"Determinants of MSME Sales Performance: Evidence from E-Commerce and E-Payment Adoption in Rappocini District, Makassar City"

Andi Muh Rayhan Ramadhan; Rasyidah Bakri; Rusli M.Rukka;
Siti Hardiyanti; Ni Made Viantika
Agribusiness Study Program, Faculty of Agriculture, Hasanuddin University, Makassar, Indonesia

Email: idhabakri@yahoo.com

Abstract

The rapid development of digital technologies has encouraged e-commerce and e-payment adoption among Micro, Small, and Medium Enterprises (MSMEs) in Indonesia. Despite their contribution to the national economy, studies examining digital transaction technologies' effectiveness on MSME sales performance locally remain limited. This study analyzes the effects of e-commerce and e-payment adoption on MSME sales in Rappocini District, Makassar City. A quantitative approach used primary data from structured questionnaires of 30 MSME actors selected via purposive sampling. The data were analyzed using multiple linear regression with SPSS. Results show e-commerce adoption has a positive significant effect on MSME sales ($\beta > 0$; $p < 0.05$), as does e-payment usage ($\beta > 0$; $p < 0.05$). Simultaneously, both variables significantly influence sales performance. These findings suggest that strengthening digital platforms and cashless payment systems can enhance MSME sales. Policy interventions should focus on improving digital literacy, infrastructure, and access to digital financial services to accelerate MSME digital transformation.

Abstrak

Perkembangan pesat teknologi digital telah mendorong adopsi e-commerce dan e-payment di kalangan Usaha Mikro, Kecil, dan Menengah (UMKM) di Indonesia. Meskipun kontribusinya terhadap perekonomian nasional cukup besar, studi yang mengkaji efektivitas teknologi transaksi digital terhadap kinerja penjualan UMKM secara lokal masih terbatas. Penelitian ini menganalisis pengaruh adopsi e-commerce dan e-payment terhadap penjualan UMKM di Kecamatan Rappocini, Kota Makassar. Pendekatan kuantitatif digunakan dengan data primer yang diperoleh melalui kuesioner terstruktur kepada 30 pelaku UMKM yang dipilih secara purposive sampling. Data dianalisis menggunakan regresi linier berganda dengan SPSS. Hasil penelitian menunjukkan bahwa adopsi e-commerce berpengaruh positif signifikan terhadap penjualan UMKM ($\beta > 0$; $p < 0,05$), begitu pula dengan penggunaan e-payment ($\beta > 0$; $p < 0,05$). Secara simultan, kedua variabel tersebut berpengaruh signifikan terhadap kinerja penjualan. Temuan ini menunjukkan bahwa penguatan platform digital dan sistem pembayaran non-tunai dapat meningkatkan penjualan UMKM. Intervensi kebijakan sebaiknya berfokus pada peningkatan literasi digital, infrastruktur, dan akses terhadap layanan keuangan digital guna mempercepat transformasi digital UMKM.

1. INTRODUCTION

The digital era has fundamentally changed the business landscape in Indonesia, this affects various sectors in Indonesia, especially in the Micro, Small, and Medium Enterprises (MSMEs) sector. The development of information, communication, and payment technology, especially e-commerce and e-payment, has opened up many new opportunities for MSMEs who want to start and who are already undergoing efforts to expand their market reach and improve their operational efficiency. The digital era has presented innovations in the form of electronic commerce (e-commerce) and digital payment systems (e-payment), which offer opportunities in expanding market access, developing distribution networks, improving MSME operational efficiency, and making payments easier (Bukama et al., 2024).

In today's rapid digital era, entrepreneurship can be encouraged to open entrepreneurs easily with various advantages and conveniences obtained. With many entrepreneurs, the emergence of competition in the business world is inevitable (Aulia et al., 2021).

The competition is getting tighter day by day. Various innovations have been introduced to attract buyers. Product sales must also consider the reality of technological developments that tend to increase revenue. However, it will be an obstacle for MSMEs in Indonesia today. Due to a lack of technical expertise, Indonesia's MSMEs lag behind in their marketing strategies. One form of innovation that is starting to grow rapidly in the buying and selling industry is the online shopping system. However, amid rapid development of technology that offers a variety of conveniences and opportunities for entrepreneurs, MSMEs in Indonesia often lag behind in their marketing strategies, especially in utilizing e-commerce and e-payment which is now one of the most important innovations in the trade industry (Ramadhani & Hana, 2024).

This analysis will help all MSMEs understand the role of e-commerce in increasing MSME sales, as well as the challenges that may be faced in this process. Furthermore, this can provide valuable insights and knowledge to stakeholders, the government, and MSME business actors to optimize the benefits of the presence of e-commerce in the MSME business world (Raharti et al., 2024).

The economic growth of Makassar City once again shows growth dynamics that reflect the strengths and challenges faced by this city. According to BPS Makassar City (2023), Makassar City's economic growth in 2023 will grow by 5.31 percent, lower than the achievement in 2022 which experienced a growth of 5.40 percent, higher than the achievement of South Sulawesi and the National in 2023 which experienced economic growth of 4.51 percent and 5.05 percent, respectively. This shows that the economic progress of Makassar City is more stable, although slightly lower than the previous year.

Business actors in Rappocini District, Makassar City. Many have carried out marketing strategies with systems using e-commerce and e-payment, especially business actors engaged in the culinary sector. The existence of e-commerce and e-payment is very helpful for MSMEs in Rappocini District in increasing sales. E-commerce and e-payment can also be a free promotion for a business. The existence of e-commerce and e-payment also has an effect on the increase in the number of MSMEs in Rappocini District.

Technological developments continue to drive the evolution of e-commerce. Recent trends include the use of artificial intelligence for personalization of customer experiences, augmented reality to enhance the online shopping experience, and blockchain to improve transaction security (Ibrahim et al., 2023). In addition, the growth of the sharing economy and multi-sided platforms have created new e-commerce business models that challenge traditional understandings of value exchange (Wibowo, 2023)

The impact of e-commerce in increasing MSME sales is quite significant. Research conducted (Lyonita et al., 2024) shows that the use of e-commerce can increase MSME sales by up to 20%-30%. E-commerce allows MSMEs to access a wider market, both domestic and international markets, thereby increasing the competitiveness of MSMEs in market competition (Ubaidillah et al., 2024). In addition, e-commerce also helps MSMEs in optimizing the transaction process, reducing operational costs, and facilitating communication with customers, all of which contribute to MSME sales (Raharti et al., 2024).

E-payment is a transaction activity carried out by business people, banks, or public services where the transaction process is through a telecommunication network or by using modern technology (Nugraha, 2022). e-payment, is a transaction method that can be carried out digitally via the internet or other electronic devices, without using cash or checks (Sadeli, 2022). With e-payment, users can make payments in various ways, such as credit/debit cards, digital wallets, and online bank transfers. The use of e-payment has increased rapidly in line with technological developments and consumer needs for ease of transactions (Tarantang et al., 2019).

In Amaratya & Afiyati (2024), the criteria for new MSMEs are regulated in Articles 35 to 36 of the MSME PP. Based on this article, MSMEs are grouped based on the criteria of business capital or annual sales results. The business capital criteria are used for the establishment or registration of MSME activities established after the MSME PP takes effect. The capital criteria consist of. Micro Enterprises have a business capital of up to IDR 1,000,000,000.00 (one billion rupiah), excluding land and buildings where they do business, as well as annual sales of up to IDR 2,000,000,000.00 (two billion rupiah). Small Businesses have a business capital of more than Rp1,000,000,000.00 (one billion rupiah) to Rp5,000,000,000.00 (five billion rupiah), excluding land and buildings where they do

business, with annual sales of more than Rp2,000,000,000.00 (two billion rupiah) to Rp15,000,000,000.00 (fifteen billion rupiah). Medium Enterprises have a business capital of more than IDR 5,000,000,000.00 (five billion rupiah) to IDR 10,000,000,000.00 (ten billion rupiah), excluding land and buildings where they do business, as well as annual sales of more than IDR 15,000,000,000.00 (fifteen billion rupiah) to IDR 50,000,000,000.00 (fifty billion rupiah).

This study examines the influence of e-commerce and e-payment simultaneously on increasing MSME sales in Makassar City. This study examines the influence of e-commerce and e-payment simultaneously on increasing MSME sales in Makassar City. This study examines the influence of e-commerce and e-payment simultaneously on increasing MSME sales in Makassar City.

Digitalization has become a key factor in transforming economic activities, including in the Micro, Small, and Medium Enterprises (MSMEs) sector in Indonesia. The development of information technology, communication, and digital payment systems — especially e-commerce and e-payment — creates opportunities for MSMEs to expand market access, improve operational efficiency, and accelerate transaction processes. Various studies show that utilizing digital technology has the potential to enhance the competitiveness and sales performance of MSMEs, especially amidst the increasing intensity of business competition in the digital era.

However, the implementation of e-commerce and e-payment at the urban MSME level still faces various challenges, such as limited digital literacy, technical skills, and technology-based marketing strategies. This condition is also seen in MSMEs in Makassar City, especially in the Rappocini District, which is one of the centers of urban economic and entrepreneurial activities. Although the economic growth of Makassar City is relatively stable and higher than the regional and national average, not all MSMEs are able to optimally utilize digital technology to increase sales and expand market reach.

A number of previous studies have examined the impact of e-commerce and e-payment on the performance of MSMEs, but most were conducted at the national or provincial level, or used a broad sectoral approach. In addition, there are still limited empirical studies that specifically analyze the simultaneous impact of e-commerce and e-payment at the sub-district level, particularly in urban areas of Eastern Indonesia. These limitations result in a lack of contextual empirical evidence that can be used as a basis for policy formulation and MSME development strategies at the local level.

Based on these conditions, the research gap in this study lies in the lack of empirical studies that examine both partially and simultaneously the effect of e-commerce and e-payment on MSME sales at the sub-district level in urban areas.

Therefore, this study aims to analyze the effect of e-commerce and e-payment, both

partially and simultaneously, on MSME sales in Rappocini Sub-district, Makassar City. This research is expected to provide an empirical contribution at the micro-territorial level and serve as a reference for local governments and MSME actors in formulating strategies to accelerate digital transformation of MSMEs in urban areas of Eastern Indonesia.

2. RESEARCH METHOD

This research is located at Micro, Small, and Medium Enterprises (MSMEs) in Rappocini District. The selection of the research location was done intentionally or purposively. The reason the researcher chose MSMEs in Rappocini District is because this area is considered by the researcher to have a rapidly growing number of Micro, Small, and Medium Enterprises (MSMEs), especially in the culinary sector, and the culinary business actors in this area mostly use e-commerce and e-payment platforms, making it a relevant location to evaluate the impact of e-commerce and e-payment on sales. The sampling technique used in this study is non-probability sampling with purposive sampling. Purposive sampling is a sampling technique that is not based on random selection, area, or strata, but based on considerations that focus on specific objectives. The sample in this study consisted of 30 MSMEs in the Rappocini District, Makassar City with Google Form as a data collection tool.

The research variables consisted of X1 e-commerce independent variables with indicators of reach, customer satisfaction, communication tools, marketing efficiency, and ease of access. X2 e-payment with indicators of ease of transactions, payment coverage, transaction security. Sales dependent variable Y with indicators of sales volume, transaction frequency, digital reach, revenue from sales.

Non-probability sampling was applied using a purposive sampling technique, where samples were selected based on specific criteria, and a total of 30 MSME actors were obtained who were willing to be respondents. With this limited number of samples, the results of this study need to be interpreted with caution and are not intended for broad generalization, but at least can depict the conditions of some of the MSMEs around the research location.

3. RESULT AND DISCUSSION

Descriptive Statistics Analysis

The respondents in this study are MSME entrepreneurs utilizing e-commerce and e-payment, located in Rappocini District, Makassar City, with a total of 30 MSME owners. The questionnaire was designed using Google Forms and distributed online by sending the link created by the researcher to the business owners. A total of 30 completed

questionnaires were returned, all of which were filled out accurately and completely. Thus, the questionnaire response rate is 100 percent.

Table 1. Descriptive Analysis

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
E-commerce	30	18,00	25,00	22,7333	1,89251
E-payment	30	16,00	20,00	19,4000	1,27577
Penjualan	30	14,00	20,00	19,3000	1,48904
Valid N (listwise)	30				

The results of the descriptive statistical analysis showed that e-commerce had an average score of 22.73 with a standard definition of 1.89, which indicated that the majority of respondents had a fairly positive perception of e-commerce, although there were variations in their responses. Meanwhile, e-payment has an average score of 19.40 with a standard definition of 1.28, indicating that respondents generally have a good experience with e-payment with a more uniform perception than e-commerce. In terms of sales, the average value of 19.30 with a standard definition of 1.49 indicates that the increase in MSME sales tends to be high, although there is a slight variation in responses.

Validity Test

Validity is a measure that shows the level of validity and validity of a research instrument. An instrument is said to be valid if it is able to measure what should be measured and is able to reveal the data being studied appropriately. The validity test of each item is carried out by calculating the correlation of Pearson's Product Moment between the item's score and the total score. A question item is said to be valid if the significance < 0.05 and the r-count is greater than the r-table. The full validity test results are:

Table 2. Validity Test

Indicator	r-count	r-table	Sig	Standard Sig	Information
X1.1	0,818	0,361	<0,001		Valid
X1.2	0,753	0,361	<0,001		Valid
X1.3	0,909	0,361	<0,001		Valid
X1,4	0,917	0,361	<0,001		Valid
X1.5	0,818	0,361	<0,001		Valid
X2.1	0,890	0,361	<0,001		Valid
X2.2	0,927	0,361	<0,001	< 0,05	Valid
X2.3	0,829	0,361	<0,001		Valid
X2.4	0,904	0,361	<0,001		Valid
Y.1	0,842	0,361	<0,01		Valid
Y.2	0,886	0,361	<0,01		Valid

Y.3	0,817	0,361	<0,01	Valid
Y.4	0,865	0,361	<0,01	Valid

Table 2. presents the instruments used in this study are declared valid. The validity test results indicate that all indicators used to measure the variables of e-commerce, e-payment, and sales are valid. This is because the obtained significance value is less than 0.05 (p < 0.05), and all variable indicators have an r-count value greater than the r-table value of 0.361.

Reliability Test

Data that is tested for reliability is data that has passed the validity test, where only valid statements are further analyzed. In this study, reliability was tested using Cronbach's alpha value of 0.6. A measuring instrument is considered reliable if the Cronbach's alpha value obtained is greater than 0.6 (Ghazali, 2018).

Table 3. Reability Test

No	Variable	Alpha	Cronbach Alpha	Information
1	E-commerce	0,876	> 0,6	Reliable
2	E-payment.	0,906	> 0,6	Reliable
3	Sales	0,852	> 0,6	Reliable

Multiple Linear Regression Analysis Results

This analysis is used to determine the extent of the influence of e-commerce (X1) and e-payment (X2) on sales (Y). The output results of the multiple linear regression can be seen in the following table.

Table 4. Multiple Linear Regression

Coefficients[a]						
Model	Unstandardized Coefficients		Standardized Coefficients	t	sig
	B	*Std. Error*			
1 (Constant)	-0,647	1,818		-0,356	0,725
E-commerce	0,360	0,115	0,382	3,120	0,004
E-payment	0,591	0,122	0,593	4,841	<0,001
a. Dependent variabel: Sales					

Based on the results of multiple linear regression, the regression equation model is obtained as follows:

$$Y = -0,647 + 0,360.X1 + 0,591.X2 + e$$

From the above equation, it can be interpreted, namely:

1. The constant of -0.647 means that if the variables e-commerce (X_1) and e-payment (X_2) are equal to zero, then the sales value (Y) will be at -0.647. However, this is often only a mathematical representation because practically a zero value may be rare or absurd.
2. The regression coefficient for e-commerce of 0.360 indicates that if the value of the e-commerce variable (X_1) increases by one unit, then the sales value (Y) will increase by 0.214, assuming the other independent variable, i.e. e-payment (X_2), remains constant
3. The regression coefficient for e-payment of 0.591 indicates that if the value of the e-payment variable (X_2) increases by one unit, then the sales value (Y) will increase by 0.657, assuming the other independent variable, namely e-commerce (X_1), remains constant.

Partial Test

This test is used to determine the analysis of the influence of e-commerce (X1) and e-payment (X2), which can be observed by comparing the t-counb value with the t-table value using a two-tailed test. The results of the t-significance test for the first model in this study can be seen in the following table:

Table 5. Partial Test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0,647	1,818		-0,356	0,725
	E-commerce	0,360	0,115	0,382	3,120	0,004
	E-payment	0,591	0,122	0,593	4,841	<0,001

a. *Dependent variabel*: Penjualan

Table 5. presents the t-table value is 2.052. The e-commerce variable has a t-count value of 3.120. Since the t-count value is greater than the t-table value (3.120 > 2.052), the e-commerce variable has a significant influence on sales. Meanwhile, the e-payment variable has a t-count value of 4.841. The results also show that the t-count value is greater than the t-table value (4.841 > 2.052), indicating that the e-payment variable also has a significant influence on sales. Thus, both variables, e-commerce and e-payment, have a significant partial influence on sales. Among them, e-payment has a more dominant influence compared to e-commerce, as its t-count value is higher (4.841 compared to 3.120).

Simultaneous Test

In conducting the simultaneous test, the parameter used is by comparing whether F-count > F-table. The test for the simultaneous influence of independent variables on the dependent variable is carried out simultaneously, with the results presented in the following table.

Table 6. Simultaneoust Test

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	98,975	2	49,487	22,941	<,001[b]
	Residual	58,244	27	2,157		
	Total	157,219	29			
a. Dependent Variable: Penjualan						
b. Prediktor : (Konstanta), E-PAYMENT, E-COMMERCE						

Table 6. presents a significance value of <0.001, which is smaller than the significance level of $\alpha = 0.05$, and an f-count value of 22.941, which is greater than the F-table value of 3.350, it indicates that the regression model involving e-commerce and e-payment variables has a significant influence on sales. Thus, the e-commerce and e-payment variables collectively affect the sales of MSMEs.

The Partial Influence of E-commerce and E-payment on MSME Sales in Rappocini istrict, Makassar City

The e-commerce variable obtained a t-count value of 3.120. Because the t-count value is greater than the t-table (3.120 > 2.052). The significance level is 0.001 < 0.050, so it can be said that the e-commerce variable has a significant influence on sales. This is in accordance with research conducted by Yusvita Aprilyan et al., (2022) that the implementation of e-commerce has an effect on increasing sales of Micro, Small and Medium Enterprises in West Lombok Regency.

The e-payment variable obtained a t-count value of 4.841. The results also showed that t-counts were greater than t-tables (4,841 > 2,052). The significance level is 0.001 < 0.050, so it can be said that the e-payment variable has a significant influence on sales. This is not in accordance with the research of Bukama et al., (2024) suggesting that e-payment does not have a significant partial influence on the performance of MSMEs.

E-commerce and E-payment Supervisors Simultaneously Towards MSME Sales in Rappocini District, Makassar City

Based on this study, the result of the f-count value of 22.941 was obtained. The results also show that the f-count is larger than the f-table (22,941 > 3,350). The significance rate is 0.001 < 0.050, so it can be said that e-commerce and e-payment variables have a significant influence on sales. This is not in accordance with the research of Bukama et

al., (2024) entitled "The Effect of E-commerce and E-payment Adoption on the Performance of MSMEs in Penanggungan Village". With the significance results showing a value lower than 0.05, it can be concluded that both e-commerce and e-payment adoption have a simultaneous influence on the performance of MSMEs.

4. CONCLUSION

Conclusion

The partial test results indicate that the e-commerce variable has a significant effect on sales, as well as the e-payment variable having a significant effect on sales, meaning that both e-commerce and e-payment variables have a partial effect on MSME sales. The simultaneous test results show that the e-commerce and e-payment variables have a significant effect on sales, indicating that e-commerce and e-payment variables simultaneously affect MSME sales.

Referring to the results of this study, it can be concluded that to increase sales of MSMEs, especially Culinary MSMEs, MSME actors who have not yet utilized these two platforms should consider using them. It is also hoped that support from the government, from the City of Makassar to the South Sulawesi Provincial Government, can be increased to assist these MSME actors so that their knowledge and competencies regarding e-business can improve and be applied in efforts to develop the culinary businesses of these entrepreneurs.

Furthermore, the author hopes for similar research to be conducted in the future in other locations, or at this research site using a larger sample so that the results can be more valid and convincing.

REFERENCES

Amaratya, V., & Afiyati, N. (2024). Signifikansi Peran Sektor UMKM Dalam Meningkatkan Ekspor. 1, 19–29. https://doi.org/10.62383/sosial.v1i1.48

Aulia, N. A., Hasan, M., Dinar, M., Ahmad, M. I. S., & Supatminingsih, T. (2021). Bagaimana Literasi Kewirausahaan dan Literasi Digital Berpengaruh terhadap Keberlanjutan Usaha Pedagang Pakaian? Journal of Economic Education and Entrepreneurship Studies, 2(1), 110–126. https://doi.org/10.26858/je3s.v2i1.92

Bukama, S., Hanggara, B. T., & Syawli, A. (2024). Pengaruh Adopsi E-commerce dan E-payment terhadap Kinerja UMKM di Kelurahan Penanggungan. Jurnal Pengembangan Teknologi Informasi Dan Ilmu Komputer, 1(1), 1–8.

Ghazali, I. (2018). Aplikasi Analisis Multivariate IBM SPSS 25 (2018th ed.). Badan Penerbit Universitas Diponegoro

Hakim, L. (2020). Analisis Bibliometrik Penelitian Inkubator Bisnis pada Publikasi Ilmiah Terindeks Scopus. Procuratio: Jurnal Ilmiah Manajemen, 8(2), 176–189.

Lyonita, I., Dwi Magrhfirah, P., Putri Mediana, S., Saleha, B., Zebua, A., & Putri Nasution, D. (2024). Pengaruh Penggunaan E-Commerce Terhadap Bisnis Umkm. 1(3), 172–176. https://doi.org/10.62017/jemb.v1i3.827

Moch Rifqi Shihabuddin Al Ubaidillah, M Juniar Fajrus Shalah, & Muhammad Yasin. (2024). UMKM dan E-Commerce Pada Teknologi. MENAWAN : Jurnal Riset Dan Publikasi Ilmu Ekonomi, 2(5), 07–11. https://doi.org/10.61132/menawan.v2i5.757

Noor, S., Guo, Y., Shah, S. H. H., Saqib Nawaz, M., & Butt, A. S. (2020). Bibliometric analysis of social media as a platform for knowledge management. International Journal of Knowledge Management, 16(3), 33–51. https://doi.org/10.4018/IJKM.2020070103

Nugraha, A. I. (2022). Pengaruh Manfaat, Kemudahan, Dan Resiko Terhadap Penggunaan E-Payment Bagi Umkm Kabupaten Sragen Skripsi. 1–117.

Raharti, R., Irwan, M., & Nasution, P. (2024). Analisis Dampak E-Commerce Terhadap Pengaruh Penjualan UMKM. Jurnal Riset Manajemen, 2(1), 171–178. https://doi.org/10.54066/jurma.v2i1.1336

Ramadhani, D. C., & Hana, K. F. (2024). UMKM Naik Kelas : Pengembangan Melalui Digital Marketing dan Sikap Kewirausahaan Islam. Fokus Bisnis Media Pengkajian Manajemen Dan Akuntansi, 23(1), 58–72. https://doi.org/10.32639/fokbis.v23i1.751

Sadeli, N. W. (2022). Analisis Manfaat E-Payment Dari Perspektif Ekonomi Islam. Ar-Ribhu : Jurnal Manajemen Dan Keuangan Syariah, 3(1), 31–43.

Tarantang, J., Awwaliyah, A., Astuti, M., & Munawaroh, M. (2019). PerkembangSistem Pembayaran Digital Pada Era Revolusi Industri 4.0 Di Indonesia. Jurnal Al-Qardh, 4(1), 60–75. https://doi.org/10.23971/jaq.v4i1.1442

Wibowo, A. (2023). Internet of Things (IoT) dalam Ekonomi dan Bisnis Digital. In Penerbit Yayasan Prima Agus Teknik.