

-RESEARCH ARTICLE-

HOW SMES IMPROVE THEIR PERFORMANCE THROUGH MARKET ORIENTATION AND E-COMMERCE ADOPTION? THE MODERATING ROLE OF O2O CHANNEL ADOPTION

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—Abstract—

Small and medium-sized enterprises (SMEs) are vital to the economy and have the potential to grow and expand to support the expansion of the overall Indonesian

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economy. Consequently, SMEs must maximize their performance improvements. The study assessed the effect of market orientation on the performance of small and medium-sized firms (SMEs) and the mediating role of e-commerce, which was increased by the use of online-to-offline (O2O) channels. A total of 382 SME respondents participated in the study. The SMEs were selected using processes for purposive sampling, and questionnaires were utilized to collect data. An explanatory research design was employed. The study investigated several hypothesized correlations using the structural equation model (SEM) LISREL for data analysis. This study demonstrates how market orientation, e-commerce adoption, and O2O channel adoption influence the success of small and medium-sized firms (SMEs). Conclusion: To enhance performance, SMEs should adopt and implement market orientation techniques, e-commerce, and O2O channel adoption strategies.

Keywords: *market orientation, e-commerce, O2O Channel, SME performance*

1. INTRODUCTION

In the twenty-first century, the internet and digitization have accelerated the growth of small and medium-sized firms (SMEs) and other sectors of the economy. Through creativity, knowledge, and market orientation, the technological growth of the twenty-first century provides SMBs with new opportunities. Therefore, individuals must possess various skills, abilities, and competencies to adapt to the technological age. Small and medium-sized firms (SMEs) are increasingly using electronic commerce (EC) based on information and communications technology (ICT) to gain a competitive advantage and reach overseas markets (Al-qirim, 2014). When EC is implemented and utilized, producers and consumers benefit tremendously (Gellweiler et al., 2022); SMEs can also enjoy these advantages (Al-qirim, 2014).

An economic report (Laporan Perekonomian Indonesia, 2020) in Indonesia indicates that small and medium-sized enterprises (SMEs) are vital to the economy and have the potential to grow and support the expansion of the entire nation's economy. According to the most recent data (Koperasi et al., 2020), the growth and development of SMEs as the state's economic engine is a source of great pride for Indonesia. The Ministry of Cooperatives and SMEs reveals that the contribution of SMEs to the GDP is 61.07 percent (UKM, 2021). According to the official website of the Ministry of Cooperatives and SMEs, MSMEs also employ 97% of the overall workforce. SMEs, also known as micro, small, and medium enterprises, are among the most productive business units a company or an individual holds. People interested in establishing their enterprises can choose this business as one option. In 2019, the Ministry of Cooperatives and Small and Medium Firms Kementerian Koperasi Dan Usaha Kecil Dan Menengah – (Kemenkopukm. Go. Id, 2019) reported that the number of micro, small, and medium enterprises in Indonesia reached 65,4 million units, employing more than 97% of the labor force.

The government collaborates with e-commerce enterprises to provide MSME players with training and education on market orientation through digital platforms as part of its efforts to promote the growth of small and medium-sized businesses. According to data (Kemenkop Press Release, 2020), the number of small and medium-sized firms (SMEs) using digital platforms has only reached 10.25 million, meaning that just 16% of SMEs can conduct business online. Market orientation is a corporate culture in which all employees are committed to continually offering enhanced customer value (Kurniawan et al., 2021). Some study conducted primarily on small and medium-sized enterprises (SMEs) in developing nations reveals that SMEs struggle to design and implement the concept of market orientation within their firms to address the difficulties of a changing market (Alhakimi et al., 2020). Market orientation emphasizes the company's exterior requirements, desires, and market demands (Herman et al., 2018). According to Talaja et al. (2017), market orientation increases a company's market advantage, improving its business performance. To achieve this achievement, a market-oriented culture, or how organizations perceive the needs, desires, and expectations of the market can be implemented (Andiyanto et al., 2017).

In actuality, research has revealed that the usage of internet technology by small and medium-sized enterprises (SMEs) remains limited, which has led many SMEs to avoid e-commerce. The bulk of small businesses has not benefited from technological development. Moreover, Indonesian SMEs have enormous financial potential. In addition, it is intended that SME players can use e-commerce in promoting and marketing in this digital era to reach a larger market, generating much greater performance and profits (Tokar et al., 2021). Some research has been undertaken on the performance-enhancing elements. First, according to a study conducted by Iyer et al. (2019), market orientation can improve the performance of businesses. However, this study focuses solely on market orientation and positioning strategy for performance enhancement. In addition, only online company managers serve as research subjects for this study. Octavia et al. (2020) also did research with the conclusion that using e-commerce can improve SMEs' business performance and that market orientation can deepen the relationship. However, this research was limited to SME employees in the province of Jambi. In addition, the only characteristics considered are e-commerce adoption, entrepreneurial attitude, market orientation, and business performance. Next, Chuang (2018) found that a seller's integrated MO is essential to their adoption of e-marketing technologies, which promotes value co-creation between sellers and their customers. Nonetheless, this study focuses on international tourist hotels in Taiwan and uses e-commerce adoption as the mediating variable and market orientation to performance as the causal relationship.

Earlier in this research, the results of a prior study were outlined, some of which recommended the addition of other variables that can lead to an increase in SME performance. Other variables, such as market orientation, e-commerce adoption, and O2O channel adoption moderation, are therefore included in this study. This study also

identifies the collaboration and combination of market orientation, e-commerce adoption, O2O channel adoption, and SME success. Consequently, this study aims to determine how market orientation, e-commerce use, and O2O channel deployment influence the success of SMEs.

2. LITERATURE REVIEW

Prior research on the organizational consequences of e-commerce adoption, which studied the relationship between a market-oriented culture and e-commerce implementation and how it influences organizational performance, particularly in the retail industry, is highly supported by this study (Ramanathan et al., 2017). The authors investigated online-to-offline (O2O) Mitra e-commerce SMBs. Previously, these SMBs solely engaged in traditional commerce, not internet commerce. In Indonesia, a developing nation, the authors examined the adoption of e-commerce and O2O channels in their research. Earlier scholars explored the relationship between technology-organization-environment (TOE) components and implementation. They discovered more intriguing evidence of the participation of other factors in ensuring that businesses can maximize the benefits of business analytics and conventional TOE factors, which may have additional implications. Adoption level appears to mediate the association between implementation and business performance. Prior research determined that new study designs must incorporate a channel adoption metric for comparing results. Research indicates a substantial relationship between SME performance and technological innovation adoption difficulties (Mustafa et al., 2018). In this instance, the authors aimed to extend earlier research by establishing a connection between the kind of O2O channel adoption and the following questions. What is the meaning of "O2O adoption"? What differentiates O2O adoption from the adoption of other channels? (Ram, 2021).

This study seeks to construct a conceptual model that links market orientation to SME performance, market orientation to e-commerce adoption, and O2O channel adoption to SME performance in developing nations such as Indonesia.

2.1 Market Orientation and SME Performance

According to certain definitions, market orientation refers to a culture that focuses primarily on providing better value for buyers through competitor orientation, client orientation, and functional coordination (Octavia et al., 2020). Knowledge of consumer preferences is necessary for small and medium-sized enterprises (SMEs) to accurately analyze customer requests and preferences by organizing and responding to client preferences based on the acquired data (Bamfo et al., 2019). Market orientation has a crucial role in the performance of small and medium-sized enterprises (SMEs), thereby guiding them to obtain a competitive edge (Bhattarai et al., 2019). Numerous studies to date have investigated how market-oriented elements can increase the underlying

characteristics that encourage creative performance, particularly in SMEs (c et al., 2016).

Market orientation necessitates the evaluation of actual operations to aid in the creation of distinctive value and to provide a platform for analyzing customers and the competition (Fan et al., 2016). With the support of entrepreneurship and market orientation, it also has a large and favorable effect on the performance of small and medium-sized enterprises (SMEs) (Mamun et al., 2018). In this study, the hurdles that prevent small and medium-sized enterprises (SMEs) from gaining a competitive advantage due to a lack of market orientation knowledge will be examined in greater depth to provide a greater effect. Table 1 outlines the market orientation (MO) and SME performance (SP) measures.

Table 1. Dimensions and Indicators of Market Orientation and SME Performance

Variable	Dimension	Indicators
MO 1	Customer Orientation	Increase competitive advantage through target consumers
MO 2	Customer Orientation	Understanding market information
MO 3	Coordination between Functions	Sharing information about consumers to all functions within the business scope
MO 4	Coordination between Functions	Contribute to increase value for customers
MO 5	Competitor orientation	Leaders discuss with employees about competitors' strengths
MO 6	Competitor orientation	Actively monitor competitor strategy
SP1	Financial Performance	Sales growth
SP2	Financial Performance	Profit from Sales
SP3	Customer Satisfaction	Customer satisfaction
SP4	Customer Satisfaction	Customer Complain
SP5	Product Quality	Success transaction

2.2 Market Orientation and E-commerce Adoption

Utilizing online technology to enhance market orientation is a distinctive factor that might result in a sustainable competitive advantage (Liu et al., 2020). According to Huang et al. (2019), the success of technology acceptance (such as e-business or e-commerce) is contingent on the ability to comprehend new economy technologies and provide relevant responses. Consequently, the innovation strategy of new IT is crucial for market orientation, which impacts the success of e-commerce. A competitive edge can be acquired by utilizing technology properly. Regarding e-commerce, Phang et al. (2019) concluded that IT capabilities benefit the operation of these enterprises if they have a proper market orientation. E-commerce applications have enormous potential for leveraging IT to enhance market orientation capabilities and facilitate attaining vital business objectives (Gajda, 2020). The factors influencing the adoption of e-commerce are discussed in Table 2 below.

Table 2. Dimensions and Indicators of E-commerce adoption

EA1	Organization	Innovation organization
EA2	Organization	IT Capability organization
EA3	Organization	IT Experience organization
EA4	Technology	Usage easiness experience
EA5	Technology	Regarded as technology
EA6	Technology	Benefits felt
EA7	Environment	Customer/supplier pressure
EA8	Environment	Competitor pressure
EA9	Environment	External originator

2.3 E-commerce Adoption and SME Performance

In developing nations, numerous studies have been done on the adoption of e-commerce and its impact on the performance of small and medium-sized enterprises (SMEs). According to [Abebe \(2014\)](#), there is a correlation between the implementation of e-commerce and the performance of SMEs. Using a logistic regression model, [Alderete \(2019\)](#) determined the likelihood that e-commerce would be practiced in the Murcia Region of Spain. Argentina researched the factors that affect the implementation of e-commerce ([Jones et al., 2016](#)). [Alderete \(2019\)](#) supported this idea with research demonstrating that e-commerce deployment has a positive and significant impact on SME performance facilitated by ICT usage. Other organizational variables, such as firm size and social welfare programs, can be utilized to explain performance. Consequently, the success of micro, small, and medium-sized enterprises is influenced by various organizational characteristics. Generally speaking, ICT-related operations will impact the adoption of e-commerce and organizational performance.

2.4 Market Orientation and SME Performance Moderated by O2O Channel Adoption

An e-commerce platform is used to implement the O2O channel model, which displays products and services offline and responds to unanticipated buyer wants online ([Hwang et al., 2018](#)). Intra-organizational factors, such as the impact of digital technology on market trends and rivalry, also contribute to the acceleration of O2O adoption. As was previously stated, SMBs can increase the precision of their inventions through market orientation, enhancing the company's added value. Several studies have demonstrated that market orientation has a favorable and statistically significant effect on the performance of SMEs. [Hossain et al. \(2019\)](#) stated that market orientation is essential for SME companies to improve their financial and non-financial performance and that this is based on the need for SME company owners to constantly update themselves on the most recent market trends in their industry, followed by gathering in-depth market information. The dynamics of the evolving macroenvironment significantly affect an

SME's decision to embrace O2O. (Ram et al., 2019). Table 3 shows the parameters and indications of O2O channel adoption.

Table 3. Dimensions and Indicators of O2O Channel Adoption

Variable	Dimension	Indicators
OA1	Relative Advantage	Market development
OA2	Relative Advantage	Customer Acquisition
OA3	Compatibility	Suitability with knowledge
OA4	Compatibility	Conformity with knowledge
OA5	Compatibility	Organizational compatibility
OA6	Trialability	Ease of exploration
OA7	Trialability	Correcting errors

3. HYPOTHESES DEVELOPMENT

According to the authors, there is a correlation between market orientation, adoption of e-commerce, O2O channel adoption, and SME performance (Figure 1), defined as follows.

H1: Market orientation has a positive direct effect on SME performance

Market orientation directly impacts the performance of businesses in emerging nations, enhancing the results (Keilor et al., 2015). Hossain et al. (2019) discovered that market orientation is essential for SME companies to improve their non-financial and financial performance. This can be attributed to the need for SME company owners to constantly update themselves on business market trends, followed by collecting in-depth market data. The greater MSMEs' market orientation, the better their performance. This is consistent with the findings of Acosta et al. (2018), who concluded that the role of market orientation could increase the favorable impact of SMEs on performance. In addition, Iyer et al. (2019) said that a company's performance could be improved through market orientation. Therefore, it can be argued that the hypothesized relationship between market orientation and SME performance is positive and direct.

H2: Market orientation has a positive direct effect on e-commerce adoption

Huang et al. (2019) discovered that the introduction of internet technology into marketing operations boosts the impact of market orientation upon core marketing abilities and improves performance. E-commerce applications have significant potential for leveraging IT to enhance market orientation capabilities, fulfilling vital company goals (Gajda, K. 2020). A higher MO is obtained by utilizing IT to support MO components (market intelligence generation, responsiveness, and dissemination). According to research by Herrero et al. (2018), market orientation can promote the adoption of e-commerce. In addition, Mohan et al. (2019) assert that market orientation can boost e-commerce adoption. Therefore, it can be argued that the hypothesis formulated is market orientation has a favorable direct effect on e-commerce adoption.

H3: E-commerce adoption has a positive direct effect on SME performance

According to multiple sources, incorporating e-business activities in SMEs gives e-business adoption benefits and business capabilities that can be categorized as communicational or informative functions, transactional or collaborative processes, and business intelligence functions. Examples of e-commerce communication functions include service or product advertising and consumer involvement. Hussain et al. (2020) found that the role of e-commerce adoption can improve the performance of small and medium-sized enterprises (SMEs). According to research conducted by Hussain et al. in 2022, e-commerce directly impacts SMEs' performance. Therefore, it can be inferred that the hypothesized relationship between e-commerce adoption and SME performance is positive and direct.

H4: Market orientation has a positive direct effect on SME performance moderated by O2O channel adoption

The acronym O2O stands for online to offline. This innovative channel strategy mixes internet and offline sales. This new model supplements the existing purchasing strategy by incorporating online components for traditional clients or combining traditional shopping with digital or mobile shopping. With the implementation of the O2O channel, it is anticipated that SME performance will improve. This is consistent with Suryani et al. (2022)'s conclusion that the O2O channel can strengthen the link between MO and SME performance. Therefore, it can be inferred that using O2O channels positively mediates the hypothesized relationship between market orientation and SME performance.

Based on the above hypotheses, the research framework is presented in figure 1 below:

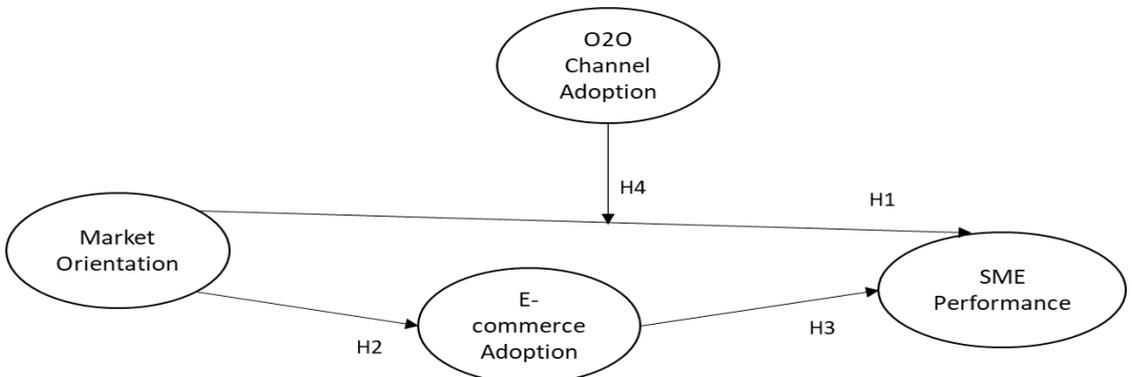


Figure 1. Research hypothesis

4. METHODOLOGY

The design of this study is quantitative and cross-sectional. The Java region accounted for 92% of O2O Mitra's e-commerce shop activity, while only 8% came from outside

the Java region. To identify and classify eligible SMEs as research units for this study, we utilized the concept of SMEs stated by Law No. 20 of 2008 on SMEs. According to the law, SMEs (small firms) are businesses with annual sales of less than Rp2.5 billion. This study focused on small and medium-sized enterprises (SMEs) in Indonesia selling airtime cellular refill pulses via the e-commerce platform O2O Mitra in NTB, Yogyakarta, and Central Java. Heads, owners, or shift leaders participated in the survey, as did individuals who held positions as store heads or shift leaders and those in whom the store owner had confidence. After eliminating all insufficient responses, the authors analyzed 382 responses. Respondents were requested to complete a Survey Monkey questionnaire, from which these results were derived. The authors collected the responses using a simple random sample approach.

From April to May of 2022, survey data were obtained over two months. The authors utilized a 4-point Likert scale to collect responses from respondents, with 1 representing "strongly disagree" and 4 representing "strongly agree." Several doctorate students and five owners/managers of SMEs participated in a pilot study to evaluate the questionnaires' content and face validity. Therefore, the wording and order of these questions were modified. Covariant-based structural equation modeling was employed to assess the instrument's construct reliability and discriminant validity (CB-SEM). Utilizing Lisrel software with CB-SEM, the data was analyzed. CB-SEM was chosen over covariance-based modeling for such a large sample size due to its advantages (Hair et al., 2017). The model was implemented through structural analysis, measurement, and hypothesis testing.

5. RESULTS

55% of the 382 respondents were female, and 45% were male; they were all from Java (Indonesia) and outside of Java; 62% were business owners, and 38% were business managers. Most business owners were in their early twenties; 90% of participants were below 45, and only 10% were older than 45. 36% of the participants had a bachelor's degree or higher, 60% had a high school diploma, and the rest held a variety of secondary and basic education degrees.

All organizations utilized this Mitra O2O e-commerce platform. In 94% of instances, there were five or fewer workers. Approximately 5% of businesses had between 6 and 15 employees, whereas only 1% had more than 11 employees. The majority (98%) were medium- and small-sized enterprises with annual sales of less than Rp1 billion. Only 2% had annual revenues that exceeded Rp1 billion. The majority (90%) of firms are quite young. Table 4 displays the descriptive analysis of the four variables included in this study. MO1 obtained the highest score of 93.1%, while EA1 received the lowest score of 56.9%. Each variable averaged a score greater than 55%. This suggests that the respondents acknowledged its indicators. Nonetheless, the score remained below 60%, suggesting that each indicator and variable may be enhanced.

Table 4. Descriptive Analysis of Indicators

Indicators	Respondent Answer				Total score	% Score
	1	2	3	4		
MO1	0	20	66	296	1422	93,10%
MO2	24	77	140	141	1162	76,00%
MO3	26	96	148	112	1110	72,60%
MO4	22	82	153	125	1145	74,90%
MO5	28	92	141	121	1119	73,20%
MO6	19	90	161	112	1130	74,00%
Market Orientation					7088	77,30%
EA1	78	161	103	40	869	56,90%
EA2	19	92	114	157	1173	76,80%
EA3	14	51	129	188	1255	82,10%
EA4	11	77	120	174	1221	79,90%
EA5	68	144	106	64	930	60,90%
EA6	17	103	174	88	1097	71,80%
EA7	27	150	130	75	1017	66,60%
EA8	15	110	177	80	1086	71,10%
EA9	77	153	97	55	894	58,50%
E-commerce Adoption					9542	69,40%
Indicators	Respondent Answer				Total score	% Score
	1	2	3	4		
OA1	41	113	153	75	1026	67,10%
OA2	48	117	146	71	1004	65,70%
OA3	21	106	159	96	1094	71,60%
OA4	19	109	150	104	1103	72,20%
OA5	27	87	157	111	1116	73,00%
OA6	13	68	144	157	1209	79,10%
OA7	12	75	156	139	1186	77,60%
O2O Business Adoption					7738	72,30%
MP1	19	117	150	96	1087	71,10%
MP2	17	114	152	99	1097	71,80%
MP3	19	89	147	127	1146	75,00%
MP4	14	69	130	169	1218	79,70%
MP5	18	85	159	120	1145	74,90%
MSME Performance					5693	74,50%

Table 5 displays the examination of the outer model. The analysis results indicate that each indicator has a loading factor of more than 0.70, suggesting that it can be used to analyze the variable under discussion. In addition, the AVE score for each indicator is more than 0.5. In contrast, the CR was greater than 0.70. Thus, the indicators are accurate for evaluating the pertinent variables.

Table 5. Convergent and Reliability Test

Indikator	SLF > 0,5	Error	CR>=0,70	VE>=0,50	Keterangan
Market Orientation			0,9	0,647	Reliabel
MO1	0,712	0,493			Valid
MO2	0,849	0,279			Valid
MO3	0,912	0,168			Valid
MO4	0,868	0,247			Valid
MO5	0,648	0,58			Valid
E-commerce Adoption			0,913	0,601	Reliabel
EA1	0,765	0,415			Valid
EA4	0,704	0,504			Valid
EA5	0,842	0,291			Valid
EA6	0,771	0,406			Valid
EA7	0,786	0,382			Valid
EA8	0,817	0,333			Valid
EA9	0,733	0,463			Valid
O2O Business Adoption			0,887	0,611	Reliabel
OA1	0,745	0,445			Valid
OA2	0,755	0,43			Valid
OA4	0,853	0,272			Valid
OA6	0,794	0,37			Valid
OA7	0,756	0,428			Valid
MSME Performance			0,9	0,696	Reliabel
MP1	0,937	0,122			Valid
MP2	0,945	0,107			Valid
MP3	0,756	0,428			Valid
MP4	0,664	0,559			Valid

The R-square test was used to examine the hypothesis. According to Table 6, the R2 coefficient of e-commerce adoption in Model 1 was 1. This indicates that market orientation influenced e-commerce adoption by 54,9 percentage points.

Table 6. Path Coefficient and R2

Relationship	Standardized (Path Coefficient)	T-value	R-Square Parsial	R-square Simultan
Model 1 MO ---> EA	0,741	11,387	-	0,549
Model 2 MO ---> MP	0,272	4,323	0,207	0,752
EA ---> MP	0,473	7,179	0,368	
OA ---> MP	0,278	6,861	0,156	
MO*OA ---> MP	-0,078	-2,206	0,021	

In Model 2 (moderation), R2 was 0.752% for SME performance. Thus, market orientation, e-commerce adoption, and O2O channel adoption, moderated by O2O channel adoption, influenced SME performance by 75.2%. In addition, as shown in Table 7 below, all of the study's hypotheses are accepted because their t-values are greater than 1.96.

Table 7. Hypothesis Test

Hipotesis	Relationship	Standardized (Path Coefficient)	T-value (> 1,96)	Hypothesis Result
Direct Effect				
1	MO ---> EA	0,741	11,387	Accepted
2	MO ---> MP	0,272	4,323	Accepted
3	EA ---> MP	0,473	7,179	Accepted
4	MO*OA ---> MP	-0,078	-2,206	Accepted
-	OA ---> MP	0,278	6,861	Accepted

6. DISCUSSION

H1: Market orientation has a positive direct effect on E-commerce adoption

The statistical test results recapitulation table shows that the path coefficient between market orientation (MO) and e-commerce adoption (EA) is 0.741, with a t value of 11,387. Due to the fact that $t = 11,387 > t \text{ table} = 1,96$, market orientation has a major impact on e-commerce adoption. The positive path coefficient value of 0.741 indicates that market orientation and e-commerce adoption are positively correlated, indicating that as market orientation increases, e-commerce adoption will also increase, and vice versa: if market orientation decreases, e-commerce adoption will decrease.

This is consistent with previous research on the use of internet technology to enhance market orientation as a distinguishing characteristic that can lead to a long-term competitive advantage (Liu et al., 2020). The use of internet technology in marketing operations increases the influence of market orientation on key marketing capabilities, which improves performance, according to Huang et al. (2019). Additionally, Huang et al. (2019) argued that the success of technology adoption (such as e-business or e-commerce) is contingent on the capacity to perceive developing market technologies and provide relevant solutions. Implementing a new IT strategy is, therefore, vital for market orientation, which impacts the success of e-commerce.

H2: Market orientation has a positive direct effect on SME performance

The table of statistical test findings recapitulates a path coefficient of 0.272 and a t value of 4.323 between market orientation (MO) and MSME performance (MP). H_0 is rejected while H_3 is approved because $t = 4.323 > t_{table} = 1.96$. Therefore, we can conclude that market orientation strongly affects the performance of SMEs. According to the positive path coefficient value of 0.272, market orientation and MSME performance have a positive association, meaning that market orientation will enhance MSME performance and vice versa. If market orientation is low, MSME performance will decline.

The study's findings are consistent with previous research on the relationship between market orientation and corporate performance (Guo, et al., 2019). Alabsy (2021) discovered a correlation between the business performance of micro, small, and medium-sized enterprises and their market orientation. Market orientation has a favorable and statistically significant effect on the business success of MSMEs. The business performance of a small and medium-sized enterprise (SME) is determined by its ability to meet consumer demands and seize unrealized possibilities. It was discovered that market orientation directly affects the success of business firms in emerging nations, as it complements the results (Keilor et al., 2015). Hossain et al. (2019) discovered that market orientation is essential for SMEs to improve their financial and non-financial performance. This can be explained by the need for MSME business owners to constantly update themselves on current market trends, followed by collecting in-depth market information. The greater MSMEs' market orientation, the better their performance. Implementing a market-oriented culture, or how firms view the market's needs, wants, and expectations, can enhance performance (Andiyanto et al., 2017). According to Zhang et al. (2020), business performance should be evaluated to gauge organizational success, as it is the operational capacity to meet the needs of the company's key shareholders. SMBs must comprehend the market orientation concept to realize enhanced success (Amin et al., 2016).

H3: E-commerce adoption has a positive direct effect on SME performance

The path coefficient between e-commerce adoption (EA) and MSME performance (MP), as shown in the statistical test results recapitulation table, is 0.473 with a t value

of 7.179. H_0 is rejected, and H_2 is accepted because the t values are $7.179 > t$ table 1.96. Therefore, it is evident that adopting E-commerce significantly impacts MSMEs' performance.

The positive path coefficient value of 0.473, which demonstrates a positive relationship between MSME performance and e-commerce adoption, indicates that the greater the e-commerce adoption, the greater the MSME performance, and vice versa: the lesser the e-commerce adoption, the greater the MSME performance. Information sharing, technical application, buy-sell transactions, financial transactions, and competitiveness are the five pillars of e-commerce. E-commerce is the electronic gathering, processing, storage, distribution, and sharing of data using information and communication technology (Sergi and Esposito, 2019). Innovation diffusion theory (IDT) (Lee, 2021) and technology-organization-environment (TOE) (Zhang et al., 2019) are theories or frameworks that consider the technological, external, and internal components of an organization in the study of drivers for innovative technology diffusion. Even though the majority of people are still reluctant to use it, e-commerce has a positive impact on the lives of people.

Moreover, micro, small, and medium-sized enterprises (MSMEs) in the business sector have ample room to expand their e-commerce sales. Indirectly, MSMEs are required to adapt their previous offline transactional procedures. Then, during the pandemic, it was posted online. E-commerce is believed to increase the sales and performance of SME actors.

H4: Market orientation has a positive direct effect on SME performance moderated by O2O channel adoption

The path coefficient between market orientation moderated by O2O business adoption ($MO*OA$) and MSME performance (MP) is -0.078 with a t value of -2.206, as shown in table 10 of the statistical test results recapitulation. Because H_0 is rejected and H_4 is accepted, the value of t is H_0 values -2.206 - t table -1.96. In conclusion, the performance of MSMEs is, therefore, significantly impacted by market orientation, which is moderated by O2O business adoption. Online to offline (O2O), one of the most important e-commerce business models, combines the benefits of online and offline modes to help companies increase their customer base, market share, and marketing skills, among other things (Liao & Yang, 2020). It is described as "e-commerce that combines buying, selling, and storing goods or services online, with consumption in brick-and-mortar stores" (Wan et al., 2019). Baesens et al. (2016) state that customers and businesses gain from a more effective transactional model when a real business presence and supporting resources are integrated with online information services and transaction capabilities. Lower marketing costs, greater accessibility to potential customers, and a wider distribution of marketing campaigns are all benefits of O2O (Pan et al., 2019).

In addition, consumer desire to utilize online buying is known as O2O channel model acceptability. Groupon (Groupon.com) is a common example of "online to offline" marketing since it uses a website or mobile ad to give discounts for physical locations such as restaurants and theater tickets. In contrast, an example of "offline to online" is when customers use Facebook in physical stores to share product information with their friends and family, pushing them to make a purchase. Shopkick's shopping app (Shopkick.com), which connects with major retailers and brands to offer discounts and rewards to customers in-store, is another example. Customers can earn points at the store by entering, scanning merchandise, purchasing items, and redeeming reward cards.

Adoption of O2O channels in addition to e-commerce ultimately increases SME success. The adoption of e-commerce should act as a buffer between the direct consequences of market orientation and SME performance. The results of this study indicate that when e-commerce and O2O channel usage are coupled, SME performance is increased even more. The company will be more successful if it aggressively pursues O2O channel adoption.

7. CONCLUSION

Using the O2O model, distribution of innovation (DOI), and the TOE (technology, organizational, and environmental) theory, this study aimed to learn more about market-oriented features and how they influence e-commerce adoption and business performance in SME Mitra e-commerce. A new retail sector analysis indicates that e-commerce adoption substantially impacts the success of small and medium-sized enterprises (SMEs), corroborating the study's empirical findings. This data complements earlier Deloitte research indicating that digital technology might help Indonesian SMEs increase income by up to 80 percent. The results also suggest that market orientation affects e-commerce adoption positively. The second study confirms the findings of the first, which suggested that market orientation affects the adoption of e-commerce, which is reduced by the usage of O2O channels and the performance of SMEs.

8. RESEARCH IMPLICATIONS

This study's findings revealed a high link between factors. Adopting e-commerce can increase long-term output, markets, and financial success despite the danger of short-term losses. In contrast to organizations with 0–2 years of experience, 50 percent of the 100 replies were from companies with 2–4 years of experience (short-term innovation). This research is limited to elements that can affect the performance of SMEs. With a tiny sample size drawn from Mitra e-commerce, primarily in Java, and a negligible percentage outside of Java, the focus of this study was on SMEs. According to the authors, future research should encompass additional industries and small-scale SMEs.

Further research should be conducted in various industries (not just Mitra e-commerce), possibly in numerous cities with sufficient sample sizes. This study focused on the

overall market orientation of firms. However, future study is expected to address other market orientations, including radical and incremental.

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