
Research Article

Probability to Apply for The Pre-Employment Card Program During the Covid-19 Pandemic in NTB Province

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ABSTRACT

The pre-employment card program is initiated to deal with the impact of the pandemic on the labor force. We conducted this study to see what factors have the probability of influencing a person's decision to apply for the pre-employment card program in NTB Province during the pandemic. The analytical method used is binary logistic regression. The August 2020 National Labor Force Survey data from the Statistics of NTB Province was processed to answer the purpose of the analysis. The result shows that four factors in the model influence the labor force in NTB Province's decision to sign up for the pre-employment card program. Those factors are graduating from school in the last year, previous work experience, not working due to covid, and the length of looking for a job.

Keywords: *Binary Logistic Regression, Pre-Employment Card, Unemployment*

Background

Classical linear regression models generally One of the challenges in labor policy is to create jobs and reduce unemployment. The decline in the unemployment rate will affect the decrease in poverty (Bintang & Woyanti, 2018), (Meimela, 2020). So it is only natural that poverty reduction policies are generally combined with job creation policies to reduce unemployment.

The emergence of a pandemic at the end of the first quarter of 2020 became a stumbling block in the unemployment reduction scheme set by the government. The pre-employment card, originally intended to create more jobs and reduce unemployment, has changed its designation to become one of the instruments

for the recovery of the national economy affected by the pandemic. As a result of the pandemic, the wave of layoffs has been unstoppable, and many workers have lost their income due to covid-19. The government then took a targeting maneuver on the pre-employment assistance participants.

The government then changed the target participants of assistance on the pre-employment card program to overcome the impact of the pandemic for those who suffer from layoffs and small-micro enterprise actors who are having business difficulties (Barany et al., 2020), (Mardiyah & Nurwati, 2020), (Kong & Prinz, 2020), Petrosky-Nadeau and Valetta (2020) have studied the magnitude of the impact of the pandemic on unemployment and the critical

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role of government assistance in dealing with it. Specifically, Leon A. Abdillah (2020) and Consuello (2020) discussed the implementation of pre-employment cards in suppressing the wave of unemployment due to the covid-19 pandemic. Therefore, indicators regarding pre-employment cards are crucial as a monitoring and evaluation tool for this policy in Indonesia. The government then took a targeting maneuver on the pre-employment assistance participants.

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We have not found research specifically discussing the factors that affect a person's possibility of applying for a pre-employment card during the pandemic, especially in the NTB Province. Therefore, this study aims to observe the factors that can influence a person's decision to enroll in the Pre-Employment Card program during the pandemic in NTB Province. Binary logistic regression will be used in the modeling because the response variable (y) used in the study is binary. For example, Suhendra, Ispriyanti and Sudarno (2020) used a binary logistic regression model to see the factors that influence the classification of the giving of a prosperous family card. Inputs for the government and other policymakers are

the expected result from this research as material for evaluating the implementation of the pre-employment card policy.

Methods

The Pre-Employment Card Program

The pre-employment card is a work competency development program and entrepreneurship based on the spirit of cooperation (Komite Cipta Kerja, 2020). Those who do not have a job, those who suffer from layoffs, and small-micro enterprise actors are the targets for the Pre-employment cards program to improve their competence and skills. Pre-employment cardholders are entitled to job competency training and educations, and also incentives. The total benefits of the pre-employment program package are up to IDR 3,550,000- (Kemenaker, n.d.)

Initially, this program was a campaign promise by President Joko Widodo in the 2019 Presidential Election. The pre-employment card program was accelerated into April 2020 to overcome the impact of the covid-19 pandemic, specifically at reducing unemployment. The government Modified the pre-employment card into a form of social assistance to respond to the pandemic situation (Royani Hamzah & Khusnia, 2021). The digital platforms are partnered with to provide online training in order to improve the competence of cardholders. As of April 27, 2020, alone, more than 8 million people have applied for the pre-employment program (Wijayanti & Humardhiana, 2020).

The main requirements for receiving a pre-employment card are Indonesian citizens aged 15 years and over. Applicants must also be job seekers or prospective entrepreneurs. Pre-employment cardholders will be given certified training and receive incentives to get a job within a maximum period of 12 months after the training. There is an additional incentive for wages during training for a maximum of up to three months after graduating from training (Rawie & Samputra, 2020).

Impact of Covid-19 Pandemic on The Labor Force in NTB Province

Social restrictions to contain the spread of the covid-19 virus have narrowed the space for

business actors to move. As a result, many economic actors were forced to go out of business and lay off their employees. The pandemic has also affected other working-age categories besides unemployment in the NTB Province. The labor force affected by the pandemic is grouped into four conditions, namely a) Unemployment, b) Non Workforce who have stopped working in February-August 2020, c) Those who have jobs but temporarily are not working, and d) Those who work but have to experience reduced working hours. Conditions c) and d) are categorized as impacts on residents who are currently still working, then conditions a) and

b) are categorized as impacts on residents who stop working (BPS Provinsi NTB, 2020).

Based on the Official Statistics News released in November 2020, as many as 455.56 thousand people of the working-age population in the NTB Province were affected by the pandemic, where the proportion of the male population is more than the female population. The type of impact of the Covid-19 pandemic felt by workers in NTB is most on the experiencing a reduction in working hours. Table 1 describe the impact of covid-19 pandemic in NTB Province.

Table 1. Impact of Covid-19 on the Labor Force by Gender in NTB Province, August 2020

Details	Gender (000 people)		Total (000 people)
	Male	Female	
Unemployment due to covid-19 pandemic	16,73	11,66	28,39
Non Workforce due to covid-19 pandemic	3,88	8,78	12,66
Temporary Not Working due to covid-19 pandemic	19,53	16,13	35,66
Those Who Work with reduced working hours due to covid-19 pandemic	220,82	158,03	378,85
Total	260,96	194,60	455,56

Source: Statistics of NTB Province NTB, 2020

Binary Logistic Regression

According to Hosmer and Lemeshow (2013), logistic regression models commonly explain the relationship between several independent variables and response variables with more than two categories. For example, in binary logistic regression, the response variable (y) consists of two categories. Therefore, the logistic regression model is as follows:

$$\pi(x_i) = \frac{\exp(\beta_0 + \beta_1 x_{1i} + \dots + \beta_p x_{pi})}{1 + \exp(\beta_0 + \beta_1 x_{1i} + \dots + \beta_p x_{pi})}$$

Then the transformation in logit form becomes:

$$g(x_i) = \ln \frac{\pi(x_i)}{1 - \pi(x_i)} = \beta_0 + \beta_1 x_{1i} + \dots + \beta_p x_{pi}$$

Where b_0, b_1, \dots, b_p is a regression coefficient vector. The regression coefficient in the logistic regression model is interpreted as the probability of occurrence on the variable x to affect y (Phillips et al., 2015).

Research Method

It is necessary to carry out a goodness of fit test to observe if the model is suitable for explaining the response variable. In other words, there was a difference between predictions and observations (Hosmer & Lemeshow, 2013). For this reason, the hypotheses to be tested are:

H₀: Model fits

H₁: Model is not fit

Hence, if the model is fit, we need a decision to fail to reject H₀, which means that the model is appropriate (Tampil et al., 2017).

Descriptive and inferential analysis is used in this study to achieve the research objectives. Using the descriptive analysis is a way to explore information related to the labor force. To perform the inferential analysis, we utilized binary logistic regression. In this research, respondents who answered that they applied for the pre-employment card program were categorized as successful (y=1), while those who did not apply were categorized as failed (y=0). The study uses Microsoft Excel and SPSS version 25 applications for data processing.

As described from the www.prakerja.go.id webpage, the pre-employment card program is intended for job seekers, workers who have been laid off, workers who have been temporarily laid off, including micro and small enterprise entrepreneurs. The main priority for pre-employment recipients is those affected by the

pandemic. Handayani and Rachman (2020) researched the motives in the search for pre-employment cards. Based on this information, this research identifies four variables to observe the possibility to influence a person's decision in applying for the pre-employment card program during the pandemic as follows:

Table 2. Variable in The Research

Variable	Category
Apply for pre-employment card (Y)	1 = Yes 0 = No
<i>graduating from school in the last year</i> (X1)	1 = Yes 0 = No
<i>previous work experience</i> (X2)	1 = Yes 0 = No
<i>not working due to covid</i> (X3)	1 = Yes 0 = No
<i>the length of looking for a job</i> (X4)	1 = ≤ 1 years 2 = 2 - 4 years 3 = ≥ 5 years

The data processed in the study came from the National Labor Force Survey (Sakernas). The survey is an annual survey, and for the research, we use the data from the survey in August 2020. The survey comprises questions regarding the pre-employment card program application and the impact of the covid-19 pandemic. Because of that reason, this research decided to use this data. The scope of the research only covers the province of NTB, and the data source is the BPS of NTB Province.

Result and Discussion

The working-age population in NTB Province in August 2020 reached 3.82 million people. Of the workforce, 2.69 million people are categorized as the labor force, and the rest are defined as not in the labor force. The unemployed and the working population are part of the labor force group. The NTB Province promotes tourism to drive the economy. The outbreak of the pandemic has hit this sector. Social restrictions lead to no tourists in many tourism sites. Visitors drop either because of the rules that prohibit tourism site operations or because potential tourists choose to stay at home. As a result, many tourism industry enterprises have gone out of business, and even if they can survive,

they choose the option to lay off some of their employees. Some of the layoffs are permanent, while few of them are temporary (Petrosky-Nadeau & Valetta, 2020), (Qiu et al., 2020), (Riadil, 2020).

The government addresses the pre-employment card program as a form of social assistance to workers and Small-Micro Enterprises affected by the covid-19 pandemic. Of the 113.43 thousand unemployed in the NTB province in August 2020, 25 percent were unemployed due to the covid-19 pandemic. However, it turns out that the presence of the pre-employment card is only recognized by 3.87 percent of the labor force, whether they are affected by the pandemic or not.

As illustrated in table 3, the majority of applicants for pre-employment cards are male. Both male and female participants, most of them have the educational background from high school, vocational or bachelor degree and above. Female applicants for the pre-employment card with bachelor's degree and above are more than males.

Only a small number of applicants for pre-employment cards have middle-high school education and below, both male and female.

Table 3. Unemployment of NTB Province by Status of Applying for Pre-Employment Card Program Versus Education Degree, August 2020 (Percent)

Education Degree	Apply for Pre-Employment Card			
	No		Yes	
	Male	Female	Male	Female
Never graduated/ Not finished Elementary School	3,81	2,40	0,32	0,77
Elementary School or equivalent	7,69	8,25	4,18	3,26
Middle-High School or Equivalent	14,34	16,27	10,47	4,29
High School or Equivalent	36,20	35,65	36,55	36,54
Vocational School	11,66	7,93	22,62	13,99
Diplomas	5,38	7,66	4,54	9,94
Bachelor, Grad School, Post Grad	20,93	21,84	21,33	31,21
Total	100,00	100,00	100,00	100,00

Source: BPS of NTB Province (Processed Data)

Figure 1 reveals the reasons why the labor force in NTB Province enrolls in the pre-employment card program. Most admitted that they applied to improve their work skills. It turned out

that more than 21 percent of participants were interested in applying because of the incentives given by joining this program.

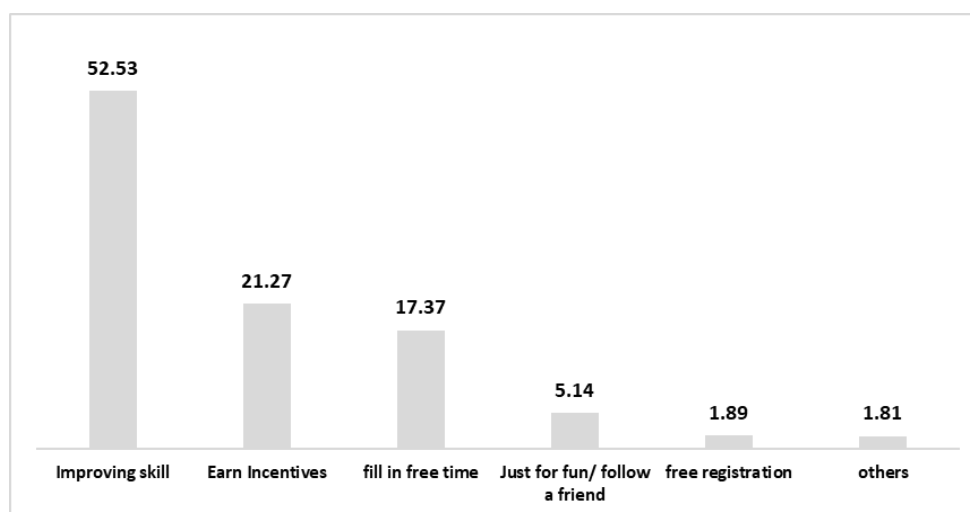


Figure 1. Reason Applying for The Pre Employment Card Program
Source: BPS of NTB Province (Processed Data)

Several people apply simply because the registration is free. The government is hoping that the implementation of the pre-employment card can help create new jobs and generate business entrepreneurs through the education and training provided. Therefore, whatever the reason is, all hope that it will reduce unemployment and help to resolve the impact of the covid-19 pandemic.

Dealing with the pandemic, it turns out that pre-employment registrants in NTB Province are more interested in accepting direct cash assistance. As revealed in Figure 2, more than 27 percent of pre-employment card program applicants expect unconditional assistance from the government.

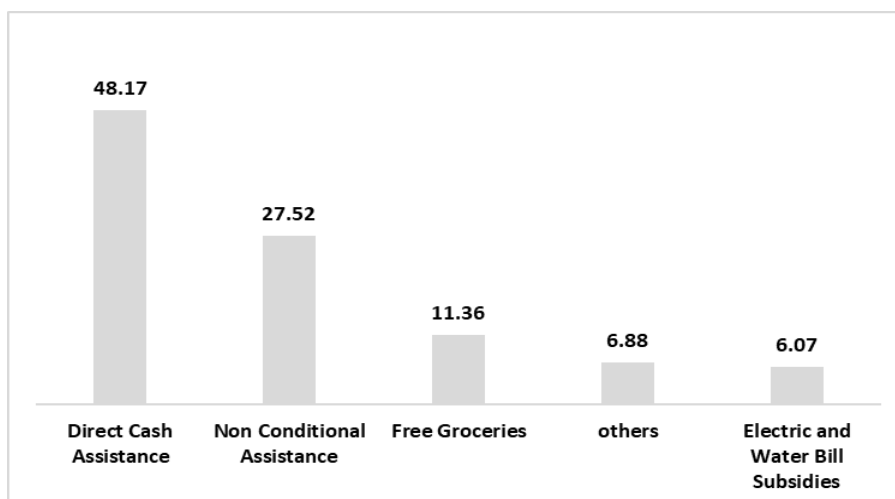


Figure 2. Types of Social Assistance Wanted by The Participants
Source: BPS of NTB Province (Processed Data)

The form of education and training provided in the pre-employment card program seems less desirable to the pre-employment applicants in NTB.

Based on the identification described earlier, the next step is to analyze the probabilities for the labor force in NTB Province to apply for a pre-employment card program. The analysis of binary logistic regression use the SPSS 21 software.

Goodness of Fit Test

We carried out the Hosmer and Lemeshow goodness of fit tests to answer the hypotheses. The following table shows the results.

Table 3. Hosmer and Lemeshow Test

Chi Square	df	Sig
5,986	1	0,014

Source: Data Processing

As revealed in table 3, the significance value of 0.014 is more than $\alpha = 1\%$; therefore, we fail to reject H0. This decision is the desired one; thus, the model is declared fit to explain the probability of applying for a pre-employment card.

Overall Test

The analysis conducted the Omnibus Overall test to see the effect of the overall predictor variable on the response variable. The results of

data processing shown in table 4 explain that the p-value is smaller than $\alpha = 1\%$, $\alpha = 5\%$ and even at $\alpha = 10\%$.

Table 4. Omnibus Test of Model

Step 1	Chi-Square	df	Sig
Step	8120,784	4	0,000
Block	8120,784	4	0,000
Model	8120,784	4	0,000

Source: Data Processing

The results described in table 4 make the decision taken is to reject H0. Therefore, we concluded that at least one x variable affects the decision to apply for a pre-employment card program (y). With the significance of the Omnibus Test, the model can be used to analyze the response variables.

Partial Test

Conducting this test is a step to observe which predictor variables affect the response variable. The partial test results shown in table 5 reveal that each predictor variable has a p-value of 0.000, which is smaller than $\alpha = 1\%$, 5% , and even 10% . Therefore, we can conclude that all the factors identified earlier are significant and have the probability to affect the decision to apply for the pre-employment card program. Those factors are graduating from school in the last year (X1), previous work experience (X2), not working due to covid (X3), and length

of looking for a a job (X4). All positive Coefficient B indicates the direction of the effect of the variable x on y.

Thus, the binary logistic regression equation is:

$$\ln\left(\frac{pi}{1 - pi}\right) = -4,321 + 0,77X1_1 + 0,23X2_1 + 0,76X3_1 + 1,82X4$$

Although all predictor variables are significant, there is an indication that there are still many other factors that need to be discovered in constructing the response variable, which is

the decision to apply for a pre-employment card. The Nagelkerke R Square value reflects this indication because the value is only 1,6 percent.

Table 5. Partial Test

Variable	B	S.E	Wald	df	Sig.	Exp(B)
<i>graduating from school in the last year (X1)</i>	0,772	0,011	4578,530	1	0,000	2,165
<i>previous work experience (X2)</i>	0,229	0,007	1649,923	1	0,000	1,349
<i>not working due to covid (X3)</i>	0,756	0,026	865,788	1	0,000	2,129
<i>the length of looking for a job (X4)</i>	1,820	0,031	3374,392	1	0,000	6,172
Constant	-4,321	0,032	17727,267	1	0,000	0,013

Source: Data Processing

The interpretation of the odds ratio value of each X variable indicated by exp (B) illustrates the probability of these variables influencing the decision of the labor force in NTB Province to apply for a pre-employment card program.

The probability of the labor force in NTB Province who graduated from education last year was 2,165 times greater to apply for a pre-employment card than those who graduated later than the last year. Those who graduated from education in the past year are job candidates who tend to be inexperienced. As a result, when competing with other experienced job applicants, they will be eliminated. A pretty high odds ratio illustrates that those fresh graduates highly appreciate the presence of a pre-employment card.

The probability for the labor force in NTB Province who has previous work experience to apply for a pre-employment card is 1,349 times greater than those who have no experience. These results indicate that even though they already have previous work experience, registering for a pre-employment card is considered a solution to get a more decent job. Through this pre-employment card program, those who already have work experience will have more skills and knowledge to improve their qualifications to compete in job markets.

The labor force who are not working because of the covid-19 pandemic has a 2,129 times greater probability of applying for a pre-employment card than those who are not working for other reasons. This study gives the signal that the change in the allotment of the pre-employment card program to address employment problems due to the pandemic is suitable for the situation. The presence of the pre-employment card program has a tremendous opportunity to be taken by those workers who involuntarily lose their jobs due to the pandemic.

The longer someone from the labor force struggles to find jobs, illustrates that their qualifications are still lacking so that their skill is not qualified to compete in the job market. The study results, where the odds value is way more than one, indicate that the longer they seek a job, the greater their chances of applying for pre-employment card.

Conclusions

The probability for the labor force in NTB Province who has previous work experience to apply for a pre-employment card is 1,349 times greater than those who have no experience. These results indicate that even though they already have previous work experience, registering for a pre-employment card is considered a

solution to get a more decent job. Through this pre-employment card program, those who already have work experience will have more skills and knowledge to improve their qualifications to compete in job markets.

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References

- Barany, L. J., Simanjuntak, I., Widia, D. A., & Damuri, Y. R. (2020). Bantuan Sosial Ekonomi di Tengah Pandemi COVID-19: Sudahkah Menjaring Sesuai Sasaran? *Centre for Strategic and International Studies*, April, 1–11. <https://www.csis.or.id/publications/bantuan-sosial-ekonomi-di-tengah-pandemi-covid-19-sudahkah-menjaring-sesuai-sasaran>
- Bintang, A. B. M., & Woyanti, N. (2018). Pengaruh PDRB, Pendidikan, Kesehatan, Dan Pengangguran Terhadap Tingkat Kemiskinan Di Jawa Tengah (2011-2015). *Media Ekonomi Dan Manajemen*, 33(1), 20–28. <https://doi.org/10.24856/mem.v33i1.563>
- BPS Provinsi NTB. (2020). Keadaan Ketenagakerjaan Provinsi NTB Agustus 2020. *Berita Resmi Statistik*, 1–14.
- Consuello, Y. (2020). Analisis Efektifitas Kartu Pra-kerja di Tengah Pandemi Covid-19. *Buletin Hukum Dan Keadilan*, 4(1), 93–100. <http://journal.uinjkt.ac.id/index.php/adalah/article/view/15479>
- Handayani, A. D., & Rachman, A. (2020). Dampak Pandemi COVID-19 Terhadap Motif dan Tren Penelusuran Informasi Kartu Prakerja di Indonesia. *Empower: Jurnal Pengembangan Masyarakat Islam*, 5(2), 111. <https://doi.org/10.24235/empower.v5i2.7187>
- Hosmer, D. W., & Lemeshow, S. (2013). *Applied Logistic Regression*. John Wiley and Sons Inc.
- KCK. (2020). <https://www.prakerja.go.id>. In *Komite Cipta Kerja*.
- Kemnaker. (2020). <https://bantuan.kemnaker.go.id/support/solutions/articles/43000568759-apa-manfaat-kartu-prakerja->
- Kong, E., & Prinz, D. (2020). The Impact of Shutdown Policies on Unemployment During Pandemic. *Covid Economics*, 1(6), 24.
- Leon A. Abdillah. (2020). Kartu Prakerja Bantuan Pemerintah di Masa Pandemi Global COVID-19. *Kementerian Koordinator Bidang Perekonomian Republik Indonesia*.
- Mardiyah, R. A., & Nurwati, R. N. (2020). *Dampak Pandemi Covid-19 Terhadap Peningkatan Angka Pengangguran di Indonesia*.
- Meimela, A. (2020). Model Hubungan Jumlah Pengangguran Dan Indeks Kedalaman Kemiskinan Di Pulau Sumatera Tahun 2019 Menggunakan Regresi Nonparametrik. *Jiep*, 20(2).
- Petrosky-Nadeau, N., & Valetta, R. G. (2020). Unemployment Paths in Pandemic Economy. *IZA Institute of Labor Economics*, 13294.
- Phillips, J., Cripps, E., Lau, J. W., & Hodkiewicz, M. R. (2015). Classifying machinery condition using oil samples and binary logistic regression. *Mechanical Systems and Signal Processing*, 60, 316–325. <https://doi.org/10.1016/j.ymssp.2014.12.020>
- Qiu, R. T. R., Park, J., Li, S. N., & Song, H. (2020). Social costs of tourism during the COVID-19 pandemic. *Annals of Tourism Research*, 84, 102994. <https://doi.org/10.1016/j.annals.2020.102994>
- Rawie, Y., & Samputra, P. L. (2020). Analisis Cost and Effectivity Program Kartu Prakerja di Indonesia. *Jurnal Manajemen Dan Kebijakan Publik*, 5(2), 118–139. https://journal.uny.ac.id/files/journals/22/article_s/32430/submission/review/32430-85288-1-RV.pdf
- Riadil, I. G. (2020). Tourism Industry Crisis and its Impacts: Investigating the Indonesian Tourism Employees Perspectives' in the Pandemic of COVID-19. *Jurnal Kepariwisata: Destinasi, Hospitalitas Dan Perjalanan*, 4(2), 98–108. <https://doi.org/10.34013/jk.v4i2.54>

- Royani Hamzah, I., & Khusnia, S. (2021). Kartu Prakerja di Tengah Pandemi Covid-19 dalam Perspektif Maqashid Syariah. *Jurnal Sosial Teknologi*, 1(1), 19–25. <https://doi.org/10.36418/sostech.v1i1.3>
- Suhendra, M. A., Ispriyanti, D., & Sudarno, S. (2020). Ketepatan Klasifikasi Pemberian Kartu Keluarga Sejahtera Di Kota Semarang Menggunakan Metode Regresi Logistik Biner Dan Metode Chaid. *Jurnal Gaussian*, 9(1), 64–74. <https://doi.org/10.14710/j.gauss.v9i1.27524>
- Tampil, Y., Komaliq, H., & Langi, Y. (2017). Analisis Regresi Logistik Untuk Menentukan Faktor-Faktor Yang Mempengaruhi Indeks Prestasi Kumulatif (IPK) Mahasiswa FMIPA Universitas Sam Ratulangi Manado. *D’CARTESIAN*, 6(2), 56. <https://doi.org/10.35799/dc.6.2.2017.17023>
- Wijayanti, R. I., & Humardhiana, A. (2020). Optimalisasi Program Kartu Prakerja Dengan Pelatihan Branding Strategy. *Dimasejati: Jurnal Pengabdian Kepada Masyarakat*, 2(1), 109. <https://doi.org/10.24235/dimasejati.v2i1.6645>