

## EVALUATION OF THE PRE-EMPLOYMENT CARD PROGRAM: DOES THE PROGRAM INCREASE WORKERS WAGES? (DIFFERENCE IN DIFFERENCE METHOD)

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### ABSTRACT

*This study evaluates the impact of the Pre-Employment Card Program on workers' wage levels using SAKERNAS data. This study uses the Difference in Difference method to evaluate the pre-employment card program on wages. The results of the analysis show that the program has not succeeded in increasing workers' wages in accordance with its initial objectives. The results also show that workers who did not receive the pre-employment card have higher wage levels compared to those who received the program. These findings underscore the need for an in-depth evaluation of the design, implementation, and training curriculum of the Pre-Employment Card program. This evaluation should consider feedback from participants as well as a labour market needs analysis to ensure the program's relevance and effectiveness in increasing workers' wages in the future. This research also highlights the importance of adjusting the program based on dynamic labor market conditions as well as the specific needs of workers. The results of this study are expected to provide insights for policy makers and program implementers to improve the quality and impact of the Pre-Employment Card Program, so that it can contribute more effectively to improving the economic welfare of workers in Indonesia.*

## INTRODUCTION

The Pre-Employment Card Program has been a key focus of the Indonesian government's policy to enhance workforce skills and competitiveness. Launched in response to the country's economic challenges, this program offers training and subsidies for individuals seeking to improve their skills and enter the labor market. The primary objective of the program is to increase workers' wages by enhancing their skills and competencies. However, the actual effectiveness of the Pre-Employment Card Program in achieving this goal remains a subject of intense debate, with various studies and analyses conducted to evaluate its impact.

Although the program has improved access to training and skills development, its impact on wage increases remains unclear (Wibowo & Timur, 2023). Studies indicate that while participants have the opportunity to take various training programs designed to enhance their skills and competencies, the ultimate outcome in terms of wage growth has not been consistently observed. Further research is needed to understand why skill improvements do not always directly translate into higher earnings.

The success of the Pre-Employment Card Program in increasing workers' wages depends on several factors, including the quality of training provided, the availability of relevant job opportunities, and ongoing support for participants' integration into the labor market (Santoso & Setiawan, 2023). Training quality is crucial, as the material must align with industry needs and provide practical skills that participants can immediately apply. Additionally, the availability of relevant job opportunities is another critical factor, as training efforts may be ineffective if there are no suitable jobs for participants to utilize their newly acquired skills.

Ongoing support also plays a vital role in the program's success. Participants need assistance in integrating their new skills into the labor market, which may require career guidance, job placements, or professional networking. Without this support, many participants may struggle to leverage their skills for higher-paying jobs. Macroeconomic factors and labor market conditions should not be overlooked, as broader market dynamics can influence the effectiveness of training in increasing wages.

Overall, while the Pre-Employment Card Program holds great potential to improve workforce skills and competitiveness, a comprehensive evaluation and a more holistic approach are necessary to ensure that it effectively achieves its ultimate goal of increasing workers' wages and well-being. This involves not only improving training quality but also ensuring sufficient job opportunities and providing continuous support to participants after training. By doing so, the Pre-Employment Card Program can deliver a more significant and sustainable impact on wage growth in Indonesia.

In this research context, a comprehensive evaluation of the effectiveness of the Pre-Employment Card Program in increasing workers' wages in Indonesia is crucial. By analyzing the latest data from SAKERNAS 2022 and 2023, this study aims to provide valuable insights for policymakers, practitioners, and academics in understanding the real impact of training programs like the Pre-Employment Card on wage growth in Indonesia.

## LITERATURE REVIEW

The importance of comprehensive evaluations of workforce training programs as a foundation for better policy decisions in the employment sector (Andries, 2023). In this context, a thorough evaluation includes assessing the design, implementation, and outcomes of training programs to ensure that the goals of enhancing workforce skills and competencies are truly achieved (Ginting, 2020). Complex relationship between wages and workers' economic well-being, emphasizing that wages are not only financial compensation but also serve as a broader indicator of economic stability, social security, and worker productivity (Khan, 2022).

Focusing specifically on the Pre-Employment Card Program, provide a comprehensive literature review, exploring various aspects and challenges in its implementation (Pratama & Nugroho, 2023). Their research notes that while the program aims to improve workforce skills through training, its impact on wage increases remains inconsistent. Evaluate the effect of the Pre-Employment Card Program on workers' wages, finding that the results do not always align with the program's initial objectives (Wibowo & Timur, 2023). Their study indicates that although participants acquire new skills, this does not always translate into significant wage growth.

Examining factors that influence the program's success in raising wages in Indonesia (Santoso & Setiawan, 2023). Their study identifies key elements such as training quality, the relevance of training to labor market needs, and continued support for program participants. The role of training quality in improving worker productivity, which can indirectly impact wages (Setiawan & Sari, 2023). Their findings suggest that high-quality training aligned with industry needs enhances worker efficiency and performance, thereby increasing their value in the labor market and positively affecting wages.

Emphasize the importance of a collaborative approach in workforce development, which can significantly influence the effectiveness of training programs like the Pre-Employment Card Program (Suharto, 2023). Their study finds that collaboration between the government, industries, and training institutions ensures that training programs remain relevant and responsive to labor market demands. With such a collaborative approach, programs like the Pre-Employment Card can be designed and implemented more effectively, ensuring that participants acquire skills that align with industry requirements.

## RESEARCH METHOD

The Difference in Differences (DID) method is an approach used to evaluate the impact of a policy or program using cross-sectional data. In DID, the difference between the treatment group (those affected by the program) and the control group (those not affected by the program) is analyzed. The DID model includes a treatment dummy variable ( $DiD_i$ ) that identifies whether an individual belongs to the treatment or control group, as well as control variables ( $X_i$ ) that influence the outcome.

Albouy (2015) evaluates an intervention, program, or treatment on effect  $Y$  within a population of individuals. Two groups are indexed based on treatment status  $T = 0, 1$ , where 0 indicates individuals who were not offered treatment and are classified as the control group, while 1 represents those who received treatment and are classified as the treatment group (Heckman et al., 1997). It is assumed that there are two time periods for the observed individuals,  $t = 0, 1$ , where 0 represents the pre-treatment period and 1

represents the post-treatment period (Athey & Imbens, 2006). All observations are indexed by  $i = 1 \dots N$ , where each individual has two observations: pre-treatment and post-treatment, expressed as follows: for the average sample outcome of the treatment group,  $Y-T0$  and  $Y-T1$ , and for the control group,  $Y-C0$  and  $Y-C1$ .

a Simple Pre vs. Post Estimator first considers an estimator based on comparing the average differences in outcome  $Y_i$  before and after treatment for the treatment group (Albouy, 2015).

$$\delta_1 = Y^{T1} - Y^{T0}$$

The expectation of the estimator is as follows:

$$E[\delta_1] = E[Y^{T1}] - E[Y^{T0}] = [\alpha + \beta + \gamma + \delta] - [\alpha + \beta] = \gamma + \delta$$

According to (Albouy, 2015), the estimator will be biased if  $\gamma \neq 0$ , which is the constant mean difference in post-treatment  $Y_i$  outcomes, between treatments.

The Difference-in-Differences (DID) estimator is defined as the difference in the mean pre- and post-treatment treatment group outcomes minus the mean pre- and post-treatment control group outcomes (Abadie, 2005).

$$\delta_{DD} = (Y^{T1} - Y^{T0}) - (Y^{C1} - Y^{C0})$$

According to (Albouy, 2015), the expectation of this estimator will be unbiased.

$$\begin{aligned} \delta_{DD} &= E[Y^{T1}] - E[Y^{T0}] - E[Y^{C1}] - E[Y^{C0}] \\ &= (\alpha + \beta + \gamma + \delta) - (\alpha + \beta) - (\alpha + \gamma) + \alpha = (\gamma + \delta - \gamma) = \delta_{DD} \end{aligned}$$

Then the DID model for cross-sectional data can be formulated as follows:

$$Y_i = \beta_0 + \beta_1 D_i + \beta_2 X_i + \beta_3 (D_i \times X_i) + \epsilon_i$$

The dependent variable in this study is the wage level with the treatment variable is the pre-employment card program with a dummy variable, where 1 is an individual who gets a pre-employment card while 0 is an individual who does not get a pre-employment card. The control variables in this study are age, gender and education which are characteristics of individuals.

## RESEARCH RESULTS AND DISCUSSION

Kartu Prakerja is an Indonesian government initiative that aims to improve the skills and competitiveness of the workforce. The program subsidizes training for individuals so that they can attend various courses and trainings organized by training service providers that have collaborated with the government. Through Kartu Prakerja, people can acquire skills that are relevant to the demands of the job market, thereby increasing their chances of getting a better job and earning a higher income. The pre-employment card program aims to increase workers' wages.

Wages are the financial rewards given to workers as a result of the work or services

they perform. It is one of the key aspects of the employment relationship that takes into account the value of workers' contributions to the production of goods and services (Blanchflower & Oswald, 2020). Increasing wages in improving the living standards of workers and their families, as well as in reducing economic inequality and emphasizing that changes in wage levels can have an impact on labor market stability and overall economic balance (Khan, 2022).

**Table 1. Difference in Difference Result of SAKERNAS 2022**

**Pre-Employment Card**

Outcome Variable	Group	Mean Value	Std. Err.	t-value	p-value
Before	Control	8.26405	-	-	-
	Treated	8.26405	-	-	-
Diff (T-C)		0	-	-	-
After	Control	8.26405	-	-	-
	Treated	8.26405	-	-	-
Diff (T-C)		10.645	2.232	4.77	0.000***
Diff-in-Diff		10.645	2.232	4.77	0.000***

Variable	Coefficient	Std. Error	t-value	P-Value
Pre-Employment Card	-422381.3	41689.53	-10.13	0.000
Age	11826.2	113.503	104.19	0.000
Sex	654977.5	3622.506	180.81	0.000
Education	327975.7	1026.127	319.62	0.000
_cons	-1059287	832.348	-155.04	0.000

Source: Data Processing, 2025

The test result of the pre-employment card program on the wage level of workers in 2022 shows a negative coefficient with a probability value of 0.000 which is smaller than 0.05, indicating that individuals who do not receive pre-employment cards have a higher wage level compared to those who receive pre-employment cards. This finding contradicts the original objective of the program which was designed to increase the skills and, directly, the wages of workers through training. This finding raises important questions about the pre-employment card program. While the program is designed to help workers improve their skills and competitiveness in the job market, the test results show that workers who participate in the program actually have lower wage levels.

**Table 2. Difference in Difference Result of SAKERNAS 2023**

### Pre-Employment Card

Outcome Variable	Group	Mean Value	Std. Err.	t-value	p-value
Before	Control	1.7e+06	-	-	-
	Treated	1.7e+06	-	-	-
Diff (T-C)		0	-	-	-
After	Control	1.7e+06	-	-	-
	Treated	1.7e+06	-	-	-
Diff (T-C)		0.167	1.046	0.16	0.873
Diff-in-Diff		0.167	1.046	0.16	0.873

Variable	Coefficient	Std. Error	t-value	P-Value
Pre-Employment Card	237.4168	20639.25	0.01	0.991
Age	6743.048	989.2327	6.82	0.000
Sex	643340.7	20319.36	31.66	0.000
Education	62752.36	4288.246	14.63	0.000
cons	769258.2	47217.89	16.29	0.000

Source: Data Processing, 2025

The results of the evaluation of the Kartu Prakerja program on workers' wage levels in 2023 indicate that this program did not have a significant impact on increasing workers' wages, as evidenced by a probability value of 0.872, which is greater than 0.05. This finding suggests that although the Kartu Prakerja program was designed to enhance workers' skills and competencies through various training sessions, its impact was not reflected in the wages received by participants. The failure of the Kartu Prakerja program to increase workers' wages in 2023 highlights the need for a more in-depth evaluation of its design and implementation.

According to Indonesia's Central Bureau of Statistics (BPS), the Kartu Prakerja program aims to improve workforce competence and productivity through government-subsidized training. However, this study's results suggest that the program may not be effective in achieving these objectives. A study that aligns with these findings is the research by (Smith & Todd, 2005), which found that job training programs often do not lead to significant wage increases for participants, particularly when the training is not aligned with labor market needs. Additionally, a 2021 report by the International Labour Organization (ILO) states that the effectiveness of job training programs depends heavily on the quality of training and the relevance of the skills taught to market demands (ILO, 2021).

One possible factor contributing to the failure of the Kartu Prakerja program in increasing wages is the alignment between the training provided and labor market needs. Training that is irrelevant or poorly targeted is unlikely to result in significant wage increases (Andries, 2023). The quality of training, including teaching methods and content delivery, plays a crucial role in the effectiveness of job training programs. Poorly structured training or training that is not tailored to industry needs can reduce its potential benefits for participants (Setiawan & Sari, 2023). To enhance the effectiveness of the



Kartu Prakerja program, a comprehensive evaluation of its design, implementation, and training curriculum is necessary. Collaboration between the government, training providers, and industries is essential to develop training programs that are more relevant and useful. By making adjustments based on participant feedback and labor market analysis, the Kartu Prakerja program can become more effective in improving skills and, ultimately, increasing workers' wages (Suharto, 2023).

Findings from 2022 and 2023 raise important questions about the effectiveness of the Kartu Prakerja program. Although this program is designed to help workers improve their skills and competitiveness in the labor market, the test results indicate that workers who participated in the program actually had lower wage levels, and the program failed to significantly impact their wages. This may be due to several factors, including the quality of the training provided, the relevance of training to industry needs, or the influence of other variables such as broader macroeconomic conditions, labor supply-demand imbalances, or limitations in the program's reach.

To improve the effectiveness of the Kartu Prakerja program, a thorough evaluation of the training design, implementation, and curriculum is needed. This evaluation should consider feedback from program participants to understand the challenges they face during and after training. Additionally, a comprehensive labor market analysis should be conducted to ensure that the training provided matches the skills currently needed by industries. This approach should also include comparisons with similar training programs in other countries that have successfully increased workers' wages, allowing best practices from those programs to be adopted.

Furthermore, there needs to be a continuous monitoring and evaluation mechanism to assess the program's effectiveness periodically. This includes evaluating the long-term outcomes for program participants in terms of career advancement and income growth. By doing so, the program can be adjusted to become more relevant and effective in enhancing skills and, ultimately, increasing workers' wages. This will help ensure that the goal of improving workers' welfare through the Kartu Prakerja program can be achieved more effectively.

Additionally, collaboration between the government, the private sector, and educational institutions must be strengthened to ensure that the training provided truly reflects labor market needs and can be applied in real work environments. Through these collaborative efforts, the Kartu Prakerja program can be improved to be more responsive to dynamic changes in the economy and industry, thereby providing a greater positive impact on wage growth and workers' welfare in Indonesia.

## CONCLUSION

The test results of the pre-employment card program on workers' wage levels in 2022 and 2023 show that the program did not succeed in increasing workers' wages in accordance with the objectives of the program. Workers who did not receive pre-employment cards had higher wage levels, and the program also did not show a significant effect on increasing workers' wages. These findings highlight the need for an in-depth evaluation of the program's design, implementation, and training curriculum, taking into account participant feedback and labor market needs analysis, to make the pre-

employment card program more relevant and effective in increasing workers' wages.

## REFERENCE

- Abadie, A. (2005). Semiparametric difference-in-differences estimators. *Review of Economic Studies*, 72(1), 1–19. <https://doi.org/10.1111/0034-6527.00321>
- Albouy, D. (2015). Program evaluation and the difference in difference estimator. *Economics*, 13.
- Andries, J. (2023). Evaluating the Effectiveness of Workforce Training Programs. *Journal of Labor Economics*.
- Athey, S., & Imbens, G. W. (2006). Identification and inference in nonlinear difference-in-differences models. *Econometrica*, 74(2), 431–497. <https://doi.org/10.1111/j.1468-0262.2006.00668.x>
- Blanchflower, D. G., & Oswald, A. J. (2020). Well-being over time in Britain and the USA. *Journal of Public Economics*, 190.
- Ginting, M. L. B. (2020). *Efektivitas Program Kartu Prakerja dalam Meningkatkan Kesejahteraan Pekerja di Masa Pandemi Covid-19*. Institut Agama Islam Negeri (IAIN) Ponorogo.
- Heckman, J. J., Ichimura, H., & Todd, P. E. (1997). Matching as an econometric evaluation estimator: evidence from evaluating a job training Programme. *Review of Economic Studies*, 64(4), 605–654. <https://doi.org/10.2307/2971733>
- I. L. O. (2021). *Training and Skills Development*. <https://www.ilo.org>
- Khan, A. (2022). The Role of Wages in Determining Workers' Economic Welfare. *Journal of Labor Economics*.
- Pratama, F., & Nugroho, H. (2023). Assessing the Impact of Kartu Prakerja Program on Workers' Wages: A Review of Literature. *Journal of Labor Market Research*, 30(3), 321–335.
- Santoso, C., & Setiawan, D. (2023). Factors Influencing the Success of Kartu Prakerja Program in Increasing Workers' Wages: A Cross-Sectional Study. *Indonesian Journal of Labor Economics*, 12(1), 45–58.
- Setiawan, T., & Sari, M. (2023). The Role of Training Quality in Enhancing Worker Productivity. *Economic Development Journal*.
- Smith, J. A., & Todd, P. E. (2005). Does Matching Overcome LaLonde's Critique of Nonexperimental Estimators? *Journal of Econometrics*.
- Suharto, I. (2023). Collaborative Approaches to Workforce Development: Lessons from Indonesia. *Public Policy and Administration Research*.
- Wibowo, A., & Timur, B. (2023). Evaluating the Effectiveness of the Kartu Prakerja Program: Does It Increase Workers' Wages? *Journal of Economic Development*, 45(2), 217–230.