaluate how economic policies affect living standards [15]. The human development index is also used to assess the goals of human development based on a variety of essential facets of quality of life [16]. For achieving sustainable development and increasing human resources, the human development index acts as a benchmark. The impact of problems with improving fundamental human capital competencies is measured using the HDI [9]. According to the United Nations Development Program (UNDP), development aims to create the conditions necessary for a person to lead a healthy, long, and productive life [17]. The higher HDI is symbolic of how well the government has succeeded in raising the standard of living. It is possible to boost income levels with an increase in the HDI and a rise in population productivity [18].

2.4 Poverty

When a person is poor, their rights and wishes are not respected, which results in constraints. One could contend that people’s incapacity to fulfill the conditions for a good existence is reflected in their poverty [19]. Absolute poverty and actual poverty are the two categories of poverty. The quantity of money required to cover basic requirements is what determines whether someone is truly poor. Furthermore, a person’s level of poverty, although only in the framework of the following society, determines their capacity to meet their basic needs [17]. Usually, poverty is described as a condition in which a person lacks the means or possessions required to meet basic needs [3]. The population’s main priorities for improving human resources are health and education. Prioritizing health and education will have an impact on how well sources of economic development are absorbed and managed. With this, it may work to improve the population’s well-being while accelerating its economic development [20].

2.5 Number of People Working

A significant consideration in carrying out the manufacturing process to manufacture goods and services is the quantity of people employed [21]. A quality workforce can be created through higher productivity to increase production. Changes in the working population’s productivity level have an impact on the money earned by those who create components of production [22]. In order to get greater production outcomes with the amount of people working that are presently required, it takes a significant number of people to work. The welfare of the community can be improved by increasing the number of persons who work [23].

2.6 Total Population

Resident Residents play a role as actors and resources in the production process and serve as consumers of the goods produced [7]. The population growth each year has
both advantages and disadvantages. The dense population has a good effect in that it supplies a lot of workers, which helps to enhance productivity. The drawback is that a high population density combined with a low level of production might lower people’s standard of living [24]. As a country’s population grows, there are more and more job options available [10]. The country’s economy can be said to advance if its human resources (HR) are of high quality to construct an economy, but population growth is a role.

2.7 Minimum Wage

The minimum wage is a benchmark by which business owners and other stakeholders in the sector divide the salaries of those who work for them [8]. Indonesia’s minimum wage regulation provides an indication of working people’s living standards [12]. According to Law No. 13/2003 of the Republic of Indonesia on Manpower, the minimum wage must be based on a respectable level of living (KHL). The minimum wage is described in Article 1 Paragraph 1 of Minister of Manpower Regulation No. 1/1999 as “The lowest monthly wage which comprises basic salary and fixed allowances”. Employees use their pay to cover daily costs and improve their financial situation. Setting a minimum wage for social protection in order to determine salaries that do not reduce economic disparity [19]. As a country’s minimum wage rises, workers will benefit because they will be able to meet their basic needs [2].

3 Research Method

The writers of this study use quantitative methodologies that are based on numerical data and statistical analysis. The author of this study will look at the impact of the population, minimum salary, number of people working, and poverty on HDI in West Java Province between 2017 and 2021. Information acquired from websites dealing with variables, specifically the Central Bureau of Statistics of the Province of West Java. The author collected observational data from 18 districts and 9 cities in West Java Province. This study used time series and cross-section data with panel data regression technique to analyze the annual data for the years 2017 through 2021. A panel data regression analysis method is utilized in conjunction with the eviews application as a statistical processing tool. The econometric model or estimator model is systematically formulated as follows [25]:

\[ HDI_{it} = \beta_0 + \beta_1 POV_{it} + \beta_2 \log(L)_{it} + \beta_3 \log(MW)_{it} + \beta_4 \log(POP)_{it} + \varepsilon_{it} \]

Description:
HDI = Human Development Index
POV = Poverty
L = Labor
MW = Minimum wage
POP = Population
\( \beta_0 \) = Constant
### Table 1. Panel Data Analysis Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>CEM</th>
<th>FEM</th>
<th>REM</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>−58.05344</td>
<td>−45.54249</td>
<td>−26.98215</td>
</tr>
<tr>
<td>POV</td>
<td>−0.034157</td>
<td>−0.008170</td>
<td>−0.008957</td>
</tr>
<tr>
<td>logLABOR</td>
<td>−1.045762</td>
<td>2.350373</td>
<td>1.535486</td>
</tr>
<tr>
<td>logMW</td>
<td>7.792426</td>
<td>5.121322</td>
<td>5.505997</td>
</tr>
<tr>
<td>logPOP</td>
<td>2.343226</td>
<td>0.784139</td>
<td>−0.154229</td>
</tr>
<tr>
<td>R²</td>
<td>0.593741</td>
<td>0.998723</td>
<td>0.894918</td>
</tr>
<tr>
<td>Adj R²</td>
<td>0.581241</td>
<td>0.998355</td>
<td>0.891685</td>
</tr>
<tr>
<td>F-statistic</td>
<td>47.49830</td>
<td>2711.267</td>
<td>276.7823</td>
</tr>
<tr>
<td>Prob F-stat</td>
<td>0.000000</td>
<td>0.000000</td>
<td>0.000000</td>
</tr>
</tbody>
</table>

Source: Processed Result E-Views 12

\[ \beta_1 \ldots \beta_4 = \text{Regression Coefficient} \]
\[
\log = \text{Natural logarithm operator} \\
\varepsilon = \text{Error term (error factor)} \\
i = \text{Number of observation} \ i \\
t = \text{Number of year} \ t \ (2017–2021)
\]

## 4 Result and Discussion

### 4.1 Estimation Result

In this study, cross section and time series data are combined using the panel data technique. All districts and cities in the province of West Java are included in the cross section statistics. The observations used to create the time series data range from 2017 to 2021 [26]. In this investigation, secondary data were used. The Fixed Effect Model, which are shown in Table 1, are the best Chow test models and Hausman test based on the findings of the regression study.

### 4.2 Selection of a Selected Estimation Model

**Chow Test**
To determine whether the Fixed Effect Model is superior to the Common Effect Model, the Chow test is performed. According to Table 2, the model selected is FEM because \( H_0 \) is disregarded as a consequence of the Chow test, where the statistical significance of the empirical \( F \) is 0.0000 (\(<0.05\)), according to the results of the Chow test.

**Hausman Test**
The Hausman test is used to determine whether the Fixed Effect Model outperforms
Table 2. Chow Test Result

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section F</td>
<td>1268.558303</td>
<td>(26,104)</td>
<td>0.0000</td>
</tr>
<tr>
<td>Cross-section Chi-square</td>
<td>777.936178</td>
<td>26</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

$R^2 = 0.593741; F\text{-Stat} = 47.49830; \text{Sig. F-Stat} = 0.000000$

Source: Processed Results E-Views 12

Table 3. Hausman Test Result

<table>
<thead>
<tr>
<th>Test Summary</th>
<th>Chi-Sq. Statistic</th>
<th>Chi-Sq. d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section random</td>
<td>21.434368</td>
<td>4</td>
<td>0.0003</td>
</tr>
</tbody>
</table>

$R^2 = 0.998723; F\text{-Stat} = 2711.267; \text{Sig. F-Stat} = 0.000000$

Source: Processed Results E-Views 12

Table 4. Regression Result of Fixed Effect Model

\[
HDI_{it} = -45.54249 - 0.008170POV_{it} + 2.350373\log L_{it} \\
(0.0000) (0.0000)
+ 5.121322\log MW_{it} + 0.784139\log POP_{it} \\
(0.0000) (0.1356)
\]

$R^2 = 0.998723; DW = 2.198165; F = 2711.267; \text{Prob. F} = 0.000000$

Source: Processed Results E-Views 12

the Random Effect Model. The FEM model is selected because $H_0$ is rejected based on the Hausman test results, which demonstrate that the p-value, probability, or empirical statistical significance of Chi squares is 0.0003 ($<0.05$) (Tables 3 and 4).

4.3 Goodness Selected Model Test

Existence Model Test (F Test). The p-value, probability, or empirical significance of the F statistic, which has a value of 0.0000 ($<0.01$) and indicates that poverty, the number of people working, minimum wages, and population can affect the human development index, indicates that the Fixed Effect Model (FEM) estimation model exists.

R-Square Interpretation. $R^2$ predictive power has an $R^2$ coefficient of determination of 0.9987. This indicates that the factors of poverty, the number of people working,
district/city minimum wage, and population account for 99.87% of the variation in the HDI variable. Other variables not included in the model have an impact on the remaining 0.13%.

**Interpretation Variables**

The regression coefficient for poverty is -0.008170. This suggests that the human development index may drop by 0.008170% if poverty rises by 1,000 individuals every year. HDI is negatively or significantly impacted by poverty. According to research [13] growing poverty tends to lower the HDI. This is because growing poverty has a negative or significant effect on HDI. The poor HDI may be impacted by the rising poverty rate. Therefore, in order to actualize quality human traits in West Java Province, the government must offer work opportunities, businesses, and training. Furthermore, research [27] indicates that decreasing poverty has an influence on the HDI rising, proving that poverty has a negative or significant impact on HDI. According to research, increasing poverty has a significant negative influence on HDI, as seen by the fact that the proportion of HDI will decrease with each level of poverty [6]. Lack of ability to act is a contributing factor in poverty. Therefore, it can be said that the community’s capacity to produce resources has an impact on raising HDI. Research [19] and research [1] support a prior study. The poverty component is evident due to the poor HDI. Therefore, through fostering an environment that will boost economic productivity in particular areas, the government must implement a program to combat poverty in order to lower unemployment in the province of West Java [28]. By also developing a priority scale of human development, it also raises the composite index of new human development and establishes a measurement of the achievement of the development performance of the district or city, facilitating development in the region and lowering poverty in West Java Province [29].

With a linear logarithmic, the variable “number of people working” has a regression coefficient of 2.350373. In other words, if there are 1,000 more persons working, the HDI will result in a rise of 2.350373%. The number of individuals employed in the West Java Province significantly and favorably affects HDI. According to research, a high working population will lead to a rise in the HDI, or vice versa, a low working population will lead to an increase in the HDI [21]. Additionally, research [23] indicates that HDI can be improved by increasing the number of individuals working. According to research [22] if the productivity of the working population increases, the money received will likewise, rise; conversely, if the working population’s productivity declines, the level of income would also fall. For this reason, it is assumed in this study that fewer people will be employed. The HDI is significantly and favorably impacted by persons who work. The result of more individuals working might be viewed as a positive aspect in boosting the human development index. In other words, the more people who work, the more productive those workers are, and the greater the population, the greater the potential of the home market. Determine the state and level of human development in the area in order to perform at the best level possible [30]. In other words, the more people who work, the more productive those workers are, and the greater the population, the greater the potential of the home market. Determine the state and level of human development in the area in order to perform at the best level possible [31].
The district/city minimum wage has a regression coefficient of 5.121322 with a linear-logarithmic connection. In other words, it may be deduced that the human development index can rise by 5,121322% if salaries rise by 1 million rupiah. The human development index in West Java is significantly and favorably impacted by the minimum wage. According to research [2] the minimum wage has a significant impact on the HDI because significant increases in various regions result in an increase in expenditure income, which stabilizes the economy. If this development continues to rise, it will have an effect on the HDI. The minimum wage has an effect on the HDI in the province of West Java. This suggests that the quality of the human development index will also rise if the minimum wage in an area is rising. The HDI in the province of West Java increases in proportion to the district and city higher minimum wage. This study is consistent with the research [19]. The minimum salary boosts people’s purchasing power in a district or city, allowing them to more easily pay health and education, which are crucial factors in improving HDI. As a result, the minimum wage has a positive and significant impact on HDI [12].

The HDI in West Java Province is unaffected by populations. According to the findings, the population variable has a coefficient value of 0.1356 (more than 0.10). This means that the HDI is unaffected by population density, high or low. This study supports previous research [24] that the HDI is unaffected by population density since changes in the HDI are not a criterion for defining the population density in a given area. According to research, a huge majority of people cannot accurately predict changes in the human development index from study to study [13]. According to study [10], if a region has a large population, the human development index will decline because the poor have fewer resources to meet their requirements, such as those for health and education. West Java Province is a province where people travel around from one place to another to pursue different goals in life. According to BPS, West Java Province has a population density that changed significantly between 2017 and 2021. Because many individuals migrate to meet their daily requirements, if the population varies, it will have an impact on unemployment and pervasive poverty in various locations. Low earnings and a dense population that must be balanced with employment possibilities are side effects of unemployment that might hurt the economy. Because of poverty and a lack of income, unemployment might result in it [32].

5 Conclusion

The human development index measures three fundamental aspects of excellent human resources, including lifespan, knowledge, healthy living, and a reasonable level of living. The government is required to create a benchmark for human existence with a human development index in order to calculate the increase in human development. Skill development, education, and health are indicators of human development. If these three factors are balanced, it will grow and offer outstanding and high-quality people resources. The HDI serves as one of the government’s tools for measuring the effectiveness of initiatives to promote quality human development in a nation (HDI).

The Fixed Influence Model (FEM) estimated model was chosen based on the findings of the research on the analysis of the effect of poverty, the number of people working,
the minimum wage, and the total population on the HDI in West Java Province 2017–2021. Due to the most precise estimation achieved with panel data regression. The estimated model is backed by the selected Fixed Effect Model (FEM), illuminating the simultaneous effects of poverty, labor force participation, and minimum wage on the HDI.

The results of panel data regression analysis using the t-test show that the number of people working and the minimum wage have a positive or substantial impact on the human development index, whereas poverty has a significantly negative impact on the index. In West Java Province, the population has no bearing on the human development index from 2017 to 2021. Therefore, it can be claimed that poverty, the number of workers, and the minimum wage have a substantial impact on each district’s or city’s human development index. However, this study’s findings suggest that the population of the districts and cities in West Java Province is not yet significant since changes in population density do not affect the rise in the HDI. Therefore, the population of each district and city in West Java Province as a whole has no direct bearing on the human development index.

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References


