

Influence Technological Innovation, Social Media & Marketing Increasing Productivity And Growth Jakarta's UMKM

Aisyah Nur Sadjadah¹, Adristy Yumi Andini², Osly Usman³

¹Department of Digital Business, Universitas Negeri Jakarta, Indonesia.

²Department of Digital Business, Universitas Negeri Jakarta, Indonesia.

³Department of Digital Business, Universitas Negeri Jakarta, Indonesia.

Abstract

The growth and sustainability of DKI Jakarta's micro, small, and medium enterprises (UMKM) in the current digital era is greatly influenced by their ability to utilize technological innovation, social media, and effective, interactive, and creative marketing strategies. This research aims to study the effect of using technological innovation, social media and creative, interactive and effective marketing media on the productivity and growth rate of UMKM in DKI Jakarta. This case study was conducted on Jakarta residents, and data was collected through a questionnaire survey. The results of the analysis show that DKI Jakarta UMKM that are successful in utilizing the latest technology and integrating it into their daily operations experience a significant increase in productivity and business growth. The use of apps, interactive marketing on social media and product and service innovation are key factors that support the success of this study. This research makes an important contribution in understanding the role of technology, marketing media and social media in supporting DKI Jakarta UMKM. The implication of the findings of this research is the importance of training and mentoring in assisting DKI Jakarta UMKM in developing their digital skills. In addition, cooperation with e-commerce platforms and the use of interactive marketing strategies also need to be improved.

Keyword: technological innovation; social media; marketing media; company productivity; company growth.

1. Introduction

The Effect of Technological Innovation, Social Media, Effective, Interactive, and Innovative Marketing Media in Improving Company Productivity to Support Company Growth (UMKM): A Case Study of the Jakarta Community explores the complex dynamics of UMKM in Jakarta. This study will examine the multivariate interactions of various key variables in the UMKM ecosystem in Jakarta.

Technological innovation in UMKM in Jakarta refers to the creation and application of new technologies, systems, processes, and tools, and to produce significant advances or breakthroughs in the development and growth of UMKM in Jakarta. Technological innovation can affect business efficiency and results, expand markets, change business models, and attract new customers. Technological innovation includes introducing new technology into production and consumption. Technological innovation can have a positive impact on the productivity and success of a company, and it is important for companies to develop product and technology innovation strategies to remain competitive and relevant in their industry. There are several UMKM in Jakarta that have several obstacles in keeping up with the rapid development of technology in this era of globalization. The use of technology is becoming increasingly important to support various activities, including communication, information, and transportation. Lack of technological knowledge and skills is one of the main obstacles that prevent UMKM in Jakarta from competing in a dynamic business environment.

Social media is a digital technology that allows UMKM Jakarta to create and share information, interests, ideas and other forms of expression through virtual communities and social media networks. Social media platforms are interactive Internet Web 2.0 applications that allow users to create and share content such as text messages or comments, photos, digital videos, and data generated during any interaction any online. Social media can play an important role in the marketing strategies of UMKM in Jakarta, especially with relatively new applications such as tiktok, signal and clubhouse join established social networks such as facebook, youtube and instagram. Social media is used to market products, promote brands, connect with customers, and develop new business. Social media can help UMKM in Jakarta develop relationships with customers and improve communication between consumers, coworkers, and workers. Using social media can be very beneficial in managing and building connections within a business network. UMKM in Jakarta face challenges in adopting and using social media due to a lack of information technology knowledge and skills.

Marketing media refers to the channels and platforms that UMKM in Jakarta can use to promote their products or services to their target audience. Marketing media can include traditional media such as radio, television, and print media, as well as digital media such as social media, email, and search engines. The use of marketing media is essential for UMKM in Jakarta to reach their target audience and promote their brand, products or services effectively. In particular, social media marketing has become increasingly popular in recent years due to the widespread use of social media platforms by consumers. Social media marketing involves using social media platforms to connect with audiences, build business brands, increase sales and boost website traffic. New media marketing is another type of marketing media that focuses on promoting brands and selling products and services through established and emerging online channels. The goal of media marketing is to get consumers involved with brands, engaging them in a way that increases awareness and correlates with

sales. The COVID-19 pandemic is one of the reasons why UMKM in Jakarta increasingly need to adopt and use digital marketing strategies, including social media marketing, to maintain business continuity and reach your customers.

Business productivity measures a company's efficiency in converting inputs, such as labor and capital, into outputs, such as goods or services. Productivity is a measure of economic or business performance, indicating how effectively people, businesses, industries and the economy as a whole convert inputs into outputs. Business productivity can be measured at multiple levels, including individual productivity, labor productivity, industry productivity, team or department productivity, and national or global productivity. Business productivity refers to the efficiency and effectiveness of a business in using its resources to produce goods or services. It is a measure of how well a business can use inputs such as labor, capital, technology, and time to produce desired results. Productivity is critical for businesses as it has a direct impact on profits, competitiveness and overall success.

Business growth refers to the expansion of a company's operations, which can be measured in various ways, such as an increase in revenue, market reach, change in profit or product line. Business growth is a function of the business life cycle, industry growth trends, and the owner's desire to build equity. A growth strategy is a plan that a company makes to expand its business in certain aspects, such as annual revenue, number of customers, or number of products. Company growth is reflected in the development of the business over time. This includes measurable increases in scale, revenue, market share and other key performance indicators. Business growth is a fundamental goal for most companies as it signals success and can increase profitability, market influence and overall business sustainability.

2. Literature Review

2.1 Thecnological Innovation

Innovation is not only creating a new idea, but also involves combining existing ideas in a new and unique way. Technological innovation emphasizes collaboration and integration of different ideas (Edwards-Schachter, M., 2018). Technology encompasses several aspects such as technical knowledge, culture, and practices that can be used by humans in their efforts to design and build machines, tools, products, or services to meet their needs (Ince et al., 2016).

Technological innovation is the ability of technology to innovate that can enable a company to gain a sustainable competitive advantage seen as a dynamic capability (Souitaris, V., 2003). The ability of technological innovation in adapting to technological changes to unforeseen technological changes can develop new products and use new technological processes to meet current and expected future needs (Ghaffari et al., 2017). Technological innovation capacity is formed by idea creation capacity, product development capacity, process innovation capacity, technology absorption capacity, leadership capacity, resource deployment capacity and Ability to use systems and tools (Heij et al., 2020).

2.2 Social Media

Social media is defined as a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0 and enable the creation and exchange of user-generated content (Leonardi et al., 2013). Social media appears to have been used in two

main ways The first method, the most commonly studied, is used for company communication with external parties, such as customers, suppliers, and the public Most businesses that use social media to communicate with external parties have a strategy that spans multiple platforms (Voorveld, H. A., 2019).

Social media is a platform used for internal communication and social interaction within the company. The internal social media platform is one of the platforms designed in a special edition. While many external social networks originate from public platforms, most companies deploy integrated social media platforms for internal communications that have some functionality (Alharthi et al., 2020). Social media is also referred to as a system of parts of communication associated with distributed brands. Through social media, internet users can access, share, engage, add, and create together (Hou et al., 2020).

Social media is a group of internet and mobile-based applications and services, where users engage directly in online activities, such as creating content, participating in exchanging information, communities, and interacting with each other (Aygul et al., 2019). Social media as a channel for users to interact opportunistically and selectively, both in real time and asynchronously, with broad and narrow audiences who derive value from the content user-generated content and their perceptions of interactions with others (Carr and Hayes., 2015).

2.3 Marketing Media

Media marketing can be defined as a communication medium within a brand at a company that is placed in the context of online social networks. It is characterized by social and user interactivity in a company's efforts to communicate with consumers and potential customers (Ebrahim, R. S., 2020). Marketing media is used as a dialog that is often used by people or companies engaged in the scope between the parties mentioned in driving a communication that reveals some information such as promotions or commonly used as a tool to learn from each other's usage experience, which in turn can benefit one or all parties involved (Yadav et al., 2017).

Media marketing is one of the media used as a process that utilizes social media technology in creating, communicating, and delivering a marketing offering that can increase value for company stakeholders (Masuda et al., 2022). Marketing media is also pertinent and inseparable from the popularity of SMM in industry and academia. Marketing media is used as a means of connecting and interacting with potential customers and can build relationships with customers (Koay et al., 2020). Marketing media is considered an interdisciplinary and cross-functional media that uses social media which can usually be combined with other communication channels to achieve company goals, namely by creating value for the company (Mandagi et al., 2021).

2.3 Company Productivity

Firm productivity refers to a measure of how efficiently and effectively a firm is measured using its resources, including labor, technology, time, and capital in producing goods or services. It is one of the key metrics that shows how well a company can produce outputs relative to its inputs, highlighting the company's efficiency and effectiveness in achieving its goals. Productivity is a tool for companies to obtain more goods and services in each hour worked than we have previously obtained (Maletič et al., 2014).

Productivity is also defined as the ratio of outputs to inputs of a company's production system. The outputs produced from the production system are products or services, while the inputs consist of various resources such as labor, equipment, plant, materials, costs and maintenance effectiveness that play an important role in productivity and profitability, which are usually used to produce products or services (Maletič et al., 2012). The productivity maintenance function has an important role in a company's ability to compete based on quality, cost and delivery performance. It is also shown that if corporate maintenance is utilized effectively, there will be scope for companies to increase their profits and productivity (Abdelmoniem et al., 2023). Enterprise productivity is considered as one of the factors that can influence the success and overall performance of any enterprise in today's competitive market (Echeme et al., 2016).

2.3 Company Growth

Company growth as a result of an effective level of management in the company. The company will grow through management development that can enable and motivate the company to provide the best results for company growth (Sansone et al., 2020). Company growth is considered an increase in the company's capability to create, adopt, and integrate. Company growth will occur when the company can develop its capabilities in facing challenges in the market and in taking opportunities that will arise (Galiyeva et al., 2019).

3. Material and Method

This research uses quantitative research methods where in this research data is very influential in conducting this research. Data is defined as a fact, idea, or piece of information that is separate or fragmented, especially if the data is in its original form collected and has not been analyzed (Grace et al, 2023). There are two types of data, namely primary and secondary (Sekaran et al, 2019). In the research process, all data will later be grouped into two types of data, namely :

- Primary data which is defined as original and factual data and is collected by researchers for the first time in finding a solution to the problem at hand. In addition, there are four main sources of primary data including: surveys, experiments, interviews, and observations (Putra et al, 2023).
- Secondary data is data obtained from graphic documents (such as: tables, minutes, notes, SMS, etc), photos, movies, video recordings, objects and other things that can be styled Enriched with preliminary data. This research is a type of research that uses secondary data from related literature that has been published by several other parties such as books, journals, and articles related to the existence of factors that can influence intentions in increasing productivity and company growth, especially those influenced by technological innovation, social media, and marketing media (Arikunto, 2013).

3.1 Design Study

The research method is a systematic, rational, and logical scientific procedure that is usually used by researchers in solving problems or testing a hypothesis (Jack et al., 2012). In connection with the title mentioned, this research is a type of quantitative research. Quantitative

research is a study where the research uses statistical techniques in analyzing data, where data are collected using measurement instruments (Creswell et al., 2014). With quantitative methods, the significance of differences in groups or the relationship between the variables studied can be obtained (Sudaryana et al, 2022). The approach of this research is an explanatory approach, which is a research method by explaining the position of the variables to be studied and the influence between one variable and another (Sugiyono, 2018).

3.2 Data Analysis

In this study, the questionnaire was widely distributed through various online media. The requirements for respondents in this study are the DKI Jakarta community who already have small and medium enterprises (UMKM) and the DKI Jakarta community who have used the products and services of DKI Jakarta MSMEs. Respondents obtained through the purposive sampling method above were 100 respondents who had used the services of DKI Jakarta UMKM products and services, which at least had UMKM. All respondents are DKI Jakarta residents who already have a business and if the respondent does not have a business, the questionnaire will still be filled out because the focus of this research is how the DKI Jakarta community views the level of productivity and growth of DKI Jakarta UMKM.

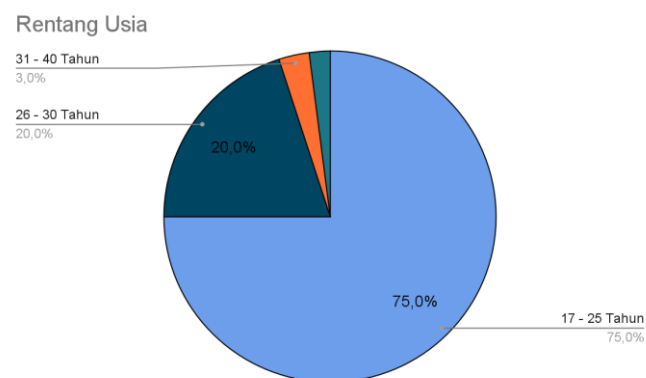


Figure 1. Age Range of Respondents

Figure 1. shows the age range of respondents which states that 75% or 75 respondents are aged 17-25 years. This age range shows the most respondents compared to other age ranges such as the age range 26-30 years as much as 20% or as many as 20 respondents, the age range 31-40 years as much as 3% or as many as 3 respondents, and > 50 years as much as 2% or as many as 2 respondents which in total shows 100% of respondents totaling 100 respondents.

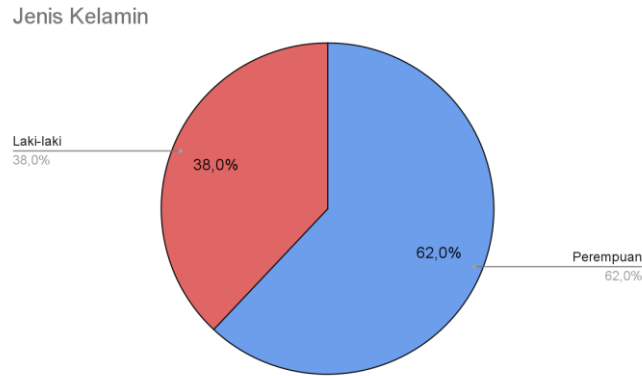


Figure 2. Gender of Respondents

Figure 2. shows the gender of the respondents which states that 62% or 62 respondents are female. This is more than respondents with male gender who were only 38% or as many as 38 respondents who filled out this research questionnaire. After the two are combined, it will show 100% of the respondents totaling 100 respondents.

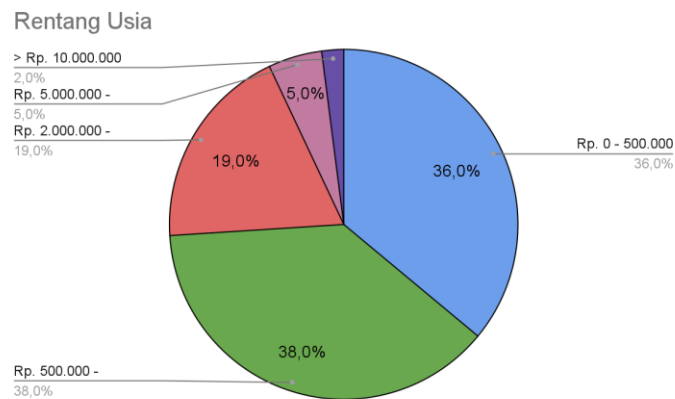


Figure 3. Income Range of Respondents

Figure 3 shows the respondent's income range which states that 38% or as many as 38 respondents have an income range of Rp.500,000 - Rp.2,000,000 which is the majority of the income range of respondents in this study. Followed by income of Rp. 0 - 500,000 as much as 36% or as many as 36 respondents, income of Rp. 2,000,000 - 5,000,000 as much as 19% or as many as 19 respondents, income of Rp. 5,000,000 - 10,000,000 as much as 5% or as many as 5 respondents, and income > Rp. 10,000,000 as much as 2% or 2 respondents.

3.2.1 Outer Loading Factor

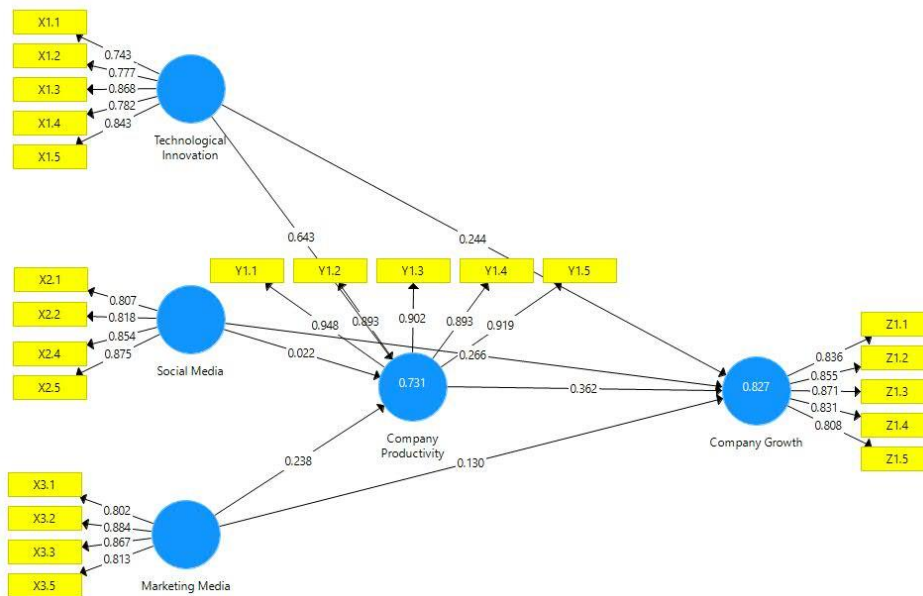
	Company Growth	Company Productivity	Marketing Media	Social Media	Technological Innovation
X1.1					0,743
X1.2					0,777
X1.3					0,868
X1.4					0,782
X1.5					0,843

X2.1				0,787	
X2.2				0,812	
X2.3				0,696	
X2.4				0,827	
X2.5				0,857	
X3.1			0,77		
X3.2			0,871		
X3.3			0,872		
X3.4			0,695		
X3.5			0,781		
Y1.1		0,948			
Y1.2		0,893			
Y1.3		0,902			
Y1.4		0,893			
Y1.5		0,919			
Z1.1	0,838				
Z1.2	0,855				
Z1.3	0,871				
Z1.4	0,831				
Z1.5	0,806				

Source: Primary Data Processing

Therefore, based on the calculation results in table 4.6 regarding the results of the outer loading calculation, it shows that there are 2 indicators that will be eliminated, namely X2.3 and X3.4. All indicators that have a value below 0.70 will be eliminated and not used in calculations in further research. Therefore, after eliminating several indicators that do not meet the outer loading value requirements, the final path diagram appears and will be used until the end of the study as shown in Figure 4.7 of the final path diagram below.

Diagram Path Final



Of the total 25 indicators in this study, 2 of them have been eliminated due to non-compliance with the outer loading requirements, leaving 23 indicators. The 2 indicators that were eliminated included:

- X2.3 : I believe that marketing campaigns through social media have been effective in increasing brand awareness and attracting new customers.
- X3.4 : I agree that the use of effective, interactive, and innovative marketing media in MSMEs in Jakarta can significantly increase their sales and business growth.

4. Result

4.1 Reliability and Validity Test

To measure the validity of a variable, we must take into account the average value of the variance extracted (AVE). The average required to qualify for validity testing using AVE is a statement that AVE is greater than 0.5 (Saputra et al., 2020).

Table 1. Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Company Growth	0,896	0,899	0,923	0,707
Company Productivity	0,949	0,95	0,961	0,83
Marketing Media	0,863	0,869	0,907	0,709
Social Media	0,855	0,861	0,896	0,634
Technological	0,863	0,875	0,901	0,646

Innovation				
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Source: Primary Data Processing

The results presented in Table 1. on the reliability and validity of the structure illustrate data with good reliability and validity values. This is based on the overall results of the data that show good results for each variable. The requirement for a variable to be declared reliable is to have a Cronbach's alpha value greater than 0.70 and a composite reliability greater than 0.70 and the overall data displays a value greater than 0.70. Then to test its validity, it is necessary to have an Average Variance Extracted (AVE) value greater than 0.5. The data also shows good results when all variables have an AVE value greater than 0.5.

4.2 Determine Discriminant Validity

Based on the theory put forward by Fornell-Lacker, it is emphasized that there is a lower limit for the AVE value, namely 0.5. Therefore, the AVE value of a variable must be greater than 0.5 to meet the eligibility criteria. Then, if the variable's AVE value is greater than 0.5, it can be seen that the square root of the variable's AVE must be greater than the correlation value of the other variables (Firman et al., 2021).

Table 2. Fornell-Larcker Criterion

	Company Growth	Company Productivity	Marketing Media	Social Media	Technological Innovation
Company Growth	0,841				
Company Productivity	0,848	0,911			
Marketing Media	0,764	0,74	0,842		
Social Media	0,824	0,745	0,728	0,796	
Technological Innovation	0,857	0,84	0,757	0,854	0,804

Source: Primary Data Processing

Table 2. shows the discriminant validity value of all variables in the study. The requirement for a variable to have a validity value is that the AVE value must be above 0.5 and has a square root of the AVE of a particular variable which is greater than the correlation. The data shows that all data has an AVE value above 0.5 which has met one of the variable validity requirements.

4.3 R Square

R-Square is a ratio definition that compares the regression sum of squares with the sum of squares in the study (Alfred et al., 2022). Therefore, the r-square can show how much influence each variable has.

Table 3. R Square

	R Square	R Square Adjusted
Company Growth	0,803	0,797
Company Productivity	0,731	0,723

Based on table 3. which shows data related to the r-square value in a study. The first variable, company growth, has a value of 0.803, which means that this variable is influenced by 80.3% by the company productivity variable and the remaining 19.7% by other variables. Furthermore, company productivity has a value of 0.731, which means that this variable is influenced by 73.1% by the technological innovation variable and the remaining 26.9% is influenced by other variables.

5. Discussion

5.1 Direct Effect Analysis

The next calculation of this study is to calculate the path coefficient as a basis for analyzing the direct effect of variables. The hypothesis will have a direct effect or the results can be accepted if when calculating the path coefficient there is a relationship between variables that has a T Statistics value > 1.960 or P Values < 0.05 (Hair et al., 2021).

Table 1. Path Coefficient

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Hasil
Company Productivity -> Company Growth	0,372	0,368	0,143	2,6	0,01	Accepted
Marketing Media -> Company Growth	0,181	0,181	0,112	1,623	0,105	Declined
Marketing Media -> Company Productivity	0,237	0,245	0,081	2,937	0,003	Accepted
Social Media -> Company Growth	0,266	0,264	0,091	2,918	0,004	Accepted
Social Media -> Company Productivity	0,028	0,038	0,119	0,239	0,811	Declined
Technological Innovation -> Company Growth	0,408	0,413	0,133	3,053	0,002	Accepted
Technological	0,637	0,623	0,123	5,186	0	Accepted

Innovation -> Company Productivity						
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Source: Primary Data Processing

The results of the first path coefficient calculation show the results of the first hypothesis, namely the effect of company productivity on company growth. Based on table 4.11, it can be identified that the relationship between the two has a significant effect and in a positive direction. This is based on the p-value of $0.01 < 0.05$ and the t statistics of $2.6 > 1.96$. Then the original sample shows a positive result stating the direction of the relationship between the two variables, which is 0.372. Therefore the first hypothesis can be accepted.

The second hypothesis is the effect of marketing media on company growth. Based on table 4.11, it can be identified that the relationship between the two has no significant effect and in a positive direction. This is based on the p-value which is $0.105 > 0.05$ and the t statistics which is $1.623 < 1.96$. Then the original sample shows a positive result stating the direction of the relationship between the two variables, which is 0.181. Therefore, the second hypothesis cannot be accepted or rejected.

The fourth hypothesis is the effect of social media on company growth. Based on table 4.11, it can be identified that the relationship between the two has a significant effect and in a positive direction. This is based on the p-value, which is $0.004 < 0.05$ and the t statistics, which is $2.918 > 1.96$. Then the original sample shows a positive result stating the direction of the relationship between the two variables, which is 0.266. Therefore the fourth hypothesis can be accepted.

The fifth hypothesis is the effect of social media on company productivity. Based on table 4.11, it can be identified that the relationship between the two has no significant effect and with a positive direction. This is based on the p-value, which is $0.811 > 0.05$ and the t statistics, which is $0.239 < 1.96$. Then the original sample shows a positive result stating the direction of the relationship between the two variables, which is 0.028. Therefore, the fifth hypothesis cannot be accepted or rejected.

The sixth hypothesis is the effect of technological innovation on company growth. Based on table 4.11, it can be identified that the relationship between the two has a significant effect and in a positive direction. This is based on the p-value, which is $0.002 < 0.05$ and the t statistics, which is $3.053 > 1.96$. Then the original sample shows a positive result stating the direction of the relationship between the two variables, which is 0.408. Therefore, the sixth hypothesis can be accepted.

The seventh hypothesis is the effect of technological innovation on company productivity. Based on table 4.11, it can be identified that the relationship between the two has a significant effect and in a positive direction. This is based on the p-value, which is $0 < 0.05$ and the t statistics, which is $5.186 > 1.96$. Then the original sample shows positive results stating the direction of the relationship between the two variables, which is 0.637. Therefore the seventh hypothesis can be accepted.

5.1 Indirect Effect Analysis

Tabel 2. *Significant Indirect Effect*

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Hasil
Marketing Media -> Company Productivity -> Company Growth	0,088	0,087	0,04	2,187	0,029	Accepted
Social Media -> Company Productivity -> Company Growth	0,011	0,009	0,046	0,23	0,818	Declined
Technological Innovation -> Company Productivity -> Company Growth	0,237	0,234	0,11	2,156	0,032	Accepted

Source: Primary Data Processing

The results of the first significant indirect effect calculation show the results of the first hypothesis, namely the effect of marketing media on company growth through company productivity. Based on table 4.12, it can be identified that the relationship between the two has a significant effect and in a positive direction. This is based on the p-value of $0.025 < 0.05$ and on the t statistics of $2.187 > 1.96$. However, the original sample shows a positive result stating the direction of the relationship between the two variables, which is 0.088. Therefore the first hypothesis is accepted.

The second hypothesis is the effect of social media on company growth through company productivity. Based on table 4.12, it can be identified that the relationship between the two has no significant effect and in a positive direction. This is based on the p-value, which is $0.818 > 0.05$ and the t statistics, which is $0.23 < 1.96$. Then the original sample shows a positive result stating the direction of the relationship between the two variables, which is 0.011. Therefore, the second hypothesis cannot be accepted or rejected.

The third hypothesis is the effect of technological innovation on company growth through company productivity. Based on table 4.12, it can be identified that the relationship between the two has a significant effect and in a positive direction. This is based on the p-value of $0.032 < 0.05$ and the t statistics of $2.156 > 1.96$. Then the original sample shows a positive result stating the direction of the relationship between the two variables, which is 0.237. Therefore the third hypothesis is accepted.

6. Conclusion, Implication, and Recommendation

6.1 Conclusion

In this study, conclusions can be drawn, namely the effect of the use of technological innovation, social media, effective marketing media, interaction and innovation on the productivity of UMKM companies in Jakarta. The results of the analysis show that the application of the latest technology and innovation strategies has a significant positive impact

on the growth and productivity of UMKM in DKI Jakarta. The use of applications and an active social media presence, as well as innovative services and interactions can help improve operational efficiency and attract new customers.

6.2 Implication

This research has important implications for stakeholders and policy makers in DKI Jakarta UMKM. First, UMKM must pay attention to the importance of using the latest technology in innovating their products and services. Second, the government and related agencies must provide training and support to DKI Jakarta UMKM owners so that they can master online and digital marketing skills. Third, collaboration among other UMKM, namely through e-commerce platforms and social media, should be encouraged in order to expand the market and increase the visibility of local businesses.

6.3 Recommendation

1. Training and Support

Government and non-profit companies should provide free training and guidance to DKI Jakarta UMKM owners on how to use technology, social media, and innovative marketing strategies.

2. Collaboration with E-Commerce Platforms

DKI Jakarta UMKM should cooperate with major e-commerce platforms such as Tokopedia, Shopee, and Bukalapak to market their products domestically.

3. Product and Service Innovation

DKI Jakarta UMKM must continue to encourage innovation in their products and services to meet the changing needs of their customers. Innovative product development and personalized customer service will increase competitiveness.

4. Interactive Customer Service

DKI Jakarta UMKM should consider integrating an interactive customer service system, such as chatbots or online feedback forms, to improve customer experience and respond quickly to customer requests.

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