# The Impact Of The Pre-Employment Card Program On Labor Force Participation In Indonesia (A Post-Covid-19 Analysis)

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## ABSTRACT

This study aims to examine the changes in labor absorption, particularly post-COVID-19, influenced by the Pre-Employment Card Program and sociodemographic characteristics. The main variable, the Pre-Employment Card Program, is analyzed based on recipients' status or those who have participated in training and received incentives. Sociodemographic characteristics include three variables: gender (using a dummy variable), education level (seven equivalent education levels), and age (25 to 44 years). Data from the National Labor Force Survey (Sakernas) for February 2022, conducted by the Central Bureau of Statistics (BPS) of Indonesia, is utilized. With a sample of 76,363 respondents aged 25 to 44 years, the study employs the binomial logit method to assess the influence of independent variables on changes in employment status. The results indicate that: a) the Pre-Employment Card Program has a smaller impact on employment compared to other variables, b) males are more likely to be employed than females post-pandemic, c) higher education levels increase the likelihood of employment, and d) older individuals are more likely to be employed or remain employed post-pandemic compared to younger individuals.

**Keywords**:  Gender, Education, Pre-Employment Card, Labor, Covid-19.

## INTRODUCTION

The COVID-19 pandemic emerged as an unprecedented global challenge (Suryahadi et al., 2020). Indonesia has been severely affected, with over a million cases reported since the first confirmed case in March 2020, resulting in tens of thousands of deaths (Jaya, 2021). The COVID-19 pandemic has impacted not only public health but also the economy, education, and social life of the Indonesian people. The ongoing restrictions to combat the virus have significantly disrupted human development in the country.

There are two main reasons for Indonesia's economic crisis caused by the COVID-19 pandemic. First, the increasing number of infected people, including those in the productive age group, has reduced households' ability to meet their daily needs, especially for those directly affected by COVID-19. Second, the social restrictions imposed by the government have prevented the economy from operating at full capacity (Izzati, 2021). Despite government responses with social restrictions, the spread of positive cases continued to increase across almost all provinces in Indonesia.

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p-ISSN: 2962-276X | e-ISSN: 2962-3499

The Central Bureau of Statistics (BPS) noted in February 2022 that despite a reduction in the unemployment rate, 954,600 working-age individuals were still forced into unemployment due to the COVID-19 pandemic (Rahman, 2022). Of this number, the majority (46.69 percent) were in the prime working age of 25 to 44 years, contributing significantly to Indonesia's demographic bonus period. This demographic bonus refers to a period when the productive age population (15-64) exceeds the non-productive age population (under 5 years and over 64 years) (Azizah & Nurwati, 2020). It is estimated that Indonesia will enter this demographic bonus period between 2020 and 2030, and if the productive workforce dominates the labor market, Indonesia can maximize this opportunity.

The government allocated IDR 677.20 trillion to mitigate the spread of COVID-19 and restore economic activities impacted by Large-Scale Social Restrictions (PSBB) and other public health measures. Of this budget, IDR 87.55 trillion was allocated for healthcare services, and IDR 589.65 trillion for PEN. Under PEN, IDR 205.2 trillion, or 30 percent of the total COVID-19 stimulus budget, was used to strengthen household consumption, with the remainder allocated to support businesses (57 percent) and healthcare services (13 percent). Notably, a significant portion of the budget was directed towards social protection programs, accounting for 35 percent (Widodo & Ardhiani, 2022).

The Pre-Employment Card program, launched in April 2020, aims to enhance labor skills (training assistance component), increase labor productivity and competitiveness, and promote entrepreneurship (PP 76/2020). The program is considered one of the government's workforce empowerment initiatives to recover the economy amid the COVID-19 crisis (Azzahra, 2023). Kurnianingsih et al. (2020) state that the Pre-Employment Card program has two missions: improving labor skills and increasing the purchasing power of those affected by the COVID-19 pandemic. The program helps job seekers enhance their skills to meet current labor market demands (Suryadi et al., 2021).

The Pre-Employment Card program has had a significant impact during the difficult times of the COVID-19 pandemic (Hermawan et al., 2021). From Wave 1 in April 2020 to Wave 20 in September 2021, the program reached 11,440,629 beneficiaries. In February 2020, it reached 5,509,055 beneficiaries (10.25 percent) and in February 2021, it reached 5,931,574 beneficiaries (14.36 percent). By February 2022, 4,984,790 beneficiaries (16.36 percent) had joined from Waves 23 to 47 (Pre-Employment Card, 2022).

The Coordinating Ministry for Economic Affairs (Kemenko Perekonomian, 2021) states that there is a positive impact between the unemployment rate and the number of Pre-Employment Card program recipients. Theoretically, training programs positively affect individuals' qualifications and productivity, enabling them to secure achievable employment (Al Ayyubi et al., 2023). In the Pre-Employment Card program, unemployed individuals receive incentives and job training, becoming more competent and skilled in relevant fields (Suryadi et al., 2021). Previous studies support the view that the Pre-Employment Card program produces skilled human

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and Quality of HR Management and Education in the Industrial Era 4.0

p-ISSN: 2962-276X | e-ISSN: 2962-3499

resources, preparing individuals for labor market absorption during or after the COVID-19 pandemic (Al Ayyubi et al., 2023; Muhammad Ihsaan Rizqulloh, 2021; Tasmilah, 2023; Zaki & Kartika Pertiwi, 2023) Masriyah et al., 2020.

Several studies support the assertion that the Pre-Employment Card program positively impacts individual employment status in Indonesia. Al-Ayyubi et al. (2023) explain the program's influence on the labor market, particularly among young people aged 18-24. Their findings suggest that the Pre-Employment Card program helps young workers, especially in entrepreneurship and the informal sector. Similarly, Tasmilah (2022) finds that the program impacts entrepreneurship in the service sector but not in other sectors. Findings by Raesalat and Alifia (2021) indicate that people in Garut Regency benefited significantly from the Pre-Employment Card program, especially workers laid off due to the COVID-19 pandemic. With the provided training, people developed self-employment skills and used business capital from the incentives received. Rizqulloh (2021) agrees that the Pre-Employment Card program enhances skills through completed training. Participants can choose training aligned with their interests and receive corresponding skill certificates.

Solihin et al. (2022) and Kurnianingsih et al. (2020) note issues in implementing the Pre-Employment Card program. Kurnianingsih (2020) argues that the Pre-Employment Card program's social protection policy objectives have not had the desired impact compared to other programs. She suggests that the government evaluate the technical and regulatory aspects of implementation. Fitri (2022) believes the program remains ineffective due to inadequate socialization and provided facilities.

The sociodemographic conditions in this study depict the population characteristics in an area, explaining social and demographic conditions (Amira & Marhaeni, 2016). Sociodemographic characteristics are crucial in assessing the population's condition in a specific area, providing a comprehensive overview of population characteristics related to individual welfare. Setyanti & Finuliyah (2022) finds that certain characteristics influence individuals' decisions to enter the labor market. These characteristics include education level, gender, age, and marital status. Prasetyo and Rachmawati (2022) also demonstrate that sociodemographic characteristics such as work experience and education level impact labor absorption.

Considering the government's efforts in economic recovery through the social protection program, Pre-Employment Card, this study explores the program's impact on employment absorption, particularly for Pre-Employment Card recipients. The study identifies individual employment status through a question in the National Labor Force Survey (Sakernas) regarding activities or work performed in the past week to earn income for at least one hour per week (Statistik, 2022). Based on BPS data (2022) showing that the majority of unemployment is among those aged 25-44, this age range is used as the sample for this study. The primary variable is the Pre-Employment Card program's impact on individual labor absorption, with additional control variables (gender, education level, and age) representing sociodemographic characteristics

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p-ISSN: 2962-276X | e-ISSN: 2962-3499

influencing labor absorption. This study focuses on 1) determining the impact of the Pre-Employment Card program on labor absorption post-COVID-19 pandemic and 2) determining the impact of sociodemographic characteristics (gender, education level, and age) on labor absorption post-COVID-19 pandemic.

**RESEARCH METHODS**

This study aims to understand and analyze labor absorption in Indonesia through a quantitative research approach using numerical data and Stata 13 statistical software. According to Kuantitatif (2016), quantitative research grounded in positivism involves rigorous numerical calculations and comprehensive data processing to achieve research objectives effectively. The study relies on secondary data from the National Labor Force Survey (Sakernas) conducted in February 2022, covering 190,851 individuals sampled across 1,000 census blocks in 34 provinces. This dataset, supplemented by data from the Central Bureau of Statistics (BPS), the World Bank, and relevant literature, provides a robust foundation for examining employment trends and changes over time in different regions of Indonesia.

The research specifically focuses on individuals aged 25 to 44, drawing from the Sakernas February 2022 dataset to analyze employment dynamics, particularly in relation to the Pre-Employment Card Program. This program data includes information on participation, training completion, and the use of incentives by respondents. The study's sample consists of 76,363 respondents from this age group who completed the Sakernas questionnaire, chosen to represent the broader population for detailed analysis. The employment status of these individuals, coded based on their income-generating activities in the past week, serves as the dependent variable. Independent variables include demographic factors like gender, education, and age, alongside details specific to program participation, aiming to elucidate factors influencing employment outcomes in Indonesia's labor market landscape.

The following table presents the operational definitions of the dependent and independent variables used in this study:

**Table 1. Operational Definitions**

| No | Variable | Operational Definition | Measurement | Code |
|---|---|---|---|---|
| **Dependent Variable** | | | | |
| 1 | Employment Status (SP) | Employment status of individuals when filling out the Sakernas February 2022 questionnaire | SP = 1 if working, SP = 0 if not working | r9a |
| **Independent Variables: Pre-Employment Card Program** | | | | |
| 2 | Pre-Employment Card | Condition when an individual has received or | D1 = 1 if recipient, D1 = 0 if not a recipient | r43e |

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and Quality of HR Management and Education in the Industrial Era 4.0

p-ISSN: 2962-276X | e-ISSN: 2962-3499

| | | | | |
|---|---|---|---|---|
| | Recipient (D1) | is receiving the Pre-Employment Card | | |
| **Independent Variables: Sociodemographic Characteristics** | | | | |
| 3 | Gender (D2) | Gender of the Pre-Employment Card recipient | D5 = 1 if male, D5 = 0 if female | k4 |
| 4 | Education Level (X1) | Highest education level attained when the individual received the Pre-Employment Card, using continuous data | 6 = No schooling and completed elementary school, 9 = Junior high school, 12 = Senior high school, 15 = Diploma I/II/III, 16 = Bachelor's degree, 17 = Master's/Doctorate | r6a |
| 5 | Age (X2) | Age when the individual received the Pre-Employment Card, productive age between 25 – 44 years | Ratio, in years | k6 |

Source: Author (2024)

**Research Analysis Method**

The researcher's chosen method to achieve the research goals is binomial logistic regression, also known as binary logistic regression. This statistical approach examines the relationship between a dichotomous response variable and one or more predictor variables, which can be categorical or continuous. Binary logistic regression is suitable here because the study's dependent variable is binary, aiming to predict its relationship with the independent variables using a Bernoulli distribution for each observation (Darwanto et al., 2021).

The binomial logistic regression model can be expressed as follows:

$$g(x) = \ln\left[\frac{\pi(x)}{1 - \pi(x)}\right] = \beta_0 + \beta_1 x_1 + \cdots + \beta_p x_p$$

g(x) is referred to as the logit function of the binary logistic regression model with p predictor variables.

In this study, the dependent variable (Y) has two categories:

$$Y = 1, \text{if working or engaged in income} - \text{generating activities}$$
$$Y = 0, \text{if not working or not engaged in income} - \text{generating activities}$$

From the above categories, the reference category or base category is Y = 1, representing employment. The binomial logistic regression model for this study can be written as follows:

$$P(SPi) = \beta_0 + \beta_1 D_1 + \beta_2 D_2 + \beta_3 X_1 + \beta_4 X_2$$

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p-ISSN: 2962-276X | e-ISSN: 2962-3499

Where:

| | |
|---|---|
| $SP_i$ | = 1, if working |
| | = 0, if not working |
| $\beta_i$ | = Variable constants |
| $D_1$ | = Pre-Employment Card recipient |
| $D_2$ | = Gender |
| $X_1$ | = Education Level |
| $X_2$ | = Age |

The parameter estimation testing is conducted to assess the significant impact of independent variables on the model and to determine the extent of influence each variable exerts on the dependent variable. This testing occurs in two stages: the simultaneous test, typically using Likelihood methods, and the partial test, conducted via the Wald test. In logit regression, coefficients are interpreted using marginal effects, which indicate the change in the dependent variable when a specific independent variable changes, holding other covariates constant. Marginal effects are calculated following logit regression analysis, where for binary variables, they measure discrete changes, and for continuous variables, they measure the instantaneous rate of change. These values typically have a narrow range, close to zero, signifying small interval values. Therefore, the marginal effect value in the conducted estimation represents the partial effect for each independent variable (Stephanie, 2020).

## RESULTS AND DISCUSSIONS

This study aims to determine the impact of the Pre-Employment Card Program on labor absorption post-COVID-19 pandemic. Additionally, it seeks to examine how sociodemographic characteristics (gender, education level, and age) influence labor absorption post-pandemic. This study uses a logistic regression model to answer the research questions and objectives through a quantitative approach utilizing microdata from the February 2022 Sakernas.

The dependent variable in this study is the probability of individuals post-COVID-19 pandemic to be employed (1) or unemployed (0), represented by a dummy variable. The independent variables used in this study comprise four variables: a) Pre-Employment Card status of the individual (dummy), b) gender (dummy), c) education, and d) age of the individual.

The first stage of the statistical analysis in this study involves parameter estimation testing. Parameter estimation testing consists of two stages: simultaneous and partial. The results of the logistic regression coefficients' simultaneous test for the influence of the independent variables on the dependent variable are shown in Table 2. below.

### Table 2. Logistic Regression Output

| Number of obs | LR chi | Prob > chi2 | Pseudo RS |
|---|---|---|---|
| 73.363 | 13009,69 | 0,0000 | 0,1535 |

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p-ISSN: 2962-276X | e-ISSN: 2962-3499

Based on the test results in Table 4.1 above, it is known that the LR Chi-square value > the Chi-square table value and the prob. value < α, which can be interpreted as rejecting $H\_0$. This indicates that, overall, the independent variables statistically significantly influence the dependent variable. Furthermore, the Goodness of Fit test results for the model are shown in Table 3. below.

**Table 3. Goodness of Fit Test Results for Logistic Regression**

| Pearson | | Hosmer–Lemeshow | |
|---|---|---|---|
| Number of observations | 76.363 | Number of observations | 76.363 |
| Number of covariate patterns | 526 | Number of groups | 10 |
| Pearson chi2(520) | 510,25 | Hosmer–Lemeshow chi2(8) | 7,65 |
| Prob > chi2 | 0,612 | Prob > chi2 | 0,468 |

Source: Author, data processed (2024)

The table above shows the results of two goodness of fit tests for the logistic regression model. The Pearson Chi-Square Test results can be interpreted as follows:

The Pearson chi-square statistic of 510.25 with 520 degrees of freedom is not significant at the 0.05 significance level (p-value = 0.612). The p-value is greater than 0.05, indicating no significant difference between the model's predictions and the actual data. This shows that the logistic model has a good fit with the data because the differences between the model's predictions and the actual results are not statistically significant.

The Hosmer-Lemeshow chi-square statistic of 7.65 with 8 degrees of freedom is not significant at the 0.05 significance level (p-value = 0.468). The p-value is greater than 0.05, indicating no significant difference between the model's predictions and the actual data within the groups. This shows that the logistic model has a good fit with the data because the differences between the model's predictions and the actual results within the groups are not statistically significant.

The good results of the Pearson and Hosmer-Lemeshow tests indicate that the logistic model used has a good fit with the data. The p-values greater than 0.05 in both tests suggest no significant differences between the model's predictions and the actual results, meaning the model can describe the relationship between the independent and dependent variables well. The partial estimation results of the logit model are shown in Table 4 below.

**Table 4. Logit Regression Estimation Results (Odds ratio)**

| | Coefficient | Std. err. | z | P>z | [95% conf. interval] | |
|---|---|---|---|---|---|---|
| **Pre-Employment status** | 0,07 | 0,05 | 1,42 | 0,16 | -0,03 | 0,16 |
| **Gender** (male=1) | 2,17 | 0,02 | 95,87 | 0,00 | 2,12 | 2,21 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Education** | 0,02 | 0,00 | 10,27 | 0,00 | 0,02 | 0,03 |
| **Age** | 0,04 | 0,00 | 25,94 | 0,00 | 0,04 | 0,05 |
| **Constant** | -1,31 | 0,07 | -20,11 | 0,00 | -1,44 | -1,18 |

Source: Author, data processed (2024)

Table 4. above shows the estimation results of the logistic regression model in terms of odds ratios. Based on these estimation results, the regression model for the probability of an individual being employed can be written as follows:

$$P(work) = -1,31 + 0,07\,D_1 + 2,17\,D_2 + 0,02\,X_1 + 0,04\,X_2$$

The interpretation of the factors affecting the probability of an individual being employed is as follows:

1. Pre-Employment Status: The coefficient of the Pre-Employment Card status variable is positive, with a significance level (P>z or p-value) of 0.16. This suggests a positive relationship between individuals with a Pre-Employment Card and the probability of being employed, although it is not statistically significant. The odds ratio of 0.07 indicates that having a Pre-Employment Card increases the likelihood of being employed by 0.07 times compared to being unemployed.

2. Gender: The coefficient of the gender variable is positive, with a significance level (P>z or p-value) of 0.00, indicating a positive relationship between being male and the probability of being employed. The odds ratio of 2.17 indicates that males are 2.17 times more likely to be employed than unemployed.

3. Education: The coefficient of the education level variable is positive, with a significance level (P>z or p-value) of 0.00, indicating a positive relationship between education level and the probability of being employed. The odds ratio of 0.02 suggests that higher education levels increase the likelihood of being employed by 0.02 times.

4. Age: The coefficient of the age variable is positive, with a significance level (P>z or p-value) of 0.00, indicating a positive relationship between age and the probability of being employed. The odds ratio of 0.04 suggests that older individuals are 0.04 times more likely to be employed than unemployed.

Table 5. below shows the estimated marginal effects of the logistic regression model in this study.

**Table 5. Estimated Marginal Effects**

| | dy/dx | Std. err. | z | P>z | [ 95% C.I. ] | | X |
|---|---|---|---|---|---|---|---|
| **Pre-Employment status** | 0,01 | 0,01 | 1,45 | 0,15 | 0,00 | 0,02 | 0,04 |
| **Gender** (male=1) | 0,33 | 0,00 | 117,18 | 0,00 | 0,32 | 0,34 | 0,48 |
| **Education** | 0,00 | 0,00 | 10,27 | 0,00 | 0,00 | 0,00 | 9,64 |
| **Age** | 0,01 | 0,00 | 26,01 | 0,00 | 0,01 | 0,01 | 34,91 |

Source: Author, data processed (2024)

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p-ISSN: 2962-276X | e-ISSN: 2962-3499

The interpretation of the variables related to the likelihood of being employed post-COVID-19 pandemic is as follows:

1. Pre-Employment Status: The coefficient (dy/dx) of the Pre-Employment Card status variable is 0.01 with a prob. value $< \alpha$ (0.15 < 0.05), indicating that H_0 is accepted. This suggests that the Pre-Employment Card status does not significantly affect the likelihood of being employed. The coefficient value of 0.01 means that individuals with a Pre-Employment Card are 1 percent more likely to be employed.
2. Gender: The coefficient (dy/dx) of the gender variable is 0.33 with a prob. value $< \alpha$ (0.00 < 0.05), indicating that H_0 is accepted. This suggests that gender significantly affects the likelihood of being employed. The coefficient value of 0.33 means that males are 33 percent more likely to be employed.
3. Education: The coefficient (dy/dx) of the education level variable is 0.00 with a prob. value $< \alpha$ (0.00 < 0.05), indicating that H_0 is accepted. This suggests that education level significantly affects the likelihood of being employed. The coefficient value of 0.00 means that individuals with higher education levels are less than 1 percent more likely to be employed.
4. Age: The coefficient (dy/dx) of the age variable is 0.01 with a prob. value $< \alpha$ (0.00 < 0.05), indicating that H_0 is accepted. This suggests that age significantly affects the likelihood of being employed. The coefficient value of 0.01 means that older individuals are 1 percent more likely to be employed.

This section explains the relationships between the independent variables through the Wald test and the marginal effect estimates. The marginal effect is used after binomial logit regression to measure the influence of each independent variable on changes in the dependent variable categories, assuming other independent variables remain constant.

**Impact of the Pre-Employment Card Program on Individual Employment Status**

The Pre-Employment Card Program was created to support the Indonesian workforce by preparing higher-quality skills tailored to labor market needs (Masriyah et al., 2020). The findings of this study indicate that the Pre-Employment Card Program has not significantly influenced individuals' likelihood of obtaining employment. With a marginal effect value of 0.01 and a significance level exceeding the threshold (0.147 > sig.), the program is deemed to have minimal impact on changing individuals' employment status. This result aligns with the findings of Maulana and Kyswantoro (2022), who revealed that the Pre-Employment Card Program does not significantly affect the unemployment rate in Indonesia. Prasetyo and Rachmawati (2022) also state that the program is still ineffective in increasing labor absorption through skill enhancement in the community.

The Pre-Employment Card, initially intended to create more job opportunities and reduce unemployment, shifted its purpose to serve as an instrument for national economic recovery

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p-ISSN: 2962-276X | e-ISSN: 2962-3499

impacted by the pandemic. Due to the pandemic, waves of layoffs (PHK) were inevitable, and many workers lost their income due to COVID-19 (Dinar, 2022). The government then targeted Pre-Employment Card Program participants for assistance through online practice and training. However, (Aryanisila, 2022) and Hermawan et al. (2021) found that the program's implementation was still relatively ineffective and unevenly distributed.

The urgent need for rapid recovery during the pandemic caused the Pre-Employment Card Program's preparation to appear suboptimal (Solihin et al., 2022). Social restrictions requiring people to isolate themselves led to the program being conducted online without proper socialization or literacy preparation, especially in remote areas with limited digital technology access (Fitri, 2022). Sasmitha (2023) revealed that the program's implementation in Binjai, North Sumatra, was hindered by internet network issues, digital illiteracy, and lack of socialization Hermawan et al. (2021) also noted that the Pre-Employment Card Program was unevenly distributed and did not focus on those significantly affected, such as those who lost their jobs or were laid off.

Buhaerah (n.d.) argues that the Pre-Employment Card's design to increase workforce productivity through vocational training and education did not meet expectations. One primary reason cited is that the program requires a full employment condition to achieve its main goals. According to Minsky (2013), full employment is when everyone who wants and is ready to work at a uniform and decent wage is employed. Minsky (2013) further suggests that programs aimed at enhancing or retraining workers should be a secondary priority after achieving full employment. Without full employment, such programs only train people for jobs that do not exist (Buhaerah, n.d.). In this situation, programs to enhance worker capacity without increasing job supply will not effectively address persistent unemployment.

Considering public participation in registering for and receiving the Pre-Employment Card, the program is deemed successful, with training participation increasing yearly to six million in 2021 (Pre-Employment Report, 2022). Other researchers have also noted how the Pre-Employment Card Program can change individual employment status. Al-Ayyubi et al. (2023) state that the program influences labor absorption, although its impact is mainly on the younger age group (18-24 years) absorbed in the informal sector. Tasmilah (2022) found that the program affected entrepreneurship creation in the service sector but not in other sectors. Raesalat and Alifia (2021) reported that the program had a positive impact, especially for those recently laid off, stimulating them to start new businesses.

Fundamentally, some studies show the Pre-Employment Card Program's favorability towards changing one's employment status is based on acquired skills translating into new jobs, particularly in the informal sector. The increasing number of workers in the informal sector (Figure 5.2) provides concrete evidence of the program's success in creating new jobs. However, this has yet to significantly change employment status in better sectors or jobs, particularly in the formal sector (Al Ayyubi et al., 2023). Buhaerah (n.d.) also argues that enhancing workforce productivity

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p-ISSN: 2962-276X | e-ISSN: 2962-3499

(through training) without achieving full employment cannot be said to meet targets or change the labor market condition. Moreover, the program's implementation is still uneven and lacks focus on the Pre-Employment Card Program's targets (Hermawan et al., 2021; Solihin et al., 2022). Based on these findings, the researcher concludes that there are still many weaknesses in the Pre-Employment Card Program during and post-pandemic, necessitating structured and equitable improvements.

**Impact of Gender on Individual Employment Status**

Males, as one of the sociodemographic characteristics, are more likely to be employed post-pandemic than females. Although the study sample shows a majority of female respondents, this does not represent the employment tendency among females. This statement is based on the estimation results with a positive value of 0.33, indicating that gender exerts the most significant influence compared to other variables. This finding is supported by Friska (2023) and Al-Ayyubi et al. (2023), who also found that males significantly influence the tendency to be employed.

Employment status due to the COVID-19 pandemic did not differ between males and females (Zatzah et al., 2021). Social restrictions and layoffs were policies resulting from the pandemic, considering other factors. However, Friska (2023) mentioned that females are more likely to be unemployed than males. Tasmilah (2022) also revealed that the COVID-19 pandemic led to an increase in the number of females exiting the labor market. According to BPS (2022), females who left the labor market previously worked as unpaid family workers and self-employed individuals. This finding aligns with Tasmilah (2022), stating that females who were self-employed were most affected during the pandemic, making them more likely to lose their jobs than other statuses, resulting in many females leaving the labor market.

Females were in a much more vulnerable position during the COVID-19 pandemic (Saraswati, 2019). This condition is because females were already at a disadvantage in the labor market before the pandemic due to gender inequality (Company et al., 2020). In Indonesia, around 70% of workers in the health, social, MSME, and education sectors are females. Sakernas (2000) showed the unemployment rate for females at the start of the pandemic (2019 to 2020), primarily in the productive age range of 25 to 44 years, at 49.31 percent. The pandemic significantly affected these sectors, causing females to more frequently experience layoffs. Even before the pandemic, females in urban areas showed declining participation in the labor force, especially after marriage and having children (Yulianto et al., 2023).

The effective age of a worker significantly influences female labor productivity. As age increases, female labor productivity declines (Zahara et al., 2018). Physical limitations experienced by the elderly and the responsibility of caring for children also hinder their labor market participation. The pandemic significantly affected older individuals as they are more vulnerable than other age groups. The most vulnerable group is elderly females living in rural areas. This occurs because elderly females tend to live alone, have higher poverty rates, and experience disabilities more frequently than elderly males (Romero et al., 2021).

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p-ISSN: 2962-276X | e-ISSN: 2962-3499

**Impact of Education Level on Individual Employment Status**

When human resource quality improves through knowledge and skills, it can drive increased labor productivity needed by many companies. The longer one pursues education, the more skilled and trained one is considered for various jobs (Saraswati, 2019). With a positive value of 0.0033, the researcher also found consistency in this study, explaining that the higher an individual's education level, the more likely they are to be employed. This finding aligns with Friska (2023), (Gautama, 2021), and Asri (2022), who revealed a significant impact of education level on individual employment status.

Higher education can increase one's knowledge and skills, thereby improving their chances of being absorbed into the labor market (Alam, 2016). Friska (2023) found that individuals with higher education levels tend to have more opportunities to retain their jobs during the pandemic. Higher education is often associated with skills suited for remote work or those less affected by social restrictions. Although the number of respondents with higher education (senior high school and above) is not as many as those with medium or low education (junior high school and below), this proves that workers with higher education levels can still sustain employment (Figure 5.6). On the other hand, individuals with low or medium education levels may face more difficulties returning to the labor market after losing their jobs during the pandemic, as jobs in certain sectors may have significantly reduced (Maulidia Fitri et al., 2023). Workers with lower education levels may be more vulnerable to low-wage jobs, job insecurity, and poor working conditions, affecting their employment status post-pandemic.

Individuals with higher education levels tend to have more access to retraining or additional education to enhance their skills and adapt to changes in labor demand post-pandemic (Rejeki and Yuningsih, 2021). This can increase their chances of finding new jobs or improving their employment status. Although the Pre-Employment Card Program did not significantly impact this study, other researchers, Al-Ayyubi et al. (2023), revealed how training within the Pre-Employment Card Program can significantly impact young workers absorbed into the informal sector. Rejeki and Yuningsih (2021) also argue in their study on the Latsar CPNS case, stating that there are differences in competencies during the pandemic.

The higher education system in Indonesia faces challenges in effectively absorbing its graduates into the labor market. Although there has been a significant increase in labor market opportunities for higher education graduates in recent years, concerns remain about the mismatch between the skills provided by the education sector and labor market demands. Moreover, labor market absorption for school graduates and higher education graduates in Indonesia is a significant challenge. Although the demand for the best graduates will remain high, improving education quality and ensuring that graduates are equipped with relevant knowledge and skills are crucial for better outcomes in the labor market.

**Impact of Age on Individual Employment Status**

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p-ISSN: 2962-276X | e-ISSN: 2962-3499

With a positive coefficient value of 0.006, the influence of age on employment status has the lowest contribution compared to other variables. This also explains that as age increases, the likelihood of being employed also increases. Several researchers have findings consistent with this, including Friska (2023).

Friska (2023) found that younger individuals are more likely to be unemployed due to the pandemic than older individuals. Younger workers tend to have limited work experience and skills that may not be fully developed compared to older workers (Harjuna, 2017). This makes them more vulnerable to layoffs or difficulties finding new jobs when the labor market becomes more competitive, especially post-pandemic.

In terms of age, younger workers were more affected by layoffs because most workers are in this age group. To minimize the impact of losses due to COVID-19, companies tend to retain older and more experienced workers. Many jobs held by younger individuals are concentrated in sectors severely affected during the pandemic, such as tourism, hospitality, retail, and services (Dhar, 2020). Travel restrictions, business closures, and reduced demand led many young workers to lose their jobs or experience reduced working hours.

According to the life cycle theory, which explains the labor pattern changes as individuals age, older workers have an advantage in terms of resilience to economic crises, including work experience, established skills, and stronger professional networks, which younger workers do not have (Friska, 2023). Additionally, despite career changes, access to broader networks and higher experience levels makes finding new jobs easier.

## CONCLUSIONS

The study investigates the impact of the Pre-Employment Card Program and sociodemographic factors on post-pandemic labor absorption using data from the February 2022 National Labor Force Survey (Sakernas) in Indonesia, comprising 76,363 respondents. It finds that the program has limited effectiveness in facilitating employment for individuals aged 25 to 44, largely directing labor towards the less stable informal sector. This mismatch between increased worker capacity and stagnant job supply fails to alleviate high unemployment rates. Socioeconomically, women face heightened vulnerability due to their concentration in the informal sector, exacerbating their unemployment risks. Higher-educated individuals demonstrate better resilience and adaptability to labor market changes, whereas lower-educated individuals struggle more with job reentry and stability. The study recommends recalibrating the Pre-Employment Card Program's target audience to enhance outcomes, focusing on formal sector opportunities. Addressing gender disparities and supporting educational parity are critical for fostering inclusive economic recovery and sustainable employment strategies in Indonesia.

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