

# THE IMPACT OF PANDEMIC COVID-19 ON PERFORMANCE BETWEEN E-COMMERCE ADOPTION AND NON- ADAPTERS IN SMALL ENTERPRISES

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## THE IMPACT OF PANDEMIC COVID-19 ON PERFORMANCE BETWEEN E-COMMERCE ADOPTION AND NON-ADOPTERS IN SMALL ENTERPRISES

### Abstract

Researchers have highlighted the role of e-commerce for small enterprises in improving performance. However, there is limited evidence on the use of e-commerce in small enterprises between e-commerce adopters and non-adopters for dealing with COVID-19. Therefore, the purpose of this study is to investigate the differences in the impact of the COVID-19 pandemic on income between e-commerce adoption and non-adopters in small enterprises. This study also explored the impact of restrictions on community activities, the intention to adopt e-commerce, and the types of assistance required for small enterprises due to the pandemic. Data were collected through an online questionnaire survey on small enterprise culinary fields in Indonesia. The descriptive analysis, cross-tabulation, and Mann-Whitney test were used to analyze the data (1024 small enterprises in Indonesia). This study finds that non-adopters of e-commerce by small enterprises experienced a decline in income, which worsened due to restrictions to community activities, compared to adopters of e-commerce. Therefore, to overcome this negativity, small enterprises were pushed to adopt e-commerce. Finally, working capital assistance is the majority of the assistance required due to the pandemic for e-commerce adoption and non-adopters. This study has significant implications for how small enterprises and governments may benefit from e-commerce for dealing with extreme disruptions such as the COVID-19 pandemic.

**Keywords:** E-commerce, Performance, Small Enterprise, COVID-19, Benefits.

**JEL Classification:** L81, L25, L53, I15, L20

### INTRODUCTION

Small and Medium-Sized Enterprises (SMEs) play a critical role in the economy of developing countries such as Indonesia, particularly in terms of job creation, unemployment reduction, and GDP added value. According to the Ministry of Cooperatives and Small and Medium-Sized Enterprises of the Republic of Indonesia, the country is speculated to have approximately 64 million MSME participants by 2020, contributing 61% and 97% to the GDP and employment.

Similarly, Indonesia is relatively the fourth country with the largest number of internet users at approximately 185 million. The sheer size of the market combined with the high level of digital literacy among its customers is apparently one of the reasons the country's e-commerce industry has grown to become the largest in Southeast Asia, accounting for over half of the region's total market size. During the pandemic, the trend towards e-commerce was further emphasized, with the country emerging as one of the region's most aggressive users of technology. Indonesia became one of the countries in Southeast Asia with the highest rates of e-commerce and mobile e-

commerce adoption during the COVID-19 pandemic, reaching 78 percent in October 2020 (Deloitte, 2021).

Several preliminary studies have reported that the use of digital technology, particularly in E-commerce, plays a significant role in deciding SMEs' success (Rahayu & Day, 2017; Antoniuk et al. 2017; Ajibade et al. 2019; Alzahrani, 2019; Bregera & Sebby, 2020; Breckova & Karas, 2020; Syaifullah et al., 2021). However, the evidence on the role of e-commerce in explaining the performance of SMEs' funding decisions is ambiguous (Nooteboom, 1992; Pscott, 2001; Molla & Heeks, 2007; Ho, 2011; and Hamad et al. 2018). Moreover, involvement in the digital economy and the adoption of e-commerce are the key to increased survivability of many businesses. However, 42% of SMEs operating offline were forced to shut down during the COVID-19 pandemic, while the remaining 24% operated online (Deloitte, 2021).

E-commerce is beneficial to both producers and consumers. It is easier for producers to attain market shares that would otherwise be impossible to obtain through traditional means. E-commerce also makes distribution routes more efficient, therefore, SMEs need to actively participate in the digital economy and embrace its transformation in order to stay current. The pandemic has undoubtedly reduced the purchasing capacity of the general public due to the decrease in outdoor activities to curb the spread of the virus. Therefore, many consumers have distanced themselves from traditional retailers and engaged in online purchases. This forced many SMEs that failed to embrace digital transformation to be shut down due to a decline in consumer patronage.

The purpose of this study is to compare the influence of the COVID-19 epidemic on both e-commerce adopters and non-adopters in small enterprises. Additionally, the impact of restrictions on community activities, the desire to adopt e-commerce, and the various support systems necessary for small businesses affected by the pandemic were also examined. The data was acquired from an online questionnaire survey carried out in 2021 among small Indonesian culinary enterprises.

## 1. LITERATURE REVIEW

SMEs play a critical role in the local, national, and global economy by creating jobs and income (Chatterjee et al., 2015). In both developed and developing countries, it accounts for at least 90% of all businesses. Meanwhile, in developed and emerging countries, it contributes to approximately 40 to 60% of global GDP, 40% industrial production, and accounts for 35% of worldwide exports (Igwe et al. 2018; Mbuyisa & Leonard 2017; Sharma & Bhagwat 2006). Furthermore, with more than 99.8% of all non-financial businesses, 58% of the total value created, and 66.8% of the entire employment opportunities, SMEs represent the backbone of the European economy (Briozzo & Cardone-Riportella 2012). In Japan, SMEs account for over 99.7% of all firms and 70% of the workforce (Yoshino & Taghizadeh-Hesary 2018). In 2014, it accounted for 99.8% of all businesses in Turkey, with 55.1% and 37.7% contributing to the export and import sectors, respectively (Kaya & Uzay 2017). SME's are a vital aspect of Colombia's economy because they generate 80% of jobs, contribute 35% of GDP, and account for 90% of the country's productive sector (Garcia et al., 2019). In Indonesia, 64 million MSME actors have contributed 61% of GDP and 97% of employment opportunities (BPS, 2019; Yudaruddin, 2020).

8 The impact of the COVID-19 pandemic on small and medium-sized enterprises (SMEs) was documented in a number of countries. It had an enormous economic impact in China, and this increased considerably as the country tightened its trade restrictions. According to Lu et al. (2020), China's lockdown policy to contain the virus had a severe impact on the cash flow of small and medium-sized enterprises (SMEs). Keogh-Brown et al. (2020) proved that the pandemic had a detrimental influence on SMEs' entrepreneurial finance in the United Kingdom. Some research further revealed that SMEs in the United States were financially vulnerable (Juergensen et al., 2020; Bartik et al., 2020). In addition, numerous multinational corporations have considerably restricted their commercial activity due to raw material supply shortages. Meanwhile SMEs with short-term commercial contracts are also under pressure due to the Covid-19 outbreak (Tairas, 2020).

10 In Indonesia, Ssenyonga (2021) reported the impact of the pandemic on the economy and society. A sharp drop in aggregate demand was due to the decrease in household and corporate spending, with a surge in unemployment due to investments and exports. The government's quick response helped mitigate the crisis's impact on the economy and vulnerable societal segments. The pandemic exacerbated the Indonesian economy's pre-existing fundamental problems, such as de-industrialization and inter-regional digital division. Tairas (2020) reported the various obstacles faced by SMEs during the COVID-19 pandemic that occurred earlier in the year. Some of the challenges were encountered in manufacturing goods and services due to scarcity of raw materials, lack of financial liquidity, and decline in demand. Hermina et al. (2020) stated that external circumstances such as rivalry and customers negatively affected SME performance during the covid19 pandemic in West Java, Indonesia.

Additionally, social isolation is also one of the obstacles that SMEs need to overcome. The only non-pharmaceutical technique for preventing COVID-19 transmission is to limit activities that bring a large number of people together (Lewnard & Lo, 2020). Eliminating these activities is a form of social isolation. Anderson et al. (2020) stated that the secret to social separation is isolating oneself and seeking remote medical care only when symptoms are severe. This entails withdrawing from crowds and acquiring knowledge that helps one avoid the virus's spread and transmission. SMEs are expected to have a chance of survival during the pandemic, supposing they adhere to the health guidelines (Sagutu & Aifuwa, 2020). However, in terms of the economy, social distance has led to a reduction in SMEs' sales due to the prohibition of activities in public spaces. COVID-19 has impacted all facets, although there is a higher concern about instituting social lockdowns or distancing measures that disproportionately harm SMEs (Thorgren & Williams, 2020). The findings of some preliminary studies reported that the social distancing policy has a substantial impact on business actors, particularly SMEs. In Indonesia, these small and medium-sized enterprises' operations were affected by their inability to operate normally, resulting in decreased demand and income (Lutfi et al., 2020).

Globally, societies were under lockdown, and residents were urged to maintain social isolation and remain at home. As social beings, seclusion tends to be detrimental to peoples' health (Cacioppo & Hawkey, 2009). Loneliness has been linked to decreased cognitive function, negativity, despair, and vulnerability to social risks, among other things. There are indications that these problems were persistent during the pandemic, as witnessed by the increase in domestic violence, neighbor disputes, and handgun sales (Campbell, 2020). Another effect of the lockdowns was the dramatic

surge in Internet and social media usage. Previous research stated that lonely persons use social media more frequently and, in some situations, prefer it to actual interaction (Nowland et al., 2018). This was an opportunity for SMEs during the COVID-19 pandemic to survive. However, there is no guarantee that the use of technology during a health crisis is bound to improve SMEs performance.

<sup>27</sup> E-commerce is the purchase and sale of products and services via the internet. Additionally, participate in monetary transactions and the selling of services or commodities. Through e-commerce operations, businesses may reach the greatest number of customers imaginable. There is no universally accepted definition of e-commerce, with many writers providing their own interpretations. Turban (2010) described e-commerce as the process of buying, selling, transferring, or exchanging products, services, and/or information through computer networks, most notably the Internet and intranets. Laudon & Traver (2017) defined e-commerce as a business transaction between people that involves the exchange of value through or via the use of digital technology. According to Botha et al. (2004), e-commerce is the electronic exchange of information between a business and its customers or suppliers in order to place orders. The internet has developed into a crucial component of business. While Li & Xie (2012) state that e-commerce is the process of purchasing and selling goods or services electronically through the internet and browsers.

<sup>63</sup> Numerous studies stated that the use of digital technology, particularly E-commerce, contributes to the success of SMEs. However, its role in explaining the performance of small and medium-sized enterprises' funding decisions is equivocal. On the one hand, some studies reported that e-commerce improves SMES' performance. Antoniuk et al. (2017) reported that the development of high-tech innovative SMEs is critical to Ukraine's economic progress. Integration of information technology enhances the performance of South African SMEs (Ajibade et al. 2019). In the context of Saudi Arabian SMEs, Alzahrani (2019) reported that e-commerce adoption has an influence on SMEs strategy. Restaurant operators connect to their target demographic in the US through the online ordering system (Brewera & Sebby, 2020). This technology enables the creation and promotion of products in the Czech Republic (Breckova & Karas, 2020). Yaifullah et al. (2021) carried out a study in Indonesia and discovered that marketing through social media has a good effect on SMEs performance. Additionally, Rahayu & Day (2017) stated that a higher degree of e-commerce adoption offers more benefits.

On the contrary, some research has proven that SMEs performance does not significantly enhance e-commerce. Nootboom (1992) discovered that technological adoption on transaction costs differs depending on the situation. Some tend to be reduced due to the adoption of new technologies. Based on the fact that virtually all industries use the internet, it is not considered a source of competitive advantage (Tapscott, 2001). According to Molla and Heeks (2007), there is no convincing evidence that supports the fact that e-commerce is advantageous for South African companies. Ho (2011) stated that there is no clear link between SMEs' strategic position and e-business skills, irrespective of the recommendation to engage in e-commerce applications. Hamad et al. (2018) discovered that Egyptian manufacturing SMEs have some difficulties comprehending the link between e-commerce and competitive advantage, which is the most significant component in creating strategic plans.

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The incorporation of e-commerce into business operations has become a goal for many SMEs and gaining significant attraction. However, MSEs in Indonesia are slowly adopting e-commerce (Busnetti & Tambunan, 2020). Numerous variables influence small businesses' use of e-commerce. In Jordan, relative advantages and information technology proficiency affect its continued intention to use e-commerce (Lubna A. et al., 2017). Government assistance directly affects Ghanaian SMEs' plans to adopt e-commerce (Awiagah et al., 2015). In Indonesia, it is influenced by several variables, including perceived advantages, technological preparedness, owners' innovativeness, IT experience, and capability (Rahayu & Day, 2015).

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COVID-19 had a severe impact on small and medium-sized businesses (SMEs) and their employees, particularly in Indonesia. Therefore, it is important to determine SMEs' needs and the factors responsible to effectively assist them in subsequent disasters. Liquidity is critical for business assistance in Indonesia (Yudaruddin, 2019; Kusumawardani et al. 2021; Hadjaat et al. 2021). Studies carried out on SMEs during the pandemic stated that these businesses received various forms of help. Gourinchas and Kalemli-zcan (2020) stated that suspending interest payments has a negligible influence on company figures. Strictly tailored treatments have a significantly greater impact at a relatively low cost. Bircan et al. (2020) carried out a firm-level study across 19 countries to determine the amount of cash and liquidity required by SMEs and whether these businesses have the capacity on their balance sheets to take on additional loans. Significant differences were discovered among nations, thereby proving that the liquidity problem faced by SMEs varies. Liu and Parilla (2020) demonstrated that the liquidity problem faced by small companies differs significantly among regions and cities in the United States.

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Meanwhile, ILO (2020) identified strategies to assist SMEs in Indonesia during the COVID-19 pandemic. These include improved access to finance and working capital to assist with short-term cash flow through grants, cheap loans, or temporary tax exemptions. The second is increasing the demand for products and services, such as assistance with interim conversions relating to covid-19 needs. The third is preserving employment and social protection, namely subsidy programs that assist employees in maintaining their jobs. The fourth is encouraging companies to reactivate when the infection has been contained. This is because businesses are bound not to resume normalcy, and companies need assistance adapting to the changing market conditions. Finally, when workers and employers confront a crisis together, social discussion and cohesiveness improve a country's resilience.

**H1:** *There is a significant difference in performance (decrease in income) between e-commerce adoption and non-adopters in small enterprises.*

**H2:** *There is a significant difference in performance (restrictions to community activities worsen small enterprise performance) between e-commerce adoption and non-adopters in small enterprises.*

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## 2. METHODOLOGY

A quantitative technique was adopted to evaluate the conceptual foundation and to address the research issues. Therefore, this study used data from an online questionnaire survey carried out in Mei 2021 – June 2021 among small Indonesian culinary enterprises. This was selected because it

offers numerous advantages over traditional approaches, including being less expensive, having a higher response rate, as well as being rapid and simple (Rahayu & Day, 2017). The questionnaire was divided into 3 sections. The first is based on the respondents' profiles. The second part is centered on the differences related to the impact of the COVID-19 pandemic on small enterprises based on the category of e-commerce adoption. The last section is in accordance with the intention to adopt e-commerce or electronic commerce. This refers to the practice of purchasing, selling, transferring, or exchanging products, services, and information through the internet (Turban, 2010).

The majority of the data acquired pertains to parties interested in small enterprises. For instance, through the Ministry of Cooperatives and Small Medium Enterprises (Kementrian Koperasi dan Usaha Kecil Menengah Republik Indonesia), the Indonesian government publishes data on small enterprise activities in certain sectors. This ministry's statistics are accessible through the following website <https://kemenkopukm.go.id/>. According to the Republic of Indonesia's Law No. 20 of 2008, MSMEs are companies with assets between 50 to 500 million rupiahs and annual sales of 300 to 2.5 billion rupiahs. These enterprises are operated by their owners or by a small number of workers.

The survey was carried out through descriptive analysis to specify the basic features of the data. This includes frequency, mean, and other descriptive statistics. According to Lutfi et al. (2020), the acquired data was examined using the SPSS program. Descriptive statistical data was used to explain the samples in a legitimate and relevant way by representing them in a numerical form and in the most straightforward feasible manner. Moreover, cross-tabulation was frequently used to classify data into mutually exclusive categories (Yudaruddin, 2014). Additionally, the Mann-Whitney test is used in this study. The purpose of this study is to determine whether there is a difference in performance between small enterprises that use e-commerce and non-adopters. The Mann-Whitney test is a non-parametric statistical test used to examine independent sample that consists of two unrelated samples. This test serves the same purpose as the t-test for parametric statistics; however, the t-test for parametric statistics requires that the data be normally distributed; when the normal distribution assumption is violated for interval and ratio scale data, another alternative is to use this test instead of the t-test. We can use the Mann-Whitney test to determine this (Yudaruddin, 2014).

### 3. RESULTS

The respondents are owners of small enterprises. A total of 1024 respondents, comprising 594 (58 percent) females and 430 (42 percent) males, participated in this survey. Furthermore, in terms of age, small enterprises that use e-commerce are led by those aged between 20 to 30 years (31% or 321 respondents). Conversely, those that do not use e-commerce are within the ages of 41 to 50 years (14.7 percent). In terms of educational background, it was discovered that 257 or 25.1% and 228 or 28.1% of the owners of both small enterprises that use e-commerce and those that did not adopt it were educated, as shown in table 1.

**Table 1.** Profile of Respondents (N = 1024)

	E-commerce Adopters	Non-Adopters of E-commerce	All respondents
Respondent's gender			
Male	203(19.8%)	227(22.2%)	430(42%)

Female	322(31.4%)	272(26.6%)	594(58%)
<b>Respondent's age</b>			
<20	35(3.4%)	13(1.3%)	48(4.7%)
20 -30	321(31.1%)	150(14.6%)	471(46%)
31-40	120(11.7%)	121(11.8%)	241(23.5%)
41-50	36(3.5%)	151(14.7%)	187(18.3%)
>50	13(1.3%)	64(6.3%)	77(7.5%)
<b>Respondent's education</b>			
Primary school	15(1.5%)	35(3.4%)	50(4.9%)
Junior high school	16(1.6%)	75(7.3%)	91(8.9%)
Senior high school	257(25.1%)	228(28.1%)	545(53.2%)
Diploma/Undergraduate	228(22.3%)	99(9.7%)	327(31.9%)
Master/ Doctoral	9(0.9%)	2(0.2%)	11(1.1)

Table 2 provides information on the differences in the distribution of income between e-commerce adopters and non-adopters in small enterprises. The results show that as many as 883 or 86.2% of the total 1024 respondents experienced a decrease in income due to the pandemic, while only 13.8% stated otherwise. As many as, 357 or 34.9% of the respondents experienced a relatively 10 - <25% decline in income. Furthermore, there is a tendency for e-commerce adopters to experience a higher decline compared to non-adopters. E-commerce adoption by small enterprises which experienced a 10 - <25%, 25 - <50% and >50% decrease in revenue, were 34.9%, 14.1% and 2.5%, respectively. Meanwhile, non-adopters of e-commerce in small enterprises that experienced a 10 - <25%, 25 - <50% and >50% decrease in revenue, were 37.5%, 16.6% and 3.4% respectively. In addition, e-commerce adopters that did not experience a decrease in revenue during the COVID-19 pandemic were greater than non-adopters. Overall, non-adopters of e-commerce experienced a decline in income due to the pandemic. To determine whether the average value provided by each group is statistically different and significant, particularly in relation to the decline in performance, as measured by income, between e-commerce adopters and non-adopters in small enterprises due to Covid19, see table 3. The results show that there is a significant difference in performance (decrease in Income) between e-commerce adoption and non-adopters in small enterprises, thereby supporting H1.

**Table 2. Distribution of Decrease in Income by E-Commerce Adoption**

	Is the Pandemic of Covid 19 reducing income?	Distribution of Decrease in Income					Total
		None	<10%	10%-<25%	25%-<50	>50%	
Adopters of E-commerce	Yes	0 (0.0%)	187 (35.6%)	170 (32.4%)	74 (14.1%)	13 (2.5%)	444 (84.6%)
	No	81 (15.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	81 (15.4%)
Non-Adopters of E-commerce	Yes	0 (0.0%)	152 (30.5%)	187 (37.5%)	83 (16.6%)	17 (3.4%)	439 (88.0%)
	No	60 (12.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	60 (12.0%)
All respondents	Yes	0 (0.0%)	339 (33.1%)	357 (34.9%)	157 (15.3%)	30 (2.9%)	883 (86.2%)
	No	141 (13.8%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	141 (13.8%)

**Table 3. Mann Whitney Test Results for Decrease in Income by E-Commerce Adoption**

Group	N	Mean Rank	Sum of Ranks	Test Statistics (Z Table)
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Decrease in Income	Adopters of E-commerce	525	489.23	256845.50	-2.700***
	Non-Adopters of E-commerce	499	536.98	267954.50	

Note: \*\*\* sig at 0.001

Table 4 shows the respondents' responses towards the impact of restricted community activities on the performance of small enterprises. Approximately 658 or 64.2% of the respondents responded slightly agree, agree and strongly agree. This shows that the restriction<sup>5</sup> policy tends to worsen small enterprise performances. Furthermore, the responses of both non-adopters and adopters of e-commerce regarding the impact of the restricted community activities were 32.70% and 31.60%, respectively. Similarly, restricted community activities negatively affected the performance of small enterprises both for non-adopters and adopters. Moreover, in Table 5, this study analyzes whether there is a significant difference in pe<sup>35</sup>rmance (restrictions to community activities worsen small enterprise performance) between e-commerce adoption and non-adopters in small enterprises. The results of this study find that there is a significant difference in s<sup>5</sup>rmance (restrictions to community activities worsen small enterprise performance) between e-commerce adoption and non-adopters in small enterprises, thus supporting H2.

**Table 4. Impact of Restrictions to Community Activities (RCA)**

E-commerce	Restrictions to Community Activities worsen small enterprise performance							Total
	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Agree	Strongly Agree	
Adopters of E-commerce	22 (2.1%)	34 (3.3%)	56 (5.5%)	89 (8.7%)	115 (11.2%)	107 (10.4%)	102 (10.0%)	525 (51.3%)
Non-Adopters of E-commerce	14 (1.4%)	21 (2.1%)	46 (4.5%)	84 (8.2%)	96 (9.4%)	91 (8.9%)	147 (14.4%)	499 (48.7%)
All respondents	36 (3.5%)	55 (5.4%)	102 (10.0%)	173 (16.9%)	211 (20.6%)	198 (19.3%)	249 (24.3%)	1024 (100.0%)

**Table 5. Mann Whitney Test Results for Restrictions to Community Activities Worsen Small Enterprise Performance**

RCA worsen small enterprise performance <sup>20</sup>	Group	N	Mean Rank	Sum of Ranks	Test Statistics (Z Table)
		Adopters of E-commerce	525	525	483.71
Non-Adopters of E-commerce	499	499	542.79		

Note: \*\*\* sig at 0.001

Table 6 shows the results of the intention to use e-commerce by small enterprises, particularly by non-adopters, during the COVID-19 pandemic. Relatively 49<sup>9</sup> or 53.3% of respondents had the intention to adopt e-commerce. Approximately 236 or 47.3% of the respondents that had the intention to use e-commerce are non-adopters that had experienced a decrease in income due to the COVID-19 pandemic. Me<sup>11</sup>while, the remaining 233 or 46.7%, have no intention of adopting e-commerce, although 40.7% experienced a decrease in revenue due to the pandemic.

**Table 6. Intention to adopt e-commerce**

E-commerce	Is the COVID-19 pandemic reducing income?	Is there an Intention to adopt e-commerce?		Total
		Yes	No	
Non-Adopters of E-commerce	Yes	236 (47.3%)	203 (40.7%)	439 (88.0%)

No	30 6.0%	30 6.0%	60 12.0%
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Table 7 shows the types of assistance that needs to be offered to these small enterprises. Working capital is the major assistance required by both e-commerce adopters and non-adopters. Similarly, approximately 556 or 54.3% of the respondents chose working capital as the much-needed assistance due to the impact of the COVID-19 pandemic. Conversely, 182 or 17.8% of the respondents selected Electricity Bill Reduction as the much-needed assistance during the pandemic.

**Table 7.** Types of Assistance Required Due to the COVID-19 pandemic

E-commerce	Working Capital Assistance	Ease of loan application administration	Electricity Bill Reduction	Tax Rate Reduction	Loan Restructuring	Other
Adopters of E-commerce	277 (27.1%)	46 (4.5%)	95 (9.3%)	36 (3.5%)	28 (2.7%)	43 (4.2%)
Non-Adopters of E-commerce	279 (27.2%)	32 (3.1%)	87 (8.5%)	35 (3.4%)	31 (3.0%)	35 (3.4%)
All respondents	556 (54.3%)	78 (7.6%)	182 (17.8%)	71 (6.9%)	59 (5.8%)	78 (7.6%)

#### 4. DISCUSSION

The growing growth of online business, which provides several conveniences, time efficiency, energy efficiency, and cost efficiency, is undoubtedly a positive development potential for SMEs. SMEs are a critical economic sector for competitive economic development; moreover, in Indonesia, this sector is a source of livelihood. Small and medium-sized enterprises (SMEs) are prevalent in the trade, manufacturing, and culinary sectors. The culinary industry is the most active and in demand by business actors. However, many culinary enterprises have yet to implement e-commerce into their operations.

This study provides an overview of the differences in the impact of the COVID-19 pandemic on e-commerce adoption and non-adopters in small enterprises. The differences in the distribution of income are also shown in Table 2 and Table 3. Indeed, all small enterprises experienced a decline in income. However, non-adopters of e-commerce experienced a greater decline in income compared to e-commerce adoption. These results show the importance of adopting e-commerce for small enterprises during the COVID-19 pandemic. Several studies have suggested that SMEs' use of digital technology, particularly E-commerce, plays a role in their success. Antoniuk et al. (2017), Ajibade et al. (2019), Alzahrani (2019), Brewera & Sebby (2020), Breckova & Karas (2020), Syaifullah et al. (2021), and Rahayu & Day (2017) reported that SMEs with e-commerce adoption reaped more benefits.

COVID-19 had an extremely negative influence on every aspect. However, greater worry was associated with imposing social lockdowns or distancing measures that disproportionately damaged SMEs (Thorgren & Williams, 2020; Lutfi et al., 2020). Table 4 shows the respondents' responses to the impact of restricted community activities on small enterprises' performances.

Meanwhile, Table 5 show that there is a significant difference in performance (restrictions to community activities worsen small enterprise performance) between e-commerce adoption and non-adopters in small enterprises. Indeed, these prohibitions disrupted the inability of small enterprises to operate normally, thereby resulting in a decline in demand and income. However, non-adopters of e-commerce were badly affected compared to its adoption by small enterprises. These results show that e-commerce plays a role in not aggravating the performance conditions of small enterprises when restrictions were placed on community activities.

Table 6 shows the results regarding the intention to adopt e-commerce by small enterprises. The non-adopters of e-commerce intend to adopt digital technology after experiencing a decline in income due to the pandemic. This shows that the negative impact of COVID-19 forced small enterprises to adopt e-commerce. Similarly, e-commerce integration into business operations has become a goal for small enterprises to deal with the pandemic. These results are consistent with the findings of Rahayu and Day (2015), which stated that there are a variety of elements, including perceived advantages, which has an impact on the use of e-commerce by SMEs in Indonesia. However, in terms of technological usage, this study reported that the majority of SMEs utilize e-commerce for marketing activities (Rahayu & Day, 2017).

The COVID-19 pandemic has been particularly harsh on small and medium-sized companies (SMEs) and their employees, notably in Indonesia. Therefore, what do SMEs want, and what has worked in prior disasters to assist them in surviving? Table 7 explores the types of assistance required for their survival. Working capital is the major assistance required by both e-commerce adopters and non-adopters. This is in line with the findings of Liu and Parilla (2020), which stated that the liquidity problem faced by these small companies differs significantly among regions and cities in the United States.

## 5. CONCLUSION AND RECOMMENDATIONS

This study investigates the different impacts of the COVID-19 pandemic on income generated by both e-commerce adopters and non-adopters in small enterprises. The impact of restrictions on community activities, the intention to adopt e-commerce, and the types of assistance required due to the COVID-19 pandemic were also explored. This study used data from an online questionnaire survey carried out in 2021 among small Indonesian culinary enterprises. The analysis of the results was carried out through descriptive analysis to explain the basic features of the data. These include frequency, mean, and other descriptive statistics. Moreover, cross-tabulation was also adopted in this research. Additionally, the Mann-Whitney test is used in this study.

It was discovered that firstly, non-adopters of e-commerce by small enterprises experienced a huge decline in income due to the COVID-19 pandemic compared to the e-commerce adoption. Secondly, restrictions placed on community activities worsened small enterprise performances of non-adopters. Thirdly, the negative impact of the pandemic pushed small enterprises to adopt e-commerce. Finally, working capital is the major assistance required by both e-commerce adopters and non-adopters.

This study has several important implications and policies. First, these findings led to help small enterprise owners better grasp the potential benefits of e-commerce, particularly in response to the

COVID-19 pandemic and restricted community activities. Secondly, these results provide more specific targets for the government to encourage small enterprises to integrate e-commerce into their business operations. Thirdly, the findings show that working capital is necessary assistance for both e-commerce adopters and non-adopters. This study has some limitations in terms of sampling as it comprises only of small enterprises. In addition, it only focuses on the small enterprise culinary field. Therefore, future studies need to explore other sectors deeply.

## **AUTHOR CONTRIBUTIONS**

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