

The Influence of Kartu Prakerja Recipients and Provincial Minimum Wage on Aggregate Employment Absorption in Indonesia During the Demographic Bonus Era

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ABSTRACT

This study examines the impact of Kartu Prakerja recipients and the minimum wage (UMP) on employment absorption in Indonesia during the demographic bonus era. Using panel data regression with the Random Effect Model, secondary data from BPS, the Ministry of Manpower, and the Ministry of Home Affairs were analyzed. The results indicate that Kartu Prakerja has a positive and significant effect, while UMP has a negative but insignificant effect. Additionally, the productive-age population negatively affects employment absorption. All variables have a significant simultaneous influence. It is recommended to expand the Kartu Prakerja program, balance UMP policies with labor productivity, and prioritize job creation to effectively absorb the productive-age workforce.

INTRODUCTION

Indonesia is currently entering a demographic bonus period, a condition where the proportion of the productive-age population (15-64 years) is larger than the non-productive-age population. This demographic bonus is expected to peak in 2030 and can be a great opportunity for national economic growth if utilized optimally. From an economic perspective, this phenomenon can increase productivity and national competitiveness, as the abundant workforce can drive growth in the industrial and service sectors. However, if not managed properly, the demographic bonus can become a major challenge, especially in terms of employment and social welfare (Ginting, 2019).

One of the main challenges in utilizing the demographic bonus is the high unemployment rate in Indonesia, particularly among the youth. According to data from the Central Statistics Agency (BPS), Indonesia's unemployment rate remains relatively high, although it has slightly decreased post-COVID-19 pandemic. One of the key factors contributing to high unemployment is the low quality of human resources (HR), characterized by relatively low education levels and a lack of skills relevant to industry needs. Many high school and university graduates struggle to find jobs due to a mismatch between their skills and labor market demands (Widyaningsih, 2024).

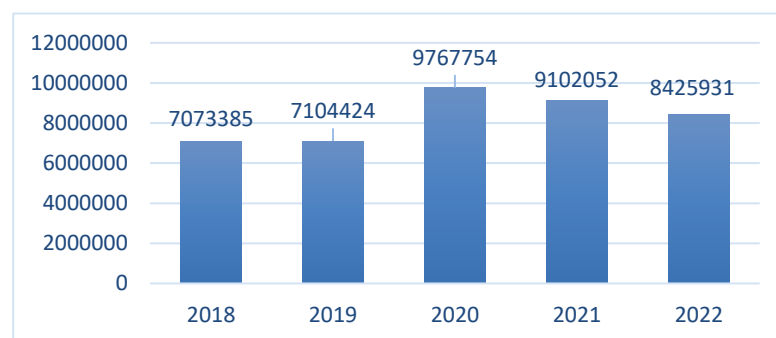


Figure 1. Unemployment Rate in Indonesia (2020–2022)
Source: Badan Pusat Statistik (BPS)

As seen in Figure 1.2, the unemployment rate remains relatively high among the productive-age population. During the COVID-19 pandemic, unemployment increased due to social restrictions that led to many businesses going bankrupt and a significant number of employees being laid off. In 2021, the unemployment rate declined but remained higher compared to 2018 and 2019. This situation is not only caused by the pandemic but also by other factors, such as the low quality of human resources and the insufficient availability of jobs for the existing workforce. This condition indicates that the demographic bonus has not yet been optimally utilized. Therefore, the government needs to implement wise solutions to address these challenges (Kariyasa, 2006).

In response to these challenges, the Indonesian government launched the Kartu Prakerja Program in 2020. This program was designed to enhance workforce skills through competency-based training. Besides serving as a social assistance initiative to mitigate the impact of the COVID-19 pandemic, Kartu Prakerja also aims to improve workforce competitiveness, making it easier for

individuals to enter the labor market (Rozikin, 2023). The program provides access to various types of training, including digital skills, entrepreneurship, and technical skills relevant to industry needs. Several studies indicate that Kartu Prakerja recipients have a higher likelihood of securing employment after completing the training compared to those who do not participate in the program (Rozikin, 2023).

Kartu Prakerja encourages increased employment opportunities for its recipients. In 2021, 27% of Kartu Prakerja beneficiaries who were previously unemployed secured jobs after completing the program. Of this percentage, 14% found employment as laborers, employees, or freelancers, while the remaining 13% started their own businesses (Kartu Prakerja, 2021). This indicates that Kartu Prakerja aims to provide access to training programs tailored to labor market needs, including digital skills, entrepreneurship, and technical or intensive training for participants. The program is available to job seekers, workers affected by layoffs, and employees who need skill enhancement (Febrian, 2024).

In the global context, several countries have successfully leveraged their demographic bonus to drive economic growth through appropriate policies. Singapore, for instance, has implemented a skill-based training program known as SkillsFuture, which aims to enhance workforce competencies in line with industry demands. This program emphasizes the importance of lifelong learning and provides incentives for individuals seeking to improve their skills. Such a model could serve as a reference for Indonesia in designing more effective labor market policies (Tan, 2017).

Apart from workforce skills, wage policies also play a crucial role in the dynamics of the labor market. The government sets the Provincial Minimum Wage (UMP) as a form of protection for workers to ensure they receive a decent income. There are two perspectives in assessing minimum wage policies. First, the minimum wage is seen as a means to protect workers by ensuring that their wages remain stable to meet daily needs. Second, it is viewed as a mechanism to help businesses maintain stable labor productivity levels. (Simanjuntak, 1992).

Table 1. Growth of Minimum Wage in Indonesia (2019-2022) (Percentage)

Year	Average Minimum Wage	Growth (%)
2019	2.455.662,23	7,61
2020	2.672.370,77	8,11
2021	2.687.723,69	0,57
2022	2.725.504,95	1,39

Source: Ministry of Manpower

Based on the table above, it can be seen that the growth of the Provincial Minimum Wage (UMP) has shown a fluctuating trend. In 2020, there was the highest increase of 8.11%, continuing the positive trend from the previous year. However, in 2021, UMP growth slowed drastically to only 0.57%, likely due to

the economic impact of the COVID-19 pandemic. UMP growth rose again in 2022, although it remained relatively low at 1.39%.

When discussing UMP increases, it is important to recognize their direct impact on the labor market. On one hand, higher UMP can boost workers' purchasing power and encourage productivity. On the other hand, if not accompanied by increased labor productivity, higher UMP may burden businesses, especially in small and medium-sized enterprises. This could affect labor absorption rates, as companies may reduce their workforce to balance rising operational costs due to UMP increases (Safitri, 2017).

Apart from Kartu Prakerja and UMP, demographic factors such as the number of people in the productive age group also play a role in determining labor absorption levels. With a continuously growing productive-age population, pressure on the labor market becomes more significant. If workforce growth is not matched by adequate job opportunities, unemployment rates may rise. Therefore, strategic and well-targeted labor policies are crucial to ensuring that the demographic bonus can be optimally utilized to enhance labor absorption.

Based on this background, this study aims to analyze the effect of the number of Kartu Prakerja recipients and the Provincial Minimum Wage (UMP) on the labor absorption rate in Indonesia during the demographic bonus era. By considering demographic factors such as the number of people in the productive age group, this research is expected to provide a clearer understanding of the challenges and opportunities in improving labor absorption in Indonesia. Furthermore, the findings of this study are expected to serve as a reference for the government in formulating more effective labor policies, ensuring that the demographic bonus can be optimally utilized to enhance economic growth and societal well-being.

LITERATURE REVIEW

Human Capital Theory

The human capital theory, developed by Becker and Schultz, states that investment in education and training enhances workers' skills and productivity, thereby increasing their chances of being absorbed into the labor market (Becker, 1992). In the context of this study, the Kartu Prakerja program serves as a form of human capital investment aimed at improving individuals' skills through competency-based training. This training is expected to make workers more competitive and better prepared to navigate the dynamics of the labor market. Additionally, the Provincial Minimum Wage (UMP) policy is also linked to this theory, as ensuring fair wages can encourage workers to enhance their skills and productivity.

Wage Theory (Mankiw)

According to Mankiw (2018), wages are determined by the marginal productivity of labor, which reflects a worker's contribution to a company's output. If the minimum wage is set higher than labor productivity, firms tend to reduce the number of workers they hire. Conversely, if wages reflect or slightly exceed labor productivity, this can incentivize skill enhancement among

workers, including through programs like Kartu Prakerja. Therefore, UMP policies should be aligned with labor productivity levels to prevent adverse effects on labor absorption in Indonesia.

Demographic Transition Theory

The demographic transition theory, introduced by Thompson (1929), explains how population structures shift from high birth and death rates to lower levels as social and economic development progresses. Indonesia is currently in a demographic bonus phase, characterized by a dominant productive-age population. This theory is relevant to the study as it highlights that a demographic bonus can drive economic growth if supported by appropriate labor policies. The Kartu Prakerja program helps enhance workforce skills to better compete in the labor market, while UMP policies can influence labor competitiveness. By optimizing both policies, Indonesia can leverage its demographic bonus to improve aggregate labor absorption.

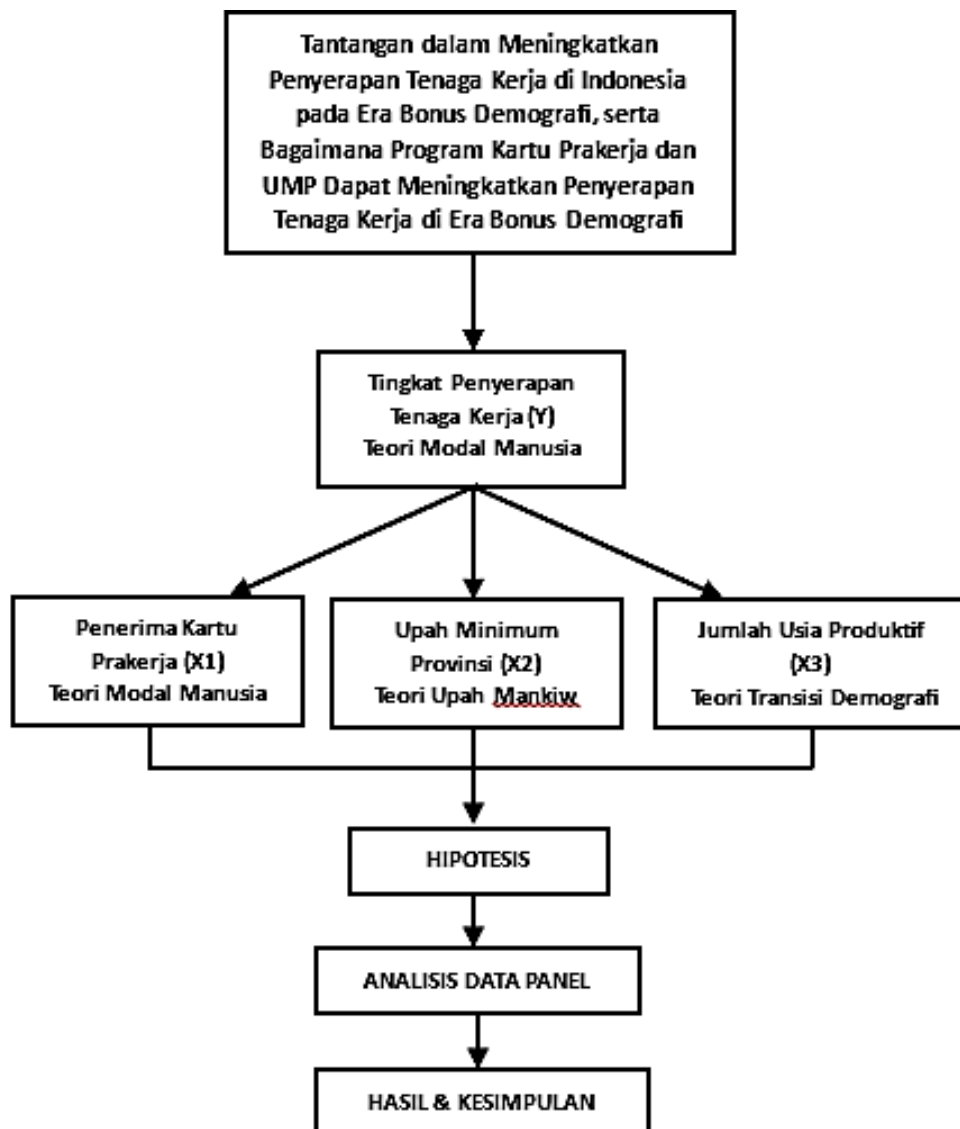


Figure 2. Conceptual Framework

Referring to the conceptual framework and previous explanations, the research hypotheses can be formulated as follows:

H1: It is suspected that the number of Kartu Prakerja recipients, the Provincial Minimum Wage (UMP), and the productive-age population have a partial effect on labor absorption in the era of the demographic bonus.

H2: It is suspected that the number of Kartu Prakerja recipients, the Provincial Minimum Wage (UMP), and the productive-age population have a simultaneous effect on labor absorption in the era of the demographic bonus

METHODOLOGY

This study employs a quantitative approach with panel data regression analysis to examine the relationship between labor absorption in Indonesia during the 2020–2022 period and the number of Kartu Prakerja recipients, Provincial Minimum Wage (UMP), and the productive-age population. Secondary data were obtained from the Central Bureau of Statistics (BPS), the Ministry of Manpower (Kemnaker), and the Ministry of Home Affairs (Kemendagri). In this study, logarithmic (LN) transformation was applied to both the dependent and independent variables. This transformation was necessary due to differences in data scales (percentage vs. nominal values in millions and thousands) to reduce disparities in value ranges (Sholihin, 2021).

The study conducted model selection tests, including the Chow test, Hausman test, and Lagrange Multiplier test, to determine the most appropriate model. Based on these tests, the Random Effect Model (REM) was chosen as the best model for analysis. To ensure the validity of the regression model, this research also performed classical assumption tests, such as multicollinearity, heteroskedasticity, and normality tests. However, since the REM model inherently addresses some classical assumption issues, additional assumption tests were deemed unnecessary (Gujarati, 2012). Using this method, the study aims to empirically analyze the factors affecting labor absorption in Indonesia and to determine the relationship between independent and dependent variables, both simultaneously and partially.

RESEARCH RESULT

Model Estimation Test

Table 2. Results of the Three Model Tests

<i>Variable</i>	<i>CEM</i>	<i>FEM</i>	<i>REM</i>
<i>_cons</i>	8.715558	- 6.977219	5.638717
LN_PRA	0.3832044	- 0.0804647	0.2905335
LN_UMP	- 0.2529335	0.6282309	- 0.0767019
LN_PRO	- 0.39666402	0.1538942	- 0.2907081
F	0.000	0.3958	0.000
R ²	0.4918	0.0004	0.4827

Description:

LN_PYB : Labor Absorption

LN_PRA : Kartu Prakerja
 LN_UMP : Provincial Minimum Wage (UMP)
 LN_PRO : Productive Age Population

Based on Table 2, the panel regression model equations for CEM (Common Effect Model), FEM (Fixed Effect Model), and REM (Random Effect Model) are as follows:

1. *Common Effect Model*

$$\text{LnPYBit: } 8.715558 + 0.3832044 \text{ LnPRAit} - 0.2529335 \text{ LnUMPit} - 0.39666402 \text{ LnPROit} + e$$

2. *Fixed Effect Model*

$$\text{LnPYBit: } - 6.977219 - 0.0804647 \text{ LnPRAit} + 0.6282309 \text{ LnUMPit} + 0.1538942 \text{ LnPROit} + e$$

3. *Random Effect Model*

$$\text{LnPYBit: } 5.638717 + 0.2905335 \text{ LnPRAit} - 0.0767019 \text{ LnUMPit} - 0.2907081 \text{ LnPROit} + e$$

Model Selection Test

Table 3. Best Model Selection Test

Model Selection Test	Effect Test	Prob
<i>Uji Chow</i>	<i>Prob > chi2</i>	0.000
<i>Uji Hausman</i>	<i>Prob > chi2</i>	0.7191
<i>Uji LM</i>	<i>Prob > chi2</i>	0.000

- **Chow Test**
 This test selects between the Common Effect Model (CEM) and the Fixed Effect Model (FEM). Based on Table 3, the chi-square probability value is $0.0000 < 0.05$, indicating that H_0 is rejected and H_1 is accepted. Therefore, FEM is the selected model.
- **Hausman Test**
 This test compares the Fixed Effect Model (FEM) and the Random Effect Model (REM) to determine the best model. According to Table 3, the chi-square probability value is $0.7191 > 0.05$, meaning that H_0 is accepted and H_1 is rejected. Consequently, the REM model is chosen.
- **Lagrange Multiplier (LM) Test**
 This test compares the Common Effect Model (CEM) and the Random Effect Model (REM). Based on Table 3, the chi-square probability value is $0.0000 < 0.05$, leading to the rejection of H_0 and acceptance of H_1 . As a result, the REM model is selected.

Thus, this study employs the Random Effect Model (REM). Since REM is the chosen model, classical assumption tests are not required, as this model is considered to meet the necessary assumptions (Gujarati, 2012). The regression equation (as presented in Table 2) is as follows:

$$\text{LnPYBit} = 5.638717 + 0.2905335 \text{ LnPRAit} - 0.0767019 \text{ LnUMPit} - 0.2907081 \text{ LnPROit} + e$$

LnPYBit : Labor Absorption
 LnPRAit : Kartu Prakerja
 LnUMPit : Provincial Minimum Wage (UMP)
 LnPROit : Productive Age Population

Partial Test (t-Test)

Table 4. Partial Test Results

Variabel	Coef.	Std. Err	z	P> z
_cons	5.638717	3.23918	1.74	0.082
LN_PRA	0.2905335	.0689321	4.21	0.000
LN_UMP	-0.0767019	.1930783	-0.40	0.691
LN_PRO	-0.2907081	.0857314	-3.39	0.001

- The Kartu Prakerja Recipients variable (LN_PRA) has a p-value of 0.000 (< 0.05), indicating that this variable significantly affects Employment Absorption.
- The Provincial Minimum Wage variable (LN_UMP) has a p-value of 0.691 (> 0.05), indicating that this variable does not significantly affect Employment Absorption.
- The Productive Age Population variable (LN_PRO) has a p-value of 0.001 (< 0.05), indicating that this variable significantly affects Employment Absorption.

1. *Simultaneous Test (F-Test)*

Based on the F-test results in Table 2, the Wald chi-square probability value is $0.000 < \alpha = 0.05$, meaning that H0 is rejected and H1 is accepted. This indicates that the variables Kartu Prakerja recipients, provincial minimum wage, and productive-age population have a significant simultaneous effect on employment absorption.

2. *Coefficient of Determination (R² Test)*

Based on Table 2, the R-square value in the Random Effect Model is 0.4827, indicating that the variables Kartu Prakerja recipients, provincial minimum wage, and productive-age population can simultaneously explain 48.27% of the influence of the independent variables on employment absorption. The remaining 51.73% is influenced by other variables outside this study.

DISCUSSION

The Impact of Kartu Prakerja Recipients on Labor Absorption

The Kartu Prakerja program is a government policy aimed at enhancing workforce skills through digital and in-person training. Introduced in 2020 as a response to labor market challenges – particularly those caused by technological

disruption and the COVID-19 pandemic – this program is designed to provide training relevant to industry needs while offering incentives to participants who complete their courses. The program is open to Indonesian citizens aged 18 and above who are not currently enrolled in formal education. Its primary target groups include job seekers, workers affected by layoffs, and those seeking to improve their skills to become more competitive in the labor market. While broadly accessible, the program prioritizes individuals from low-income and vulnerable families, as well as micro and small business owners aiming to enhance their capacities.

Based on the empirical findings presented earlier, the results indicate that Kartu Prakerja recipients have a positive and significant impact on labor absorption in Indonesia (Table 4.2). These findings reinforce the relevance of the Kartu Prakerja program in supporting the government's agenda to reduce unemployment, particularly during the demographic bonus era. The demographic bonus presents a significant opportunity for Indonesia, given the large proportion of the working-age population. However, to capitalize on this potential, human resource quality must be improved to ensure competitiveness in the labor market.

This research is grounded in Human Capital Theory, as proposed by Gary Becker and Theodore Schultz. The theory emphasizes that investments in education, training, and skill development enhance human resource quality. As individuals improve their skills through training, their chances of securing employment increase. The Kartu Prakerja program aligns with this concept by providing access to relevant industry training for the working-age population. Additionally, the program plays a crucial role in enhancing the competitiveness of Indonesia's workforce, equipping them to navigate industrial transformations and global challenges.

These findings are consistent with research conducted by Zaki et al. (2023), which demonstrated that the Kartu Prakerja program has a positive and significant effect on labor absorption. Similarly, Putri's (2021) study in Makassar confirmed that the program's training and incentives contribute to improved employment rates. In other words, the program provides both short-term benefits in the form of financial incentives and long-term advantages by enhancing individual competencies. These competency improvements not only increase job opportunities but also boost labor productivity across various industrial sectors.

Beyond its contribution to labor absorption, the program also helps reduce open unemployment. By bridging the gap between workforce skills and labor market demands, it ensures that training aligns with industry requirements. However, challenges remain, particularly in providing access to technology for individuals in remote areas. Strategic efforts are needed to raise awareness and improve accessibility, including more extensive outreach and strengthened digital infrastructure in underdeveloped regions. By addressing these challenges, the Kartu Prakerja program can significantly contribute to labor absorption, demonstrating that investment in workforce skill development is a strategic

move to maximize the demographic bonus potential and drive more inclusive economic growth.

In addition to the Kartu Prakerja program, the government also provides a social protection scheme for workers affected by layoffs through the Job Loss Insurance (Jaminan Kehilangan Pekerjaan or JKP) program. This initiative offers cash benefits, access to job training, and job vacancy information for unemployed workers. The JKP scheme provides financial assistance amounting to 45% of the worker's previous wage for the first three months and 25% for the following three months, subject to a predetermined maximum limit. By offering this support, the program provides economic security to laid-off workers while they search for new employment or enhance their skills through training. The presence of JKP complements the Kartu Prakerja program by acting as a social safety net for displaced workers, helping to mitigate economic distress and increasing their chances of reemployment within a shorter period.

The Effect of Minimum Wage on Employment Absorption

The analysis results indicate that the Provincial Minimum Wage (UMP) has a negative and insignificant relationship with employment absorption. Theoretically, an increase in UMP that is not accompanied by a rise in productivity can lead businesses to become more selective in hiring or reduce their workforce, particularly in labor-intensive sectors. However, in this study, the insignificance of the relationship between UMP and employment absorption may be attributed to the nature of the data, which includes both formal and informal workers, while UMP policies apply only to formal workers. Additionally, a large proportion of Indonesian workers are in the informal sector, thereby limiting the overall impact of UMP on the labor market.

Although UMP aims to improve worker welfare, its effectiveness in increasing employment absorption depends on other factors, such as labor productivity and the readiness of industries to adapt to minimum wage policies. Programs like Kartu Prakerja can help enhance workforce skills to better align with industry needs, while incentive policies for companies that invest in worker training can mitigate the negative effects of UMP increases.

Given that the results indicate a negative and insignificant relationship, further analysis on UMP within this study will not be conducted. This suggests that UMP is not a primary factor directly influencing employment absorption in this context. Therefore, a more comprehensive labor policy approach – including workforce skill enhancement and greater flexibility in wage determination based on productivity – should be a key focus in improving employment absorption in Indonesia.

The Influence of the Productive Age on Employment Absorption

The test results for the Productive Age variable indicate that this variable has a significant negative impact on employment absorption. The negative coefficient suggests challenges in aligning the number of people in the productive age group with the availability of job opportunities or the compatibility of workforce skills with market demands. This condition reflects the unrealized potential of the demographic bonus. This finding aligns with Umar's (2017)

research, which revealed that the demographic bonus could be a significant opportunity if accompanied by the provision of productive employment, human capital development, and government policies that support employment absorption. This study also supports Wahyuni's (2022) findings, which state that the demographic bonus plays a role in driving national economic growth by increasing the number of productive workers. However, this potential has not been fully realized due to insufficient government policies in addressing demographic bonus challenges. These findings highlight the crucial role of the government in creating adequate job opportunities and ensuring that the workforce is prepared to compete in the global market.

Moreover, increased investment in the industrial sector and digitalization is necessary to open more job opportunities that align with current economic developments. In addition, Dheba et al. (2022) emphasized that the availability of a large workforce is not accompanied by sufficient labor demand. This imbalance makes it difficult for job seekers to enter the labor market, especially those who lack relevant skills. From the perspective of labor supply and demand, an increase in the productive-age population without proportional growth in labor demand will create an oversupply of workers in the market, leading to intense competition for jobs. When the number of productive workers continues to rise while job opportunities do not increase at the same rate, many individuals, particularly those with limited skills, will struggle to enter the workforce. Therefore, improving human capital through training and education becomes the key to addressing this challenge. In addition to formal training, job opportunities must increase in parallel with the growth of the productive-age population to ensure a balanced labor supply and demand.

This study emphasizes that the demographic bonus requires synergy between the government, the private sector, and society in creating employment opportunities that support labor absorption. Programs such as Kartu Prakerja can serve as a solution to enhance workforce skills, while the government needs to strengthen policies that encourage growth in productive sectors. Furthermore, fostering an entrepreneurial ecosystem can be a strategy to reduce dependency on formal employment by encouraging young generations to create their own job opportunities through business innovation and the creative economy. Additionally, the development of a digital-based economy can create new opportunities, particularly for younger workers who are increasingly familiar with technology. With a holistic approach, Indonesia can leverage its demographic bonus as a key driver to enhance economic competitiveness on a global scale

Simultaneous Influence of Independent Variables on the Dependent Variable

Based on the research findings, the variables Kartu Prakerja Recipients (PRA), Provincial Minimum Wage (UMP), and Productive Age Population (PRO) simultaneously have a significant influence on employment absorption. This is evidenced by the Wald chi-square test probability value of 0.000, which is smaller than the significance level $\alpha = 0.05$. These results indicate that when analyzed together, these three variables significantly impact employment absorption in

Indonesia. The coefficient of determination (R^2) of 0.4827 proves that 48.27% of the variation in employment absorption can be explained by Kartu Prakerja Recipients, Provincial Minimum Wage, and Productive Age Population. The remaining 51.73% is explained by other factors not included in this model. These findings suggest that although these three variables are important, other aspects must be considered to better understand the dynamics of employment absorption in Indonesia.

Partially, the Kartu Prakerja Recipients (PRA) variable has a significant positive impact on employment absorption, with a regression coefficient of 0.2905335 and a p-value of 0.000. This means that an increase of one unit in the number of Kartu Prakerja recipients is estimated to increase employment absorption by 0.2905 units, assuming other variables remain constant. This positive relationship indicates that the Kartu Prakerja Program plays a role in improving job opportunities through skills training and workforce competitiveness. The program provides skills relevant to market needs, making it easier for recipients to find jobs or create self-employment opportunities.

On the other hand, the Provincial Minimum Wage (UMP) variable has a negative but insignificant effect on employment absorption, with a regression coefficient of -0.0767019 and a p-value of 0.691. These findings indicate that UMP does not have a statistically significant impact on employment absorption in the model used. However, the negative coefficient suggests that an increase in UMP may reduce employment absorption, especially in sectors sensitive to rising labor costs. This reflects the challenge for both the government and businesses in maintaining a balance between improving worker welfare through wage increases while ensuring that employment levels remain stable. Higher UMP can serve as an incentive for workers to invest in education and skills development, but it must be accompanied by policies that ensure labor productivity growth aligns with wage increases.

Meanwhile, the Productive Age Population (PRO) variable has a significant negative impact on employment absorption, with a regression coefficient of -0.2907081 and a p-value of 0.001. This negative relationship suggests that an increase in the productive-age population, without sufficient job creation or skill alignment, can hinder employment absorption. In other words, even though the number of people in the productive age group is growing, employment absorption remains low if skills development and job creation do not keep up. This highlights the importance of managing the demographic bonus strategically so that the large productive-age population becomes an economic asset rather than a social burden.

These research findings align with Human Capital Theory, which emphasizes the importance of investing in education, training, and skill development to create a high-quality workforce. The Kartu Prakerja Program serves as a real-world application of this theory, where training is provided to enhance workforce competitiveness. However, the success of this program must be supported by other policies, such as job creation, improved access to education, and support for productive sectors that have a high capacity to absorb labor. Thus, this study reinforces that strategic step to enhance employment

absorption in Indonesia must be taken holistically. The government must integrate various policies that support workforce development, productivity improvement, and job creation. These steps are essential to ensuring that the productive-age population makes an optimal contribution to economic growth and sustainable development in the demographic bonus era.

CONCLUSIONS AND RECOMMENDATIONS

The research findings indicate that recipients of Kartu Prakerja have a positive and significant impact on labor absorption, suggesting that the training provided enhances workers' skills and job opportunities. Meanwhile, the Minimum Provincial Wage (UMP) has a negative but insignificant effect, implying that wage increases do not always directly lead to higher labor absorption. Additionally, the productive-age population has a negative and significant impact, indicating that a surge in the productive-age population without sufficient job creation can hinder labor absorption. Simultaneously, all three variables have a significant influence on labor absorption in Indonesia during the demographic bonus era.

To enhance the effectiveness of the Kartu Prakerja program, training quality must be improved to better align with industry needs while expanding access for job seekers. UMP policies should be balanced with labor productivity improvements to prevent adverse effects on labor absorption, particularly in small and medium enterprises. Job creation must be a top priority, emphasizing vocational education, industry-based training, and entrepreneurship ecosystem development. To maximize the benefits of the demographic bonus, collaboration between the government, businesses, and educational institutions is essential in designing more strategic, effective, and sustainable employment policies to improve labor absorption in Indonesia.

ADVANCED RESEARCH

Every study has limitations, including this research. One of its main limitations is the number of variables analyzed. This study focuses solely on Kartu Prakerja recipients, the Provincial Minimum Wage (UMP), and the productive-age population, without considering other factors such as broader employment policies or specific industrial sectors that may also influence labor absorption.

Additionally, the research period (2020–2022) is relatively short and may be affected by external factors, including the impact of the COVID-19 pandemic on the labor market. Another limitation is the use of aggregate provincial-level data, which does not capture regional variations in employment conditions. This study also relies entirely on secondary data from BPS, the Ministry of Manpower (Kemnaker), and the Ministry of Home Affairs (Kemendagri). While these sources are valid, they may not fully capture qualitative aspects, such as worker motivation or the effectiveness of training policies.

To address these limitations, future research could include additional variables, such as labor investment, regional employment policies, or specific industrial sectors, for a more in-depth analysis. Extending the research period would also help identify long-term trends in labor absorption during the

demographic bonus era. Moreover, future studies could use district/city-level data to better understand regional disparities and combine quantitative and qualitative methods, such as interviews with industry players or policy analysis, to gain a broader perspective. These improvements would allow future research to provide more comprehensive insights and stronger policy recommendations for enhancing labor absorption in Indonesia.

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