



# The Role of E-Commerce on Entrepreneurial Welfare in Indonesia During the Covid-19 Pandemic

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**Abstract.** This study aims to determine the role of the use of e-commerce on the welfare of entrepreneurs in Indonesia during the Covid-19 pandemic. Based on the August 2021 Sakernas data sourced from BPS, the estimation results using binomial logistic regression show that e-commerce has an important role in increasing the welfare of entrepreneurs in Indonesia during the Covid-19 pandemic. The use of e-commerce was able to increase the income of entrepreneurs in Indonesia. Entrepreneurial activities using e-commerce are quite promising in the midst of limited business fields and post-pandemic economic recovery conditions in Indonesia, so the government needs to provide economic support and training to develop digital entrepreneurship activities in the labor force in Indonesia.

## 1. Introduction

Unemployment is still one of the problems in economic development in Indonesia. The Covid-19 pandemic in 2020 caused an economic contraction and had an impact on labor conditions in Indonesia. The impact of the pandemic has caused an increase in unemployment rates in Indonesia. Based on Sakernas data from BPS, unemployment rates in Indonesia has increased from 5.23 percent in 2019 to 7.07 percent in 2020.

Economic conditions in Indonesia are gradually recovered after the Covid-19 pandemic, so that the unemployment rate in Indonesia has decreased to 6.49 percent in 2021 (Sakernas, BPS 2021). However, unemployment rate conditions in Indonesia have still not returned to pre-pandemic conditions. Therefore, the employment problem is still a concern for the Indonesian government, so a solution is needed to reduce the unemployment rate. Apart from that, the problem of unemployment is still faced by the limited job opportunities available (Mulyadi, 2016).

In the midst of limited job opportunities, the profession as an entrepreneur is one way to create jobs (Kantis, Ishida and Komori, 2002; Niode, 2007; Mirna Noventri *et al.*, 2022). Entrepreneurship can reduce unemployment rates, because individuals are able to create their own jobs, and can even create jobs for other people. In addition, becoming an entrepreneur can increase individual income. Around 25 percent of all digital traders in Indonesia started online businesses during the Covid-19 pandemic (World Bank, 2021b). The economic crisis due to the Covid-19 pandemic and the Large-Scale Social Restrictions (LSSR) policy has resulted in people choosing to become digital entrepreneurs by utilizing e-commerce.



As technology continues to develop, e-commerce can expand business networks and make entrepreneurship easier. E-commerce, such as websites, social media and marketplaces, is a link between sellers and buyers, making it easier to carry out transactions without distance and time limitations.

During the pandemic, e-commerce was an important way for Indonesian entrepreneurs to survive the economic downturn (World Bank, 2021b). Therefore, the use of e-commerce in entrepreneurship is expected to be able to increase and strengthen economic recovery in Indonesia. So, it is necessary to conduct a study regarding the role of e-commerce on entrepreneurial welfare in Indonesia.

Studies in various countries have also shown that the use of the internet in business, such as e-commerce, can increase entrepreneurial income (Hashim, Amir and Razak, 2011; Gustina, Utami and Wicaksono, 2020; Zhou, Cui and Zhang, 2020; Falentina *et al.*, 2021; Ratnasari, 2021). However, there have been no studies that have examined the use of e-commerce on increasing entrepreneurial income during the Covid-19 pandemic in Indonesia. So researchers are interested in studying the role of the use of e-commerce on the welfare (increasing income) of entrepreneurs in Indonesia during the Covid-19 pandemic.

Therefore, the question of this study is "What is the role of the use of e-commerce on the welfare (increasing income) of entrepreneurs in Indonesia during the Covid-19 pandemic?". This study aims to examine the role of the use of e-commerce on entrepreneurial welfare (increased income) in Indonesia during the Covid-19 pandemic. It is hoped that the results of this study will provide information on the importance of using e-commerce for the workforce in entrepreneurship, as well as being useful for the Government and stakeholders in making policies related to employment and business digitalization.

## 2. Literature Review

E-commerce or electronic commerce is an activity of buying and selling goods and services specifically designed for the purpose of receiving or placing orders made using electronic media or the internet (OECD, 2020). Ordering goods and services through e-commerce by online activity, but payment and delivery of goods and services are not always by online activity. In its development, e-commerce requires a digital platform as a means of transaction, in order to maintain the security of both sides (producers and consumers). Although consumers also often connect with producers directly without any digital platform intervention. According to the OECD (2020), a digital platform is an online entity using internet access that provides digital services to facilitate relationships between two or more different but interdependent sets of users (both companies or individuals). Digital platforms can be in the form of websites, social media applications, or marketplaces.

Changes in digital technology in work, especially in the use of the internet, can affect income. Advances in digital technology have an impact on the labor market because they influence the income structure (Goldin and Katz, 1996). Differences skills using technology can increase the income gap between educated and less educated workers (Mincer, 2003). Digital skills are an important investment in human capital because they can support modern jobs (European Commission, 2022). As dependence on the internet and digital technology increases, the workforce needs to master strong digital skills, in order to encourage innovation and remain competitive at work (European Commission, 2022).

During the Covid-19 pandemic, the use of the internet can play a role in increasing income, one of which is by doing business online. Research Zhou *et al.* (2020) found that the internet increased the income of rural residents in China. Entrepreneurs (non-agricultural workers) in rural areas influence the mechanism of using the internet and increasing income through online promotional effects. In addition, research by Gustina *et al.* (2020) using IFLS-5 data for 2014 also stated that entrepreneurs in Indonesia who use the internet earn higher profits compared to entrepreneurs who do not use the internet. Likewise, research of Ratnasari (2021) using Sakernas 2019-2020 data found that internet use increases the income of informal sector entrepreneurs. The internet can increase sales by reaching consumers more widely.

The study from Hashim *et al.* (2011) on female entrepreneurs in Malaysia also shows that the internet and computer skills can increase sales. Increasing skills in mastering computers and the internet provides entrepreneurs with extensive opportunities to sell online. The study from Falentina *et al.* (2021) stated

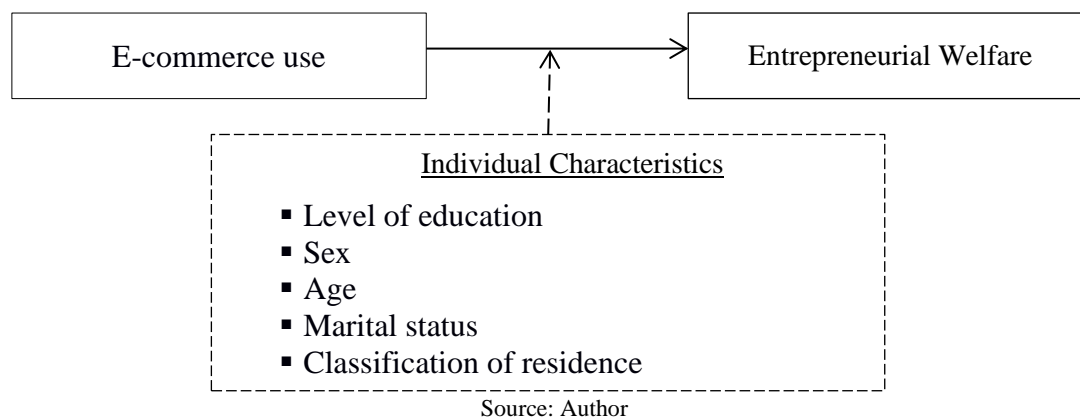


that small and medium entrepreneurs in Yogyakarta who use the internet are able to increase their productivity.

### 3. Research Methods

This study uses cross section data from the National Labor Force Survey (Sakernas) in August 2021. Sakernas is a special survey from the Statistics Indonesia (BPS) which aims to collect employment data in Indonesia. This study limits the unit of analysis to the workforce working with entrepreneurial status (self-employed, entrepreneurs assisted by permanent/paid workers, and entrepreneurs assisted by non-permanent/unpaid workers) in Indonesia. The number of research units was 195,419 sample respondents.

This study uses inferential analysis supported by descriptive analysis. Inferential analysis is used to discuss the role of e-commerce on entrepreneurial welfare as measured by increasing entrepreneurial income. Meanwhile, descriptive analysis is used to support inferential analysis. In addition, this study also controlled for individual characteristics (education, sex, age, marital status and residence classification). Figure 1 is the analytical framework for this research. Figure 1 explains that the use of e-commerce is thought to influence entrepreneurial welfare by controlling individual characteristics in the form of education level, sex, age, marital status and residence classification.



**Figure 1.** Analysis Framework

The operational definition of variables in this research refers to the concepts and definitions used by the Statistics Indonesia (BPS, 2020) in collecting employment data. The unit of analysis in this research is the workforce working with entrepreneurial status (self-employed entrepreneurs, self-employed entrepreneurs assisted by permanent/paid workers, and entrepreneurs assisted by non-permanent/unpaid workers) in Indonesia.

**Table 1.** Operational Definition of Variables

Variable Name	Definition of Variable	Categorical
<b>Dependent Variable</b>		
Welfare ( <i>Welfare</i> )	Increase in entrepreneurial income in August 2021 compared to February 2020	0 = No* 1 = Yes
<b>Independent Variables</b>		
E-commerce ( <i>Ecom</i> )	Use of social media, websites and marketplaces in entrepreneurial activities	0 = No* 1 = Yes
<b>Control Variables</b>		
Education level ( <i>Educ</i> )	The highest education level is completed at the formal education level	<i>Educ0</i> ; 0 = No school or not completed in primary school *



Variable Name	Definition of Variable	Categorical
		<i>Educ1</i> ; 1 = Completed primary school or secondary school
		<i>Educ2</i> ; 2 = Completed tertiary school or vocational school
		<i>Educ3</i> ; 3 = Completed college
Sex (Male)	Gender based on respondent's answer	0 = Female* 1 = Male
Age (Age)	Age at last birthday	15 years and over
Marital Status (Married)	Marital status	0 = Others* 1 = Married
Residential classification (Urban)	Residential classification	0 = Rural* 1 = Urban

\*category references

The method used in this study is descriptive analysis method and inferential analysis. The purpose of descriptive analysis in this study is to describe of entrepreneurship and to support the results of inferential analysis. Meanwhile, inferential analysis aims to answer the objectives of this study, and explain the interrelationships between variables using a mathematical model. The inferential analysis technique used in this study is binomial logistic regression analysis.

The binomial logistic regression model used in this research is as follows:

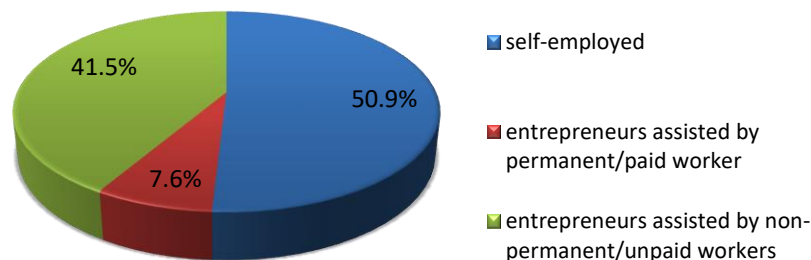
$$\ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 Ecom + \beta_2 Educ1 + \beta_3 Educ2 + \beta_4 Educ3 + \beta_5 Male + \beta_6 Age + \beta_7 Married + \beta_8 Urban \quad (1)$$

P-value = prob (Y=1) = probability of welfare.

#### 4. Results and Discussion

##### 4.1. Analysis Unit Overview

The unit of analysis in this research is entrepreneurs or the workforce who work with status: self-employed, entrepreneurs assisted by permanent/paid workers, and entrepreneurs assisted by non-permanent/unpaid workers in Indonesia. The majority of analysis units have self-employed status (50.9 percent), the others are entrepreneurs assisted by non-permanent/unpaid workers (41.5 percent) and entrepreneurs assisted by permanent and paid workers (7.6 percent) (Figure 2).



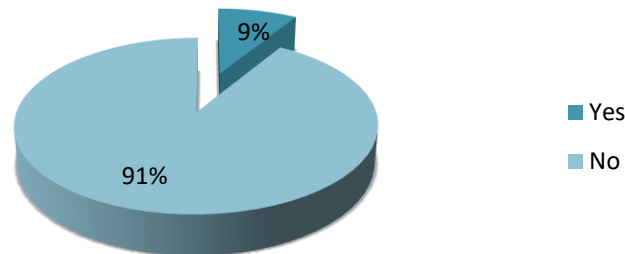
Source: August 2021 Sakernas, BPS (processed)

**Figure 2.** Distribution of Analysis Units Based on Business Status (Percent)

Only 8.7 percent of entrepreneurs in Indonesia use e-commerce in their entrepreneurial activities. Meanwhile, the remaining 91.3 percent of entrepreneurs in Indonesia apparently have not used e-



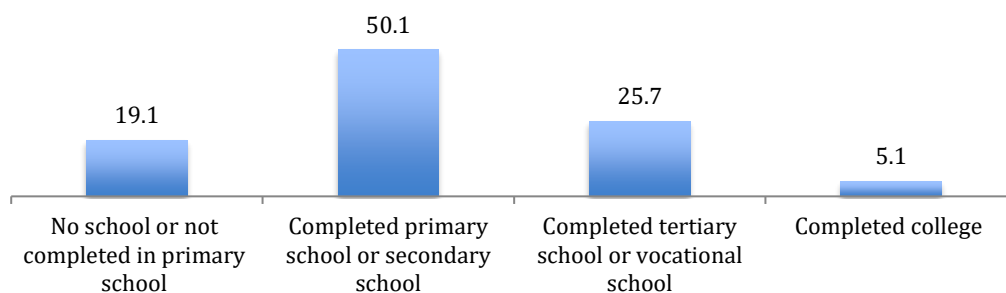
commerce in their entrepreneurial activities. This shows that the majority of entrepreneurs in Indonesia have not utilized e-commerce in their business activities in 2021.



Source: August 2021 Sakernas, BPS (processed)

**Figure 3.** Distribution of Analysis Units Based on E-commerce Usage (Percent)

Based on education level (Figure 4), the majority of entrepreneurs in Indonesia have lower middle school education (69.2 percent). Entrepreneurs with secondary education were 25.7 percent and entrepreneurs with higher education were 5.1 percent. These findings show that more Indonesian people who work as entrepreneurs actually have lower middle school education. Many workers with lower middle school education choose to work as entrepreneurs, because becoming an entrepreneur does not require a certain level of education, unlike entering the formal labor market as an employee (Hart, 1973; Abraham, 2017).

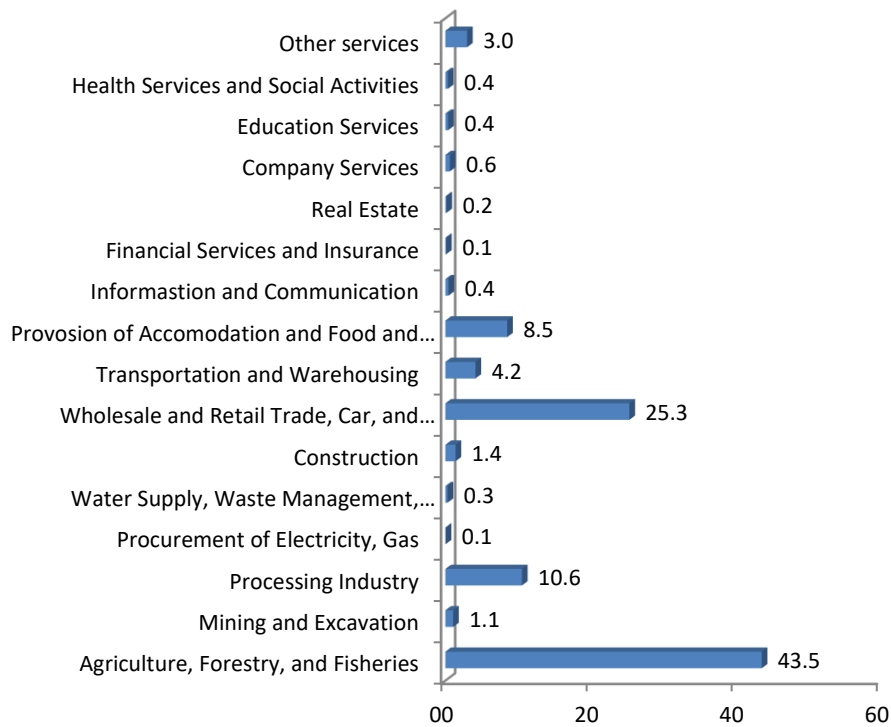


Source: August 2021 Sakernas, BPS (processed)

**Figure 4.** Distribution of Analysis Units Based on Education Level (Percent)

Based on the classification of residence, the majority of entrepreneurs in Indonesia live in rural areas (63 percent), the remainder live in urban areas (37 percent). This is because many entrepreneurs work in the sector of agriculture, forestry and fisheries (43.5 percent) who are generally located in rural areas (Figure 5).

Based on age characteristics, the majority of entrepreneurs in Indonesia are aged 25 to 59 years (76.7 percent), while those aged 15-24 years are 3.6 percent, and those aged 60 years and over are 19.7 percent. The average entrepreneur in Indonesia is 47 to 48 years old. Apart from that, entrepreneurs in Indonesia are 63.9 percent male and 36.1 percent female. Meanwhile, based on marital status, 80.9 percent of entrepreneurs are married and the remaining 19.1 percent are others (non-married).



Source: August 2021 Sakernas, BPS (processed)

**Figure 5.** Distribution of Analysis Units Based on Employment (Percent)

*4.2. Inferential Analysis*

In this research, it is necessary to estimate an entrepreneurial welfare model in order to determine the influence of the use of e-commerce on entrepreneurial welfare in Indonesia. The model estimation uses binomial logistic regression. In Table 2, the output results from the best fit model are presented.

**Table 2.** Entrepreneurial Welfare Estimation Results

Variable	Odds Ratio (Standard Error)
<b>Independent Variable</b>	
Using E-commerce	
• Yes	1.206*** (0.034)
• No (ref)	
<b>Control Variable (Individual Characteristics)</b>	
Education Level	
• Completed Primary School or Secondary School	1.013 (0.025)
• Completed Tertiary School or Vocational School	0.946* (0.030)
• Completed Collage	1.003 (0.048)
• No school or not completed in primary school (ref)	
Sex	
• Male	1.272*** (0.048)
• Female (ref)	



Variable	Odds Ratio (Standard Error)
Age	0.996*** (0.001)
Marital Status	
• Married	1.030 (0.024)
• Others (ref)	
Residential classification	
• Urban	0.671*** (0.021)
• Rural (ref)	
<b>Constant</b>	0.083*** (0.050)

Note:

\*\*\*significant at the level 1%

\*\*significant at the level 5%

\*significant at the level 10%

Source: August 2021 Sakernas, BPS (processed)

Based on Table 2, the estimation results of entrepreneurial welfare show that the use of e-commerce has an influence on increasing entrepreneurial income in Indonesia. Entrepreneurs who use e-commerce tend to be 1.21 times more prosperous than entrepreneurs who do not use e-commerce in 2021 in Indonesia. This study is in line with the study findings of Falentina et al. (2021), Gustina et al. (2020), Hashim et al. (2011), Ratnasari (2021), and Zhou et al. (2020).

Apart from that, based on educational characteristics, the level of education apparently has no effect on entrepreneurial welfare at the 5 percent significant level. Education is indeed important in running a business, managing business strategies and developing a business, so that it can improve welfare (Almeida & Carneiro, 2009; Amalia & Sugiharti, 2020; Pasay & Indrayanti, 2012; Becker, 1962). However, in this research, education is thought to have less influence on entrepreneurial welfare, because Indonesia's economic conditions are not yet stable due to the Covid-19 pandemic.

Based on gender characteristics, male entrepreneurs tend to be 1.2 times more prosperous than female entrepreneurs. Apart from that, based on age characteristics, for every additional year of age tends to be 0.95 times less prosperous. This is because young entrepreneurs tend to be superior in running computer and internet-based businesses, and are able to develop their business through a partnership system (Paramudita, 2020).

Meanwhile, based on marital status, entrepreneurs with married status tend to be 1.03 times more prosperous than entrepreneurs with status other than married. It is suspected that entrepreneurs who are married have greater economic responsibility towards their families, thus encouraging entrepreneurs to further develop and innovate for entrepreneurial success.

Based on the characteristics of residence, entrepreneurs in Indonesia who live in urban areas tend to have welfare 0.67 times lower than entrepreneurs who live in rural areas. During the pandemic, large-scale social restrictions (PSBB) were implemented in urban areas, so that economic activity in urban areas was limited. More entrepreneurs in Indonesia live in rural areas (63 percent) than urban areas (37 percent). According to Joo (2011) that rural areas have lower production costs and labor costs, as well as a good environment compared to urban areas. In addition, the majority of entrepreneurs in Indonesia live in rural areas (63 percent).

#### 4.3. Discussion

The use of e-commerce has had a big influence on entrepreneurship in Indonesia. The average monthly income for entrepreneurs in Indonesia in 2021 who use e-commerce is IDR 2,683,434, while the average income for entrepreneurs in Indonesia who do not use e-commerce is IDR 1,578,050 (Sakernas August 2021, BPS). Based on the results of the inferential analysis (Table 2) it also shows that the use of e-commerce is able to increase the welfare of entrepreneurs in Indonesia in 2021. The findings of this



study are in line with previous studies that increase income as an influence of the use of the internet in business/enterprise activities, especially e-commerce (Hashim, Amir and Razak, 2011; Gustina, Utami and Wicaksono, 2020; Zhou, Cui and Zhang, 2020; Falentina *et al.*, 2021; Ratnasari, 2021).

The use of e-commerce has a big influence on entrepreneurship, so digital business opportunities are still quite promising in Indonesia. This cannot be separated from the role of digital technology, so that entrepreneurs can reach customers not only in Indonesia, but even abroad.

E-commerce used by entrepreneurs is in the form of websites, social media (Facebook, Instagram, Twitter, etc.), instant messaging services (Whatsapp, Line, Telegram, etc.) or marketplaces (Shopee, Tokopedia, Lazada, Blibli, Olx, etc. ) proven to have an effect on increasing entrepreneurial income in Indonesia. In Indonesia, the proportion of entrepreneurs who only use email/social media/instant messaging services is 81.49 percent, the proportion of entrepreneurs who only use marketplaces/websites is 1.54 percent, and the proportion of entrepreneurs who use both is 16.97 percent. Email/social media/instant messaging services are the most widely used by entrepreneurs in Indonesia for entrepreneurship. This finding is in line with the Social and Hootsuite (2021) study that internet users in Indonesia tend to use social media. Even though they are considered less productive, social media and digital platforms can generate value through creative products which can then increase income (Rosalin, 2022).

The majority of entrepreneurs in Indonesia who use e-commerce are in the wholesale and retail trade, car and motorbike repair sectors (46 percent) (Sakernas August 2021, BPS). E-commerce opens up opportunities for entrepreneurs to increase sales by reaching more buyers (Hashim, Amir and Razak, 2011; Gustina, Utami and Wicaksono, 2020; Zhou, Cui and Zhang, 2020). So e-commerce is very helpful in businesses in the trade sector.

E-commerce business models such as consumer-to-consumer (C2C) dominate in Indonesia, because they are considered easier and simpler than business-to-business (B2B) or business-to-consumer (B2C) (World Bank, 2021a). Research from the World Bank (2021) also shows that e-commerce is one solution to help Indonesian entrepreneurs survive and develop in the post-pandemic period.

E-commerce can increase labor income. However, the intensity and penetration of e-commerce in Indonesia is still limited by issues of trust in online transactions and payments, logistics and internet connectivity (World Bank, 2021a). So, this is a challenge in itself in developing digital entrepreneurship in Indonesia.

## 5. Conclusion and Recommendation

With the development of technology, e-commerce can expand business networks and make entrepreneurship easier. The majority of entrepreneurs in Indonesia who use e-commerce are in the wholesale and retail trade, car and motorbike repair sectors.

Based on their characteristics, the majority of entrepreneurs in Indonesia have not used e-commerce, have lower middle school education, male, married, live in rural areas, and are on average 47 to 48 years old. Based on the results of inferential analysis, e-commerce has an important role in improving entrepreneurial welfare in Indonesia. The use of e-commerce has an influence in increasing entrepreneurial income in Indonesia during the Covid-19 pandemic. Digital entrepreneurship is quite promising in Indonesia, so this has become a concern for the government in making policies regarding digital entrepreneurship in Indonesia.

It is hoped that this study will be useful for the government, stakeholders, and academics. In supporting the development of entrepreneurship and e-commerce, both the central government and regional governments are expected to create and enforce regulations that protect sellers and buyers in online transaction activities. The government is also expected to ensure adequate infrastructure to support online transactions. Internet penetration to support online transactions in various remote areas also needs to be increased with various programs, such as free internet (public WiFi at certain spots in each village).

The government also needs to provide economic support to entrepreneurs, such as capital assistance and providing tax breaks or subsidies. Apart from that, the government also needs to provide training





related to entrepreneurship and e-commerce, such as financial management, product marketing, product innovation, introduction to and how to use e-commerce, and so on. For the private sector, internet service providers can expand their business in rural areas by offering competitive prices.

For academics, it is hoped that this study can provide an overview and knowledge regarding the use of e-commerce for entrepreneurial welfare. This study indicates that there is still an endogeneity problem in the e-commerce usage variable, so it is hoped that future studies can use statistical methods that can overcome this endogeneity problem.

## References

- [1] Abraham, R. (2017) 'Informality in the Indian Labour Market: An Analysis of Forms and Determinants', *Indian Journal of Labour Economics*, 60(2), pp. 191–215. doi: 10.1007/s41027-017-0096-x.
- [2] Almeida, R. and Carneiro, P. (2009) 'The return to firm investments in human capital', 16, pp. 97–106. doi: 10.1016/j.labeco.2008.06.002.
- [3] Amalia, N. and Sugiharti, L. (2020) 'Perkembangan Tingkat Pengembalian Investasi Pendidikan Menengah di Indonesia Tahun 2015 dan 2018', *Jurnal Ekonomi dan Pembangunan Indonesia*, 20(2), pp. 231–252. doi: 10.21002/jepi.v20i2.1310.
- [4] BPS (2020) *Pedoman Pencacahan Survei Angkatan Kerja Nasional Agustus 2020*, BPS. Jakarta: BPS.
- [5] European Commission (2022) *Digital Economy and Society Index (DESI) 2022: Human Capital*. Available at: <https://digital-strategy.ec.europa.eu/en/library/digital-economy-and-society-index-desi-2021>.
- [6] Falentina, A. T. *et al.* (2021) 'Digitalisation and the Performance of Micro and Small Enterprises in Yogyakarta, Indonesia', *Bulletin of Indonesian Economic Studies*, 57(3), pp. 343–369. doi: 10.1080/00074918.2020.1803210.
- [7] Goldin, C. and Katz, L. F. (1996) 'Technology, Skill, and the Wage Structure: Insights from the Past', *American Economic Review*, 86(2), pp. 252–257.
- [8] Gustina, L., Utami, D. A. and Wicaksono, P. (2020) 'The Role of Cognitive Skills, Non-Cognitive Skills, and Internet Use on Entrepreneurs' Success in Indonesia', *Jurnal Economia*, 16(1), pp. 130–142. doi: 10.21831/economia.v16i1.30414.
- [9] Hart, K. (1973) 'Informal income opportunities and urban employment in ghana', *The Journal of Modern African Studies*, 11(1), pp. 61–89. doi: 10.1017/S0022278X00008089.
- [10] Hashim, F., Amir, Z. and Razak, N. A. (2011) 'Empowering rural women entrepreneurs with ICT skills: An impact study', *Procedia - Social and Behavioral Sciences*, 15, pp. 3369–3373. doi: 10.1016/j.sbspro.2011.04.302.
- [11] Joo, H. (2011) *Comparative Analysis of Rural and Urban Start-Up Entrepreneurs*. University of Kentucky.
- [12] Kantis, H., Ishida, M. and Komori, M. (2002) 'Entrepreneurship in Emerging Economies: The Creation and Development of New Firms in Latin America and East Asia', in *Entrepreneurship in Emerging Economies: The Creation and Development of New Firms in Latin America and East Asia*. doi: 10.1504/IJEIM.2004.005755.
- [13] Mincer, J. (2003) 'Technology and the Labor Market', *Review of Economics of the Household*, 1, pp. 249–272. doi: 10.1016/j.labeco.2022.102177.
- [14] Mirna Noventri, I. *et al.* (2022) 'Peran Kewirausahaan Berbasis Digital Dalam Mengurangi Tingkat Pengangguran', *Journal of Millennial Community*, 3(2), p. 68. doi: 10.24114/jmic.v3i2.32339.
- [15] Mulyadi, M. (2016) 'Peran Pemerintah Dalam Mengatasi Pengangguran dan Kemiskinan Dalam Masyarakat', *Kajian*, 21(3), pp. 221–236. Available at: <https://jurnal.dpr.go.id/index.php/kajian/article/view/776/520>.
- [16] Niode, I. Y. (2007) 'Peran Wirausaha Sebagai Alternatif Solusi Mengatasi Masalah Pengangguran', *Jurnal Inovasi*, 4(1), p. 1.



- [17] OECD (2020) 'A Roadmap Toward A Common Framework for Measuring The Digital Economy', *Report for the G20 Digital Economy Task Force*, p. 123.
- [18] Paramudita, A. (2020) 'Study of Young Entrepreneurs Role in Creative Economic Sector Era of Industrial Revolution 4 . 0 in Indonesia', *ISI WSC 2019*, (March), pp. 0–6.
- [19] Pasay, N. H. A. and Indrayanti, R. (2012) 'Pengangguran, Lama Mencari Kerja, dan Reservation Wage Tenaga Kerja Terdidik', *Jurnal Ekonomi dan Pembangunan Indonesia*, 12(2), pp. 116–135. doi: 10.21002/jepi.v12i2.493.
- [20] Ratnasari, C. D. (2021) 'Internet Utilization and Income of Entrepreneurs in the Informal Sector', *Jurnal Ekonomi Pembangunan: Kajian Masalah Ekonomi dan Pembangunan*, 22(2), pp. 129–138. doi: 10.23917/jep.v22i2.16094.
- [21] Rosalin, Y. (2022) *Dampak Internet terhadap Pendapatan Perempuan Pekerja Informal di Indonesia*. Universitas Indonesia.
- [22] Social, W. A. and Hootsuite (2021) *Digital 2021 Indonesia*.
- [23] World Bank (2021a) 'Beyond Unicorns', *Beyond Unicorns*, p. 219.
- [24] World Bank (2021b) *Mengapa e-commerce adalah kunci bagi usaha kecil di Indonesia*. Available at: <https://blogs.worldbank.org/id/eastasiapacific/mengapa-e-commerce-adalah-kunci-bagi-usaha-kecil-di-indonesia> (Accessed: 25 August 2022).
- [25] Zhou, X., Cui, Y. and Zhang, S. (2020) 'Internet use and rural residents' income growth', *China Agricultural Economic Review*, 12(2), pp. 315–327. doi: 10.1108/CAER-06-2019-0094.