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# Analysis That Affects The Level of Labor Force Participation (TPAK) in The Madura Region

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***A B S T R A C T***

*This research investigates the determinants influencing the Labor Force Participation Rate (LFPR) in the Madura area, focusing on variables such as Average Years of Schooling (RLS), District Minimum Wage (UMK), and the Open Unemployment Rate (TPT). The scope of the study includes the regencies of Bangkalan, Sampang, Pamekasan, and Sumenep. Employing a quantitative methodology, the study utilizes panel data regression analysis. The secondary data were sourced from the Central Bureau of Statistics (BPS) spanning the years 2014 to 2023. The analysis revealed that the average duration of schooling (RLS) significantly and positively influences LFPR. Conversely, both the minimum district wage (UMK) and the open unemployment rate (TPT) were found to have no statistically significant impact on labor force participation. These outcomes highlight the critical role of educational enhancement in fostering greater labor market involvement within the Madura region.*

***Keywords:*** *Labor Force Participation Rate, District Minimum Wage, Open Unemployment Rate*
***JEL Classification Code:*** *F63, O11, R1*

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## INTRODUCTION

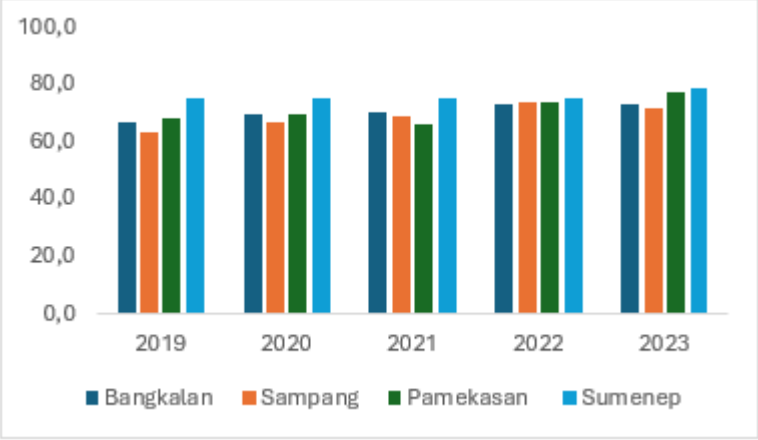
As a developing country with a large population, Indonesia faces complex challenges in managing the labor market. One of the main issues encountered is the low absorption rate of the workforce, which has a wide impact on social, economic, and political aspects. In the context of rapid global changes and economic structural transformation, it is important to understand the various factors that influence labor force participation rates. This understanding becomes the foundation for designing targeted, sustainable employment policies that can address development challenges.

The Labor Force Participation Rate is one of the key indicators in analyzing labor market dynamics in a region. LFPR describes the proportion of the working-age population that is economically active, both as workers and job seekers. A high LFPR indicates optimal utilization of the workforce in supporting economic production processes (Sari & Sugiharti, 2022). In the Madura region, TPAK presents an interesting phenomenon for study due to its unique social, economic, and cultural characteristics. Various structural and social challenges make Madura a potential area for further research in understanding the factors that specifically influence TPAK.

The Labor Force Participation Rate is an indicator that shows the proportion of the working-age population who are economically active, both working and looking for work. TPAK is calculated as a percentage of the total labor force to the total working-age population, namely individuals aged 15 years and older. This indicator reflects the availability of labor that can contribute to the production process of goods and services in an economy (Resmiati, 2018).

According to Sukirno (2004) the labor force consists of two main groups: those who work and those who are unemployed but actively looking for work. Meanwhile, those who are not included in the labor force such as students, housewives, or individuals who are not looking for work are referred to as non-workers. Understanding TPAK is important in analyzing labor market dynamics and designing effective labor policies.

The Classical Economic Theory put forward by Adam Smith explains that the level of labor force participation is determined by the labor market mechanism, in which labor demand plays a major role in encouraging individuals to work. The division of labor is considered to be able to increase productivity and create more job




Source: BPS Jawa Timur, 2019

**Figure 1.**
**Labor Force Participation Rate**

opportunities. However, in the context of the modern economy, labor participation is not only influenced by economic factors such as wage levels, but also by educational factors, government policies, and social conditions of the community. Therefore, the labor force participation rate is the result of a complex interaction between various economic and social factors (Bakti et al., 2010).

The demand for labor itself reflects the need of the business world for labor that depends on public demand for goods and services. From a legal standpoint, Law Number 13 of 2003 defines labor as any individual capable of performing work to generate goods or services, whether for personal gain or for the benefit of society (Basuki, 2014).

The Labor Force Participation Rate in Madura shows significant variation between districts. According to the Central Statistics Agency in 2023, Sumenep and Pamekasan have the highest TPAK, namely 78.86% and 77.14%, while Bangkalan and Sampang are at a lower number, even Bangkalan below the average TPAK of East Java. This inequality shows that there is a gap in labour participation which is influenced by socio-economic factors such as the quality of education, infrastructure, and access to employment. Therefore, the Madura region presents a suitable case for deeper investigation to uncover the factors influencing labor force participation rates across its districts.

In (Ikhsan, 2016) research, it was stated that the working age population and average length of schooling have a positive and significant influence on the labor force participation rate (TPAK). Conversely, the minimum wage has a significant negative influence on TPAK in districts/cities in East Java. In other words, a rise in the working-age population and the average length of education generally leads to higher labor force participation, whereas a higher minimum wage may lead to a decline in workforce involvement.

The level of education or level of education is a continuous learning stage and is arranged based on the development of students, the complexity of the material, and the method of delivery. In the formal education system, this level consists of primary, secondary, and higher education, and is preceded by pre-school education as a preparatory stage to enter basic education (Sulistiyono, 2019).

One of the main indicators to assess the level of education as well as the quality of human resources is the average length of school and the expectation rate of length of school. The average length of school shows the average number of years spent by the population in formal education, especially in the age group of 25 years and above. This figure reflects the level of education in the community in general, where the higher the average length of schooling, the higher the achievement of formal education in a region (Valiant Kevin et al., 2022).

Human Capital theory explains that education plays an important role in increasing individual work ability and income. Each additional year of education is considered to improve a person's skills, knowledge, and productivity, thus having a direct impact on the quality of the workforce and higher income. Education not only provides technical knowledge, but also forms the personality, independence, and readiness of individuals to enter the world of work (Sulistiyono, 2019)

According to Tirtarahardja and Sulo, education functions as a preparation for the workforce by equipping students through the development of attitudes, skills, and knowledge needed in the world of work. Education also encourages positive attitudes and behaviors change, including in living a healthy lifestyle, as well as expanding individual horizons. In the context of development, education is a form of basic investment that contributes

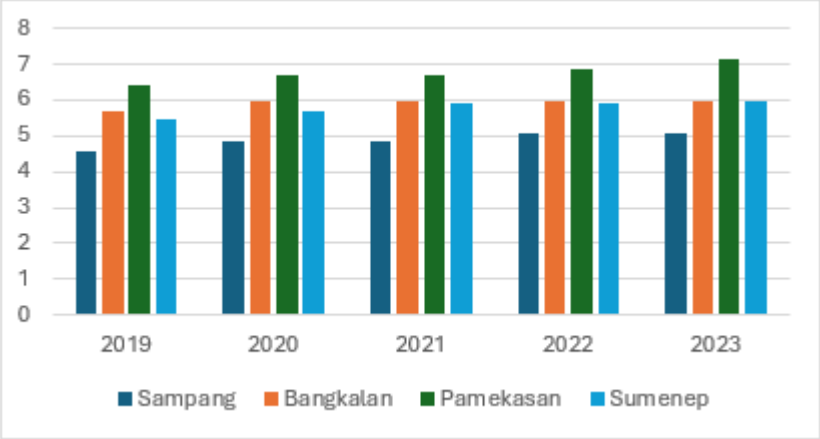
to improving the quality of human resources and the welfare of the community as a whole (Listyaningsih, 2017).

Data on the average length of schooling in four districts in Madura shows an increasing trend during the 2019–2023 period. Pamekasan Regency recorded the highest average length of school with a significant increase from 6.4 years to 7.15 years. Sampang is in the lowest position, although it still shows an increase from 4.55 years to 5.07 years. Bangkalan and Sumenep also experienced a moderate increase. In general, this reflects progress in access to and awareness of education, although there are still inequality between districts. On the other hand, an increase in the working-age population that is not balanced witemployment can reduce TPAK due to a mismatch between market needs and labor skills (Ariesti & Asmara, 2023).

economic, but also psychological impact, as it lowers motivation and perception of the value of work, which ultimately contributes to the low overall participation rate of the labor force.

According Qaimah (2022) economic growth does not have a significant impact on the Labor Force Participation Rate (LFPR) in Aceh Province. In contrast, both minimum wage levels and education exhibit a significant and positive influence on LFPR. Collectively, the variables of economic growth, minimum wages, and education contribute to influencing labor force participation. These findings suggest that improvements in education and minimum wage policies play a key role in enhancing workforce participation in the region.

The minimum wage is the lowest wage standard that an employer is required to provide to workers in a single month, in-




Source: BPS Jawa Timur, 2019

**Figure 2.**
**Average Length of School 2019-2023**

In addition to education, economic factors such as the minimum wage also affect TPAK. In Madura, even though MSEs are determined, their value is often considered insufficient for the needs of a decent life. As a result, many workers choose the informal sector which is considered more flexible even though it does not promise income stability. This condition shows that the low minimum wage not only has an

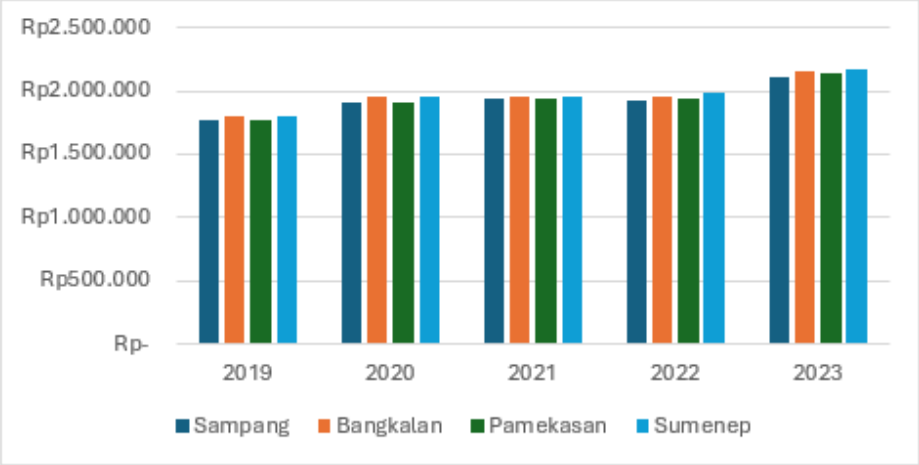
cluding basic salary and fixed benefits. This standard applies at the provincial (UMP) and district/city (UMK) levels and serves as a reference for other forms of wages, such as daily or wholesale wages, as long as the total is not less than the minimum wage that has been set (Octaviany, 2016).

According to Bonerri et al. (2018), MSEs function as wage guidelines at the district/city level, aiming to ensure that

workers receive a decent income for the services provided. The size of MSEs is influenced by the number of working-age population that enters the labor market. In classical wage theory, such as Malthus's view, the wage level is determined by the supply of labor which is strongly influenced by the number of population. As the population increases, the supply of labor also increases, so wages tend to fall. Conversely, a decrease in the population will reduce the supply of labor and cause wages to rise. This wage fluctuation is considered a natural mechanism that adjusts to the demographic conditions of the community (Sulistiawati, 2013).

tions and productivity between regions in Madura.

Despite the increase, MSEs in Madura are still considered not fully able to accommodate the needs of a decent life. The relatively low wage level can reduce the attractiveness of work in the formal sector, so that most of the working-age population chooses to work in the informal sector which is considered more flexible, although it does not guarantee income stability or employment protection. This has an impact on the low interest of the public to be actively involved in the formal job market, which ultimately affects the labor force participation rate (TPAK).




Source: BPS Jawa Timur, 2019

**Figure 3.**
**Regency Minimum Wage 2019-2023**

The increase in the Regency Minimum Wage (UMK) in the Madura region during the 2019–2023 period shows the efforts of local governments in adjusting wage standards to economic growth and the needs of the community's decent living. In general, MSEs in the four districts Sampang, Bangkalan, Pamekasan, and Sumenep have increased every year. Sumenep is recorded as the district with the highest MSEs, reaching IDR 2,176,820 in 2023, while Sampang is consistently the district with the lowest MSEs, which is IDR 2,114,335 in the same year. This difference reflects the variation in economic condi-

According to Nazwa Naisniatunnisa Sholihah & Mirna Nur Alia Abdullah (2024) based on the theory of labor demand, as explained by Mankiw (2006), a significant increase in wages can reduce the number of workers demanded by the company, especially if the increase is not accompanied by an increase in labor productivity. In the Madura region, small and medium-sized companies may face obstacles in adjusting their cost structure to the ever-increasing MSEs. As a result, they tend to keep costs down by limiting the hiring of new workers or even reducing the number of existing employees. This creates the potential for

hidden unemployment as well as stagnation in employment growth, which contributes to the challenge of increasing TPAK in the region.

Nazwa Naisniatunnisa Sholihah & Mirna Nur Alia Abdullah (2024) study shows that unemployment, education, and minimum wage affect labor force participation. Wage increases can reduce participation due to layoffs, while wage decreases increase labor demand. Therefore, a balanced wage policy is needed to support economic growth and reduce unemployment.

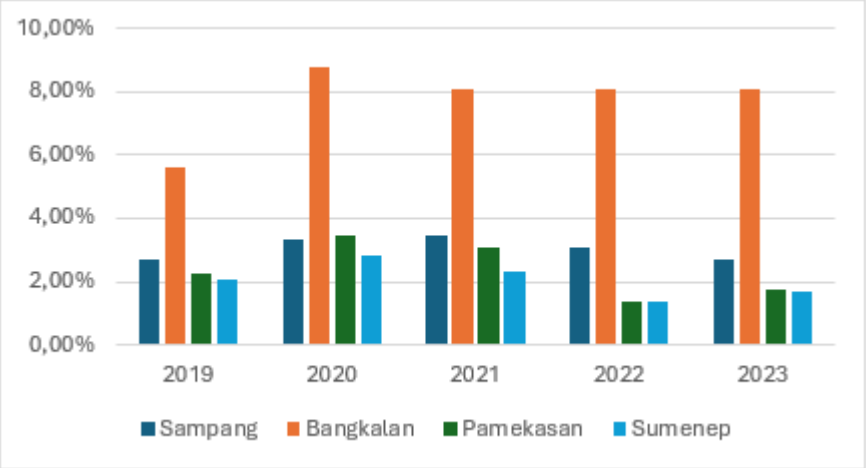
In addition, inequality of MSEs between districts also has the potential to cause a shift in the workforce between regions. Workers from districts with lower MSEs tend to migrate to areas that offer higher wages, such as Sumenep. This mobility can increase pressure in the job market of the destination region and leave an imbalance in the region of origin. Therefore, the adjustment of MSEs should not only consider the minimum living needs, but also pay attention to the competitiveness of the workforce and the capacity of the local economy so that it does not become an obstacle to the growth of work participation.

The open unemployment rate (TPT) is also one of the crucial factors that affect the Labor Force Participation Rate (TPAK) in Madura. A high TPT reflects an imbalance between the amount of labor available and the job opportunities available. This condition mainly occurs among young people, due to the dominance of traditional sectors such as agriculture, livestock, and fisheries that are unable to absorb labor optimally. The lack of investment in the manufacturing and services sectors has also worsened the situation, with many working-age residents losing motivation to look for work because they feel that job opportunities are limited or do not match their skills.

According to John Maynard Keynes' view in The General Theory of Employment, Interest, and Money (1936), full employment is rare in the economy due to low aggregate demand. Therefore, unemployment tends to always exist. Keynes classified unemployment into two main types: cyclical unemployment, which is caused by a decline in economic activity, and structural unemployment, which deals with the mismatch between labor skills and market needs. Meanwhile, the Labor Utilization Approach puts more emphasis on the extent to which the workforce is optimally utilized. This approach divides the workforce into three categories (Jingan:2000) : unemployment refers to individuals who are entirely without work and are actively engaged in seeking employment opportunities; half unemployed, namely those who work but have not been fully utilized in terms of working hours, productivity, or income; and full employment, that is, labor that has been optimally used in economic activities.

The problem of unemployment is not only experienced by individuals with low education, but also by those with a high level of education. Young people are the most vulnerable group, especially for those who do not continue their education or are not working. This condition has an impact on declining labor force participation and hampering economic growth. In addition, an increase in labor wages that is not balanced with productivity can trigger companies to reduce the number of workers, and even stop hiring, which ultimately contributes to the unemployment rate (Nazwa Naisniatunnisa Sholihah & Mirna Nur Alia Abdullah, 2024).

Data on the unemployment rate in Madura during 2019–2023 shows variations between districts. Bangkalan consistently recorded the highest unemployment rate, reaching 8.77% in 2020 and stabilizing above 8% until 2023. On the other hand, Sumenep has the lowest unemployment rate that continues to decline until 2022




Source: World Bank (processed data, 2024)

**Figure 5.**
**Forcasting**

before rising slightly in 2023. Pamekasan showed significant improvement with a sharp decline, while Sampang recorded small but relatively stable fluctuations. This condition shows that Bangkalan faces greater challenges in absorbing labor than other districts.

The complexity of this issue is further heightened by the social and cultural tendencies of the Madurese community, who generally prefer employment in the informal sector. The sector is seen as more flexible and in line with local needs, but it is often not recorded in official data and does not provide a guarantee of job protection. In addition, traditional and religious values also influence people's work preferences, thus shaping a unique and challenging pattern of workforce participation in the region.

In this context, analysis of factors such as education, minimum wage, and open unemployment rates is very important to understand the dynamics of TPAK in Madura. This study aims not only to identify the relationship between these factors, but also to explore the root causes of the low labor force participation in this region. By understanding the interaction between these factors, it is hoped that more r elevant and effective policy recommendations can be formulated to increase TPAK in Madura. The results of this research can make contribution, both to policy-making at the regional and national levels. With the right policies, such as improving access and quality.

Analysis of factors such as education, minimum wage, and open unemployment rate is essential to understand the dynamics of the Labor Force Participation Rate (TPAK) in Madura. This study aims not only to identify the relationship between these variables, but also to explore the root of the problem that causes low labor force participation. With a thorough understanding, it is hoped that more appropriate and effective policies can be formulated. The results of this study have the potential to make a great contribution to policy formulation, both at the regional and national levels. Measures such as improving access and quality of education, adjusting MSEs according to real needs, and creating jobs in strategic sectors are expected to encourage an increase in LFPR. Ultimately, this will strengthen more inclusive economic growth, improve people's welfare, and optimize the potential of the workforce in Madura for sustainable development.

## METHODOLOGY

This study uses a quantitative approach, as it allows for an objective analysis of measurable numerical data. This approach is very relevant to identify the influence of variables such as education, district minimum wage (MSE), and open unemployment rate (TPT) on the Labor Force Participation Rate (TPAK) in the Madura region. Using numerical and concrete data, this analysis is able to provide an accurate and representative picture of the labor conditions in Madura (Sugiyono, 2016).

The research was conducted in the Madura region, which includes four districts: Bangkalan, Sampang, Pamekasan, and Sumenep. This region was chosen because it has unique socio-economic dynamics and is relevant to the research topic. The time span of the study covers 2014 to 2023, with secondary data obtained from the Central Statistics Agency (BPS) as the primary source. This long time frame b allows for a comprehensive analysis of trends and changes in the factors affecting the TPAK.

The variables used in the study consisted of one dependent variable, namely TPAK (Labor Force Participation Rate), and three independent variables: Average School Length (RLS) which represents the level of education, the District Minimum Wage (UMK) as an economic indicator, and the Open Unemployment Rate (TPT) as an indicator of labor market imbalance. Data for all these variables are taken from official BPS publications, with the units used being percent for TPAK and TPT, as well as years for RLS and rupiah for MSEs.

The population in this study is the entire working-age population in the Madura area, while the research sample is in the form of secondary data related to research variables in the period 2014–2023. The type of data used is panel data, which is a combination of time series data (year) and cross section (district), which is able to provide more accurate analysis results because it reflects time dynamics and differences between regions.

In the analysis process, a classical assumption test is carried out first to ensure that the regression model meets the statistical requirements. The tests used include a multicollinearity test to see the relationship between independent variables and a heterokedasticity test using the Glejser method to determine the stability of residual variants between observations (Ghozali & Ratmono, 2017).

Furthermore, panel data regression analysis was used using the Fixed Effect Model (FEM) method, which allows control of the differences in characteristics of each district through the use of dummy variables.

To determine the most suitable panel regression model, the Chow test, the Hausman test, and if necessary, the Lagrange Multiplier (LM) test, are performed. The Chow Test is used to compare the Common Effect and Fixed Effect models, while the Hausman Test is used to choose between the Fixed Effect and the Random Effect Model. If the selected model is REM, then it is followed by an LM Test to confirm the validity of the model (Rukmana, 2019).

Finally, a statistical test was carried out, namely the t test to see the influence of each partially independent variable on TPAK, and the F test to find out the influence of the three simultaneously. In addition, the coefficient of determination ($R^2$) is used to measure how much an independent variable is able to explain the variation in the dependent variable. The high $R^2$ value indicates that the regression model used has good predictive power for TPAK (Ghozali & Ratmono, 2017).

## RESULTS AND DISCUSSION

### *Panel Data Estimation Model Selection*

The Chow test is a test model to select the appropriate model between CEM

and FEM. The Hypothesis Test is based on the following:
Ho: Common Effect Model (CEM).
Ha : Fixed Effect Model (FEM).

The decision-making is carried out by referring to the Chi-Square probability value. If the value of the Chi-Square prob is above the significance value of 0.05, then Ho is accepted and Ha is rejected so that CEM is the selected model. Conversely, if the value of the Chi-Square prob is below the significance value of 0.05, then Ho is rejected and Ha is accepted so that FEM is the selected model.

From the chow test on table 1, it can be seen that the Chi-Square prob value is 0.281 which has a value smaller than 0.05. So it can be concluded that Ho is rejected and Ha is accepted, so FEM is the chosen model.

**Tabel 1.**
**Chow Test Results**

| Effect Test | Statistic | d.f. | Prob. |
|---|---|---|---|
| Cross-Section F | 2.800685 | (3,32) | 0.0557 |
| Chi-square | 9.092646 | 3 | 0.0281 |

Source: Output E-Views 12, 2025

**Tabel 2.**
**Hausman Test Results**

| Test Summary | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob. |
|---|---|---|---|
| Cross-Section Random | 8.402056 | 3 | 0.0384 |

Source: Output E-Views 12, 2025

Hausman Test is a test model to select the appropriate model between FEM and REM. The Hypothesis Test is based on the following:
Ho: Random Effect Model (REM)
Ha : Fixed Effect Model (FEM).

The decision-making is based on the Chi-Square probability value. If the value of the Chi-Square prob is above the significance value of 0.05, then Ho is accepted and Ha is rejected so that REM is the selected model, while if the value of the Chi-Square prob is below the significance value of 0.05, then Ho is rejected and Ha is accepted so that FEM is the selected model.

Based on the assumption test table in this research, the Random Cross-Section value obtained is 0.0384, which is less than 0.05. This indicates that the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted, implying that the Fixed Effect Model is more suitable than the Random Effect Model.

Referring to the results of the Chow Test and Hausman Test, the Fixed Effect Model was identified as the most suitable model. Consequently, the Lagrange Multiplier test, which compares the Common Effect Model and Random Effect Model, was deemed unnecessary since the optimal model had already been determined.

***Multiple Linear Regression Equations***

This equation shows the relationship between the Average School Length (RLS), District Minimum Wage (UMK), and Open Unemployment Rate (TPT) on the Labor Force Participation Rate (TPAK). A constant value of 3.865896 indicates that if all independent variables (RLS, MSEs, and TPT) are in constant or zero conditions, then TPAK will have a value of 3.865896.

The regression coefficient on the RLS variable (0.052194) indicates that every one unit increase in the average length

of school will increase TPAK by 0.052194 points, assuming the other variables are fixed. This shows the positive influence of RLS on work participation. Meanwhile, the MSE variable (0.000575) also showed a positive influence, although relatively small. This means that an increase in MSEs by one unit will increase TPAK by 0.000575 points, if the other variables remain the same.

**Tabel 3.**
**Multiple Linear Regression Equations**

| Variable | Coefficient | Std.Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 3.865896 | 2.412142 | 3.602682 | 0.0177 |
| X1 | 0.052194 | 0.48E_05 | 3.031594 | 0.0391 |
| X2 | 5.75E-07 | 0.125120 | 2.444536 | 0.0094 |
| X3 | -0.020972 | 0.182970 | -0.114620 | 0.6593 |

Source: Output E-Views 12, 2025

In contrast to the previous two variables, TPT has a negative coefficient of -0.020972, which means that a one-unit increase in the open unemployment rate actually decreases TPAK by 0.020972 points, assuming the other variables are constant. This indicates that the higher the unemployment rate, the lower the participation of the working-age population in economic activities. Overall, this equation reflects a linear relationship in which education and the minimum wage drive increased work participation, while open unemployment is a holding factor.

***Classic Assumptions Test***

Based on Ghozali, the existence of multicollinearity between independent variables can be seen with a correlation matrix, if the correlation value between independent variables is above 0.90, multicollinearity is detected. However, if the correlation value between variables is below 0.90, multicollinearity is not detected.

Based on the results of the classical assumption test on multicollinearity, it shows that there is no correlation value between independent variables that exceeds 0.90. So it can be concluded that there is no multicollinearity between independent variables.

Based on Ghozali, the existence of heterokedasticity can be seen from the value of probability. If the prob value is above 0.05, there is no heterokedasticity. However, if the prob value is below 0.05, heterokedasticity occurs.

Based on the results of the classical assumption test on heterokedasticity, it shows that the probability value of each independent variable exceeds 0.05. So it can

**Tabel 4.**
**Multicollinearity Test Results**

| | RLS_X1 | UMK_X2 | TPT_X3 |
|---|---|---|---|
| RLS_X1 | 1.000000 | 0.462040 | 0.141456 |
| UMK_X2 | 0.462040 | 1.000000 | 0.139553 |
| TPT_X3 | 0.141456 | 0.139553 | 1.000000 |

Source: Output E-Views 12, 2025

be concluded that there is no heterokedasticity between independent variables.

***Statistic Test***

Based on the processing results, R-Squared (R2) shows a result of 0.637918 or 63.79%, meaning that independent variables, namely the variables of average length of schooling, district minimum wage, and open unemployment rate can explain the variable of the labor force participation rate of 63.79%. The remaining 100% - 63.79% = 36.21% were influenced by other variables that were not studied but could affect dependent variables.

Based on the table 7, the Fcalculation result was obtained of 3.201405 with a significance level of 0.013736. Ftable (α=0.05) with df1 (k-1) = 3 and df2 (n-k) = 36 where k (number of variables) and n (number of observations). The Ftable value was obtained as 2,866, so from the above results it is known that the value of Fcal (3.201405) > Ftabel (2,866).

It can be concluded that simultaneously the variables of Average School Length (X1), District Minimum Wage (X2), Open Unemployment Rate (X3) have a significant effect on the variables of Labor Force Participation Rate (Y) in the Madura region which includes Bangkalan, Sampang, Pamekasan, and Sumenep Regencies.

The results of the analysis showed that the average length of school had a positive and significant effect on TPAK in the Madura region, with a probability value of 0.0391 < 0.05 and tcount (3.03) > ttable (2.028). This means that the higher the average length of schooling, the greater the participation of the population in the labor market.

The problem faced is the low level of education, especially in areas such as Sampang, due to limited facilities and economic conditions. Suggestions that can be given are to increase access to education through assistance programs such as BOS and scholarships, as well as strengthening skills training. This is in line with Human Capital Theory, which states that education is an important investment to improve the quality and productivity of the workforce.

**Tabel 5.**
**Catechudity Test Results**

| Variable | Prob. |
|---|---|
| C | 0.1177 |
| RLS_X1 | 0.3091 |
| UMK_X2 | 0.6593 |
| TPT_X3 | 0.9094 |

Source: Output E-Views 12, 2025

**Tabel 6.**
**Determination Coefficient Test (R2)**

| Dependent Variable | Independent Variable | R-Square |
|---|---|---|
| Labor Force Participation Rate | Average Length of Schooling (X1)<br>Regency Minimum Wage (X2)<br>Unemployment Rate (X3) | 0.637918 |

Source: Output E-Views 12, 2025

This research is also supported by (Ikhsan, 2016) who showed similar results in East Java Province.

Based on the partial test, the UMK also has a positive and significant effect on TPAK, with a probability value of 0.0094 <0.05 and tcount (2.44) > ttable (2.028). The increase in the UMK provides an economic incentive for working-age people to be more active in seeking work. The problem is, even though the UMK has increased, most of the Madurese population still works in the informal sector. Therefore, an increase in the UMK needs to be accompanied by education regarding workers' rights and expanding access to the formal sector. This is in accordance with the classical view of Malthus that wage increases can encourage work participation. These results are reinforced by the findings (Qaimah, 2022) in Aceh Province which also show that the UMK has a significant effect on increasing TPAK.

In contrast to the previous two variables, TPT had no significant effect on TPAK, with a probability value of 0.6593 > 0.05 and tcount (-0.11) < ttable (2.028). The main problem is that many individuals are desperate and stop looking for work due to a lack of formal employment, so they are out of the labor force category. This is exacerbated by the dominance of the informal sector, low quality of education, and limited skills training. The suggestion for the government is to expand job creation in the formal sector and provide access to information and job training. This phenomenon mirrors the discouraged worker effect in Keynes' Theory, which explains that high unemployment causes some people to give up looking for work. Research by (Sutranggono et al., 2023) in East Java also stated that TPT is not significant to TPAK because the higher the unemployment, the smaller the labor participation.

## CONCLUSIONS

This study analyzes the influence of the average length of schooling (RLS), district minimum wage (UMK), and open unemployment rate (TPT) on the Labor Force Participation Rate (TPAK) in the Madura region. The results show that RLS has a positive and significant influence on TPAK. The low average length of schooling in several districts, such as Sampang and Bangkalan, is one of the causes of low labor participation. Conversely, the increase in education in Pamekasan and Sumenep has led to an increase in labor

**Tabel 7.**
**F Test Results**

| | |
|---|---|
| **F-statistic** | 3.201405 |
| **Prob (F-statistic)** | 0.013736 |

Source: Output E-Views 12, 2025

**Tabel 8.**
**t Test Results**

| Variable | $t_{count}$ | $t_{table}$ | Prob. |
|---|---|---|---|
| Average Length of Schooling (X1) | 3.031594 | 2.028 | 0.0391 |
| Regency Minimum Wage (X2) | 2.444536 | 2.028 | 0.0094 |
| Unemployment Rate (X3) | -0.114620 | 2.028 | 0.6593 |

Source: Output E-Views 12, 2025

participation. Therefore, improving access to and the quality of education is essential to encourage community involvement in the job market. This aligns with the Human Capital theory, which states that education enhances individuals abilities and productivity.

MSEs also have a positive and significant effect on TPAK. The increase in the minimum wage encourages the working-age population to be more active in finding work because wages are considered more feasible. Although the informal sector is still dominant in Madura, information about the increase in MSEs is often a trigger for increased interest in work, both in the formal and informal sectors. Balanced adjustment of MSEs to regional economic conditions is very important so as not to burden business actors, but still provide work attraction for the community. This is in line with classical economic theory which states that wages are the main determinant in employment decisions.

In contrast to the previous two variables, TPT did not have a significant effect on TPAK. Although unemployment is high, this does not directly reduce labor participation because many Madurese people work in the informal sector or migrate outside the region. This phenomenon illustrates the discouraged worker effect, as described in Keynes' theory, where some people stop looking for work because they feel that there are inadequate job opportunities

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