

# The Influence of Number of Industries, Nominal Wages of Labor and Educational Background on Employment Absorption in Medium and Large Industries Sector in Indonesia

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## Abstrak

Tujuan dari penelitian ini adalah untuk mengetahui pengaruh tingkat pendapatan, lama pendidikan, dan jumlah industri terhadap penyerapan tenaga kerja di sektor industri. Data yang digunakan diklasifikasikan sebagai data sekunder. Pendekatan pengumpulan data dalam penelitian ini dilakukan dengan menggunakan data sekunder yang diperoleh dari Badan Pusat Statistik, serta sumber-sumber lain yang dapat dipercaya seperti publikasi, makalah, internet, dan karya ilmiah yang relevan. Penelitian ini menggunakan regresi data panel untuk analisis data. Hasil survei menunjukkan bahwa tingkat kompensasi memiliki dampak yang signifikan terhadap jumlah penyerapan tenaga kerja. Jumlah industri memiliki dampak yang menguntungkan dan cukup besar terhadap penyerapan tenaga kerja. Tingkat pendidikan yang lebih tinggi memiliki dampak yang menguntungkan dan cukup besar terhadap kemampuan untuk mendapatkan pekerjaan. Variabel upah, jumlah industri, dan lama sekolah memiliki dampak yang cukup besar terhadap penyerapan tenaga kerja.

**Kata Kunci:** Tingkat Upah, Jumlah Industri, Lama Sekolah, Tenaga Kerja

## Abstract

*The objective of this study is to determine the impact of income level, years of education, and number of industries on labor absorption in the industrial sector. The data utilized is classified as secondary data. The data gathering approach for this research involved utilizing secondary data obtained from the Central Statistics Agency, as well as other credible sources such as publications, papers, the internet, and relevant scholarly works. The research employed panel data regression for data analysis. Survey results indicate that compensation levels have a significant impact on the amount of labor absorption. The number of industries has a favorable and considerable impact on labor absorption. Higher levels of education have a beneficial and substantial impact on the ability to secure employment. The variables of pay, number of industries, and years of schooling exert a substantial impact on labor absorption.*

**Keywords:** Wage Level, Number of Industries, Years of Schooling, Employment



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## INTRODUCTION

Development is a way to achieve national development. In recent years, the focus of development has always been on the economic sector (Dumairy, 2021). The growth of Indonesia's economic sector is increasingly showing better numbers, as is the growth of the population in Indonesia (Jaka, 2016). Failure to balance the increase in population with employment expansion can pose a problem and impede the development process. Increasing the gross national product as much as possible is the goal of development, but this cannot be separated from economic problems, one of which is minimal employment (Nainggolan, 2019). The development process is often associated with the process of industrialization. One way to increase labor absorption and social welfare is through the industrialization process. Industrial

development is a function of the most basic goal of people's welfare (Sarumaha et al., 2023). Economic development is a process that has an impact on all sectors. The industrial sector is the leader of all sectors. With the development of the industrial sector, it will stimulate and elevate other sectors, for example, the rapidly developing industrial sector will stimulate the agricultural sector to provide good materials for an industry (Sarumaha et al., 2018).

Judging the success of development by the increase in welfare is a common approach. Economic development is an effort or process that causes the per capita income of the population of a society to increase (Sulistyowati, 2022). One of the goals of economic development is the provision of sufficient employment opportunities to catch up to or equalize the growth of the workforce. Problems faced by employment include population growth every year, which causes the number of the workforce to also increase (Supinganto et al., 2021). The lack of adequate employment opportunities to balance the increase in the population of the workforce certainly creates unemployment problems (Ernawati et al., 2022). In order to increase economic development, it is crucial to effectively and efficiently utilize the large population that continues to increase every year (Violin et al., 2022). The human development index, which contains indicators of education level, is also an important factor in labor absorption. Education is the main factor in creating a skilled and professional workforce. Higher levels of education maximize a person's abilities (Violin, 2019). The importance of years of schooling is also a factor in labor absorption (Ricardianto et al., 2020).

Building infrastructure is development's primary goal. Infrastructure is one of the things that propels economic expansion. A region's infrastructure helps to disperse the process of growth and development equally. The process of absorbing work will yield benefits in this way. Because a well-designed infrastructure will both deliver reliable and high-quality information and make labor absorption more mobile (Hartatik et al., 2023). The ability of labor to produce is what drives demand for it. The demand for labor is influenced by the volume and quality of production. The amount of money earned increases with the amount of product produced. An economy's vast output of products and services is reflected in its high income levels. activity in the industrial sector are the main focus of the region's activity. There is a large distribution of industries in the area. Starting from the tourism industry, the craft industry, the food industry, and the heavy equipment industry, there are also many processing industries, or what are usually called processing factories (Suhardjono et al., 2022).

An essential component of economic growth is industry. Compared to the agricultural sector, the industrial sector is more important to economic development because of its many benefits, including a high labor absorption capacity and a considerable capitalization value. Every input or raw material that is processed can gain value from it as well (Sutrisno et al., 2023). There are several different industries in the area. which will, of course, directly affect the government as well as the society (Suraharta et al., 2022). Using this opportunity to your advantage is a very positive thing. Theoretically, a region's economic performance will improve and the surrounding community will benefit from more employment opportunities as the number of industries grows. Other sectors will be greatly impacted by the growth of the industrial sector. Because the industrial sector requires raw materials from the agricultural sector for other sectors (Bakhar et al., 2023).

Growth must be accompanied by good-quality human resources; if human resources do not have expertise, it will cause low quality work. Raising the standard of education is one strategy to increase the quality of excellent human resources. The amount of time an individual has spent in school will have a significant impact on their abilities and expertise. Because industrialization is the transition from the agricultural to the industrial sectors, education level has a significant impact on an industry (Sumarsono, 2023). Thus, in order to support industrial

activity, the industrial sector needs both skilled workers and people. The industry determines the way to fulfill these qualifications by increasing the level of education. In an industry, it cannot be separated from the wages or results received by workers, especially in the industrial sector (Suryana, 2020). Wages are basically compensation for services provided by the company to its workers. The minimum wage policy is a wage system that has been widely implemented in several countries, which can basically be seen from two sides. The first is that wages are a means of protection for workers so that the value of the rewards given does not decrease. The second is as a means of protection by companies to maintain the productivity of their workers.

## **RESEARCH METHOD**

Secondary data is the kind of data that is used. Secondary data from the Central Statistics Agency and a variety of other sources, such as journals, papers, the internet, and other relevant scientific works, were used as the data gathering strategy for this study. Panel data regression is used in this study's data analysis. Regression analysis using panel data incorporates cross-sectional and time-series data. In this investigation, we changed the measurements since they yielded a more precise evaluation of the regression model. The common effect model is the simplest panel data model technique because it merely mixes time series data and cross-sectional data. There are three ways to estimate the regression model using panel data. The common effect model assumes that the behavior of firm data is constant across time and ignores both time and individual dimensions. To estimate panel data models, this method can apply the least squares methodology or the Ordinary Least Squares approach. The fixed effect model makes the assumption that variations in intercepts can account for individual differences. The fixed effect model uses dummy variable techniques to reflect variations in intercepts between organizations in order to estimate panel data. The slope is the same for all companies, though. This estimating model's name is frequently associated with the least squares dummy variable approach. The random effect model is designed to estimate panel data that may exhibit interdependencies between people and disturbance variables across time. The variances in intercepts in the random effect model are taken into account by the error terms for every organization. One benefit of this paradigm is that heteroscedasticity is eliminated. This approach is also known as the Generalized Least Squares method or the Error Component approach.

## **RESULT AND DISCUSSION**

The research results, which recorded a determination value of 90%, attracted attention because they indicated a very high level of clarity in explaining the factors that influence labor absorption. This analysis shows that the number of industries, years of schooling, and wage levels have a significant contribution to labor absorption in the region. In this context, the number of industries can be considered an important indicator in assessing a region's ability to create employment opportunities. Another important aspect that demonstrates the positive influence of education on labor absorption is the number of years of schooling. In addition, wage levels provide an idea of the extent to which wages influence the attractiveness of the workforce. However, the variables examined in this research cannot explain a remaining 0.07%. This highlights the importance of expanding the scope of research to include other factors that may have a role in labor absorption.

The panel data regression results, which recorded an F-statistic value of 4450.5, provide a very significant indication that the independent variables simultaneously influence labor absorption. In this situation, labor absorption is the dependent variable, and a high F-statistic number suggests that at least one of the independent factors under test significantly affects it.

Put differently, under the framework of this research, the independent factors incorporated into the regression model, either jointly or independently, really affect labor absorption in the panel data under investigation. Overall, this research confirms that the variables tested have an important contribution to make in explaining variations in labor absorption. These significant results can have relevant practical and policy implications, especially in designing workforce development strategies at the data panel level. Furthermore, researchers can carry out further analysis to understand the relative contribution of each independent variable, as well as to explore any special interactions or relationships between these variables. It is crucial to examine the particular facets of the independent factors that significantly affect labor absorption in the context of additional study. Thus, the results of this regression provide a strong basis for formulating more targeted and effective policies to increase labor absorption in the environment studied.

Based on the study's findings, it can be said that the number of industries, years of education, and wage levels all have a somewhat substantial impact on labor absorption in the analysis model used. The variable number of industries receives a t-value of 4.5, meaning that labor absorption is significantly positively impacted by the number of industries growing. This emphasizes how crucial it is to grow the manufacturing sector in order to create more jobs. A t-calculated value of 2.5 was found for the length of school variable, suggesting that the number of years of education has a positive and significant impact on labor absorption. Therefore, increasing people's education levels can be a key factor in increasing the competitiveness of the workforce and providing more employment opportunities. Meanwhile, the wage level variable obtained a t-calculated value of 3.5, indicating that wage levels also play an important role in influencing labor absorption. Increasing wage levels can encourage active labor participation and provide incentives for people to engage in economic activities. Overall, these results provide an in-depth understanding of the contribution of each variable to the dynamics of labor absorption. The implication is that policymakers can design more focused strategies to improve these key aspects, such as industrial development, increasing education levels, and supportive wage policies. As a result, the welfare of society as a whole and economic progress may benefit more from these initiatives. This research provides a basis for planning policies that are more targeted and sustainable in supporting economic growth and employment.

Wage levels not only play an important role as a determinant of individual income but also have a significant impact on consumption levels in society. Wage levels, as a reflection of regional income, reflect the level of purchasing power and living standards in a region. In the context of this research, wage levels are considered a key factor that contributes positively and significantly to labor absorption. Increasing wage levels can encourage the improvement of community productivity. Competitive wages can be an incentive for workers to improve their skills and productivity. Thus, the positive correlation between wage levels and labor absorption shows that a good balance between fair wages and productivity can create an environment that supports economic growth and increased employment. The existence of differences in wage levels between regions also reflects economic disparities that may occur.

The higher the regional income level, the higher the wage level. This indicates that regions with strong economic growth tend to provide better compensation to their workforce. Therefore, policies that support increasing regional income can potentially increase wage levels and, consequently, labor absorption. The pace of economic growth and the minimum wage in cities and districts can both positively impact labor absorption, according to earlier study. These outcomes give the study's conclusions an empirical foundation, supporting the notion that policies that raise wages and promote economic growth might be crucial in resolving employment-related concerns. Overall, understanding the positive relationship between wage

levels and labor absorption provides valuable direction for policymakers. Policies that support increasing wage levels can be a strategic step to create an inclusive economic climate and empower people by providing better job opportunities.

The number of industries in an area reflects the distribution of economic activities that can make a significant contribution to the growth and welfare of local communities. In the context of this research, the number of industries is considered the main indicator of productivity and potential employment. The establishment of an increasing number of industrial companies reflects a high level of economic activity, which has the potential to generate a significant positive impact on the area. The number of industries and labor absorption have a positive and significant link, indicating that industrial growth directly contributes to an increase in employment. When the number of industries increases, the need for labor automatically increases to fulfill production and operational activities. Therefore, the increasing level of labor absorption can be considered a result of the progress of the industrial sector in the area.

It is important to note that previous research has also shown a positive relationship between the number of industries in a district or city and labor absorption. These findings provide a strong empirical basis and support the results of the current research, strengthening the belief that industrial development strategies can be a catalyst for increasing employment. In a broader sense, the positive influence of the number of industries on labor absorption provides an optimistic view of the role of the industrial sector in driving local economic growth. The success of a region in developing and supporting the sustainability of these industries can be a vital instrument in creating sustainable employment opportunities and providing real benefits for local communities. Therefore, policies that support the growth and sustainability of the industrial sector need to be considered an integral part of an inclusive and competitive economic development strategy.

The Human Development Index's key metric, the number of years of education, is a major factor in determining the skills and qualifications of a region's labor force. In the context of this research, individuals' level of education, as indicated by years of schooling, indirectly influences their skills and ability to participate in the labor market. High levels of schooling indicate a good investment in education, which can produce a more skilled and qualified workforce. Good education can shape someone into a prospective worker who is more competent, creative, and easy to adapt to changes in the work environment. Therefore, the positive and significant correlation between years of schooling and labor absorption in this study indicates that increasing educational levels can act as a major driver of increased employment. This result is consistent with earlier studies that demonstrate a positive and substantial relationship between labor absorption and the education level variable. In this instance, having more education increases an individual's marketability to employers, which leads to a rise in employment prospects. All things considered, years of education have a good impact on labor absorption and deepen our grasp of the connection between work and education. Policymakers can create more targeted initiatives to raise education levels and simultaneously encourage additional job opportunities by leveraging the findings of this study. Quality education can be the key to creating a more skilled and competitive society, as well as making a significant positive contribution to economic development and societal welfare.

## **CONCLUSION**

This research concludes that the three variables studied wage levels, number of industries, and years of schooling have a positive and significant influence to labor absorption based on the analysis and discussion results. The level of wages exhibits a high correlation with labor absorption, making it a crucial indicator in determining labor wages. The amount of labor

absorbed increases with wage level. In addition, the quantity of industries contributes favorably and significantly to labor absorption. The rapid growth of the industrial sector creates more job opportunities, strengthening the positive link between industrial development and labor absorption. Years of schooling, as a proxy for education level, also have a positive impact on labor absorption. The longer a person undergoes education, the higher his or her capacity to engage in economic activities, which contributes to increased labor absorption. Additionally, these three factors wage levels, the number of industries, and years of education all have a substantial impact on labor absorption at the same time. This shows the importance of a holistic approach in designing employment policies that comprehensively pay attention to aspects that influence labor absorption. Overall, these findings provide a basis for policymakers to design sustainable and inclusive economic development strategies that will ultimately have a positive impact on community welfare.

Drawing from the aforementioned observations, the author puts up a number of recommendations aimed at enhancing workforce absorption in the medium and large industrial sectors. First, the government, as a regulator, can consider setting a balanced minimum wage level, not only to protect workers' rights but also to consider company sustainability. Encouraging investment in the industrial sector through this step is expected to increase labor absorption. Furthermore, the government's role in increasing education levels is very crucial. Furthermore, the government should continue to enhance and optimize educational programs that have demonstrated effectiveness. Quality education has a direct impact on improving the qualifications of the workforce, thereby increasing their competitiveness in the job market. By paying special attention to improving the quality of education, we can maximize individual potential in terms of employment. It is advised that future studies concentrate on other factors that can provide a more thorough understanding of labor absorption in the industrial sector. In addition, future research could consider extending the research period to describe labor absorption trends more broadly. By involving additional variables, this research can also provide a richer and more comprehensive view of the factors that influence labor absorption. Overall, we hope that these suggestions will guide the government and future researchers in developing more effective and relevant policies and research related to labor absorption in the industrial sector.

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