

# Open Innovation And Digital Marketing: A Catalyst For Culinary SMEs In Makassar

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**Abstract:** Through an open innovation process, this study aims to determine the impact of IT awareness and digital marketing on the performance of SMEs in Makassar City. A sample of 94 SMEs using the Lameshow formula was collected in Makassar City for this study. The study shows that in Makassar City, IT awareness and digital marketing have a substantial and beneficial impact on the openness of innovation processes for SMEs. Given the results of this study, it was found that SMEs in Makassar City should start to increase their information technology awareness and use Digital Marketing for Open Innovation processes to improve their performance.

**Keywords:** IT Awareness; Digital Marketing; Open Innovation; Culinary SME Performance; Makassar City.

**Abstrak:** Melalui proses inovasi terbuka, penelitian ini bertujuan untuk mengetahui dampak kesadaran TI dan pemasaran digital terhadap kinerja UKM di Kota Makassar. Sampel sebanyak 94 UKM yang menggunakan rumus Lameshow dikumpulkan di Kota Makassar untuk penelitian ini. Studi ini menunjukkan bahwa, di Kota Makassar, kesadaran TI dan pemasaran digital mempunyai dampak besar dan bermanfaat terhadap keterbukaan proses inovasi bagi UKM. Berdasarkan hasil penelitian tersebut, ditemukan bahwa UKM di Kota Makassar sebaiknya mulai meningkatkan kesadaran teknologi informasi dan menggunakan Pemasaran Digital untuk proses Inovasi Terbuka dengan tujuan untuk meningkatkan kinerjanya.

**Kata Kunci:** IT Awareness; Digital Marketing; Open Innovation; Kinerja UKM Kuliner; Kota Makassar.

## INTRODUCTION

Micro, small, and medium enterprises are the central pillar supporting the Indonesian economy. There are currently 64 million micro, small and medium-sized enterprises in Indonesia. The GDP contribution of the Indonesian micro, small and medium-sized enterprises is significant. Indonesian MSMEs contributed up to IDR 8,573.910 trillion to Indonesia's GDP (based on current prices) in 2018. In 2018, Indonesia's GDP was IDR 14,838.320 trillion, and the contribution of micro, small and medium enterprises represented 57.800 per cent of Indonesian GDP.

Moreover, MSMEs employ 116,978,631 people or 97 per cent of the Indonesian workforce for SMEs and large enterprises. There are 64,194,057 micros in Indonesia, small and medium-sized enterprises or 99 per cent of business units (J. B. Halik et al., 2023). Therefore, MSMEs are the small ones who play a big role in the Indonesian economy. Makassar, the capital of South Sulawesi province, can be classified as one of Indonesia's best GDP cities. In 2019, Makassar City Cooperatives and SMEs Service data recorded 13,277 business units.



Currently, the world is facing very rapid technological developments. This also spurs the movement of all fields towards the era of digitalisation, including in the marketing field. The marketing industry is evolving quickly, making it imperative to adjust to digital developments. Digital technology has brought about profound changes in human existence and introduced a novel aspect of consumer behaviour. It is either directly or indirectly essential to consumers, businesspeople, and everyone else to have knowledge of technology and be technologically savvy. It is essential that each individual in the modern era comprehend the latest technological advances, or what is generally referred to as IT awareness.

With the emergence of Web 2.0 technologies and social media, people are finding new ways to interact with global and local communities. (Kotler et al., 2019) Explains that marketing 1.0, product-oriented marketing, was the beginning of the marketing era. In this period, the seller aimed to sell as many products as possible without considering what consumers wanted.

In the meantime, marketing 2.0 is focused on consumers. Here, sellers have started trying to touch consumers' hearts, but they are only considered passive objects. The 3.0 version of human-oriented marketing was then developed. Retailers are not only selling products but also vision, mission and values that correspond to the needs of consumers in this marketing era.

Sellers feel that further development of this advertising strategy is still essential. Thus, rapid technological developments could encourage more effective marketing. This is how marketing 4.0 is going to emerge eventually. The marketing 4.0 approach integrates innovative technologies to interact with consumers in a human sense.

Moreover, the marketing world has entered a new era known as Marketing 5.0. An era where existing technology is used for humanity (Technology for Humanity) (Kotler et al., 2021). Assimilation, integration, and acculturation beyond the user's community are encouraged by the convenience and connectivity of social media, mobile technology, and other digital technology and applications (Yen & Dey, 2019).

Currently, both producers and consumers feel convenience with the presence of digital marketing tools. The most apparent effect felt by companies with digital marketing tools is lower and cheaper promotional costs associated with using digital marketing media.

Unlike offline advertising, consumers find it easier to locate and compare information about possible products and services (J. Halik et al., 2021; J. B. Halik et al., 2023). Every business, regardless of its size, aims to surpass its competitors and obtain optimal performance to attain its business goals (Pap et al., 2022).

In order to outperform their competitors, these businesses need to improve their ability to innovate, both in producing products and services (Rumanti et al., 2022). The concept of organisational performance applies to all activities in a company, both those which produce products and services.

(Pap et al., 2022) explains that "open innovation" is needed to support corporate performance, which consists of executing a company's vision, mission, targets and activities (Lopes et al., 2022). One of the main reasons supporting the attempts of organisations to reflect their main objectives and accomplish optimal performance rapidly is innovation. Organisational stakeholders have given excessive attention to organisational performance, an essential concept in management research (Rumanti et al., 2022; Singh et al., 2021).

Open innovation positively affects various organisational performance measures, including moderating companies' choice of marketing tools to influence consumers'



purchasing decisions (Londong et al., 2024). (Rumanti et al., 2022) their research suggests that open innovation practices can encourage long-term competitive advantage and improve company performance. Given the increasing volume of globalisation in innovation, new technologies, communication models, new information technology and various forms of business that are increasingly diverse at present, research carried out by (Lopes et al., 2022) suggests that companies will need to adopt open innovation practices as globalisation is constantly evolving.

Open innovation can be a support factor for SMEs in terms of their performance. Open innovation consists of two activities: inbound and outbound open innovation (Popa et al., 2017). Inbound activities are more likely to improve radical innovation performance, whereas outbound practices significantly affect incremental innovation. This can be better addressed, especially in SMEs (Rumanti et al., 2022).

SMEs have an extremely wide variety of characteristics, notably extensive adaptability and a dynamic spirit of creativity. SMEs differ widely in size, technical proficiency, and the characteristics of their business activities and commodities. Even so, several global research studies emphasised the positive impacts of digital marketing channels for boosting the growth of small and medium-sized enterprises. Via social media platforms, customers generate direct connections with new brands, products, and services (Aswani et al., 2018). The performance of a business is directly related to purchasing decisions made by consumers (Halik et al., 2023; London et al., 2024). In this context, it is essential to examine whether using digital marketing media can assist SMEs in improving their overall performance. SMEs are expected to be able to obtain feedback from consumers in order to improve their performance through the use of digital marketing media (Chatterjee & Kumar Kar, 2020).

The problem for SMEs is a need for adequate digital skills and capabilities and an inadequate level of knowledge among their employees (Cenamor et al., 2019). According to (Shaltoni, 2017) research, there is an opinion that digital marketing is different from internal processes or business objectives. Due to this, we are interested in finding out how the performance of SMEs in Makassar City can be affected by digital marketing through open innovation and information technology awareness.

This study attempts to present several novelties. **Firstly**, whereas earlier research has concentrated on specific social media platforms, this study thoroughly investigates the effects of using digital marketing media. Using the above approach, researchers can give a more comprehensive overview of how digital marketing media affects SMEs' performance in Makassar, particularly for those in the culinary industry. It is envisaged that businesses and SMEs that use digital marketing media will learn how to increase the effectiveness of their business performance and how it might influence it.

**Second**, this research includes the open innovation process as a moderating variable, answering the question that has yet to be widely researched about how IT knowledge and digital marketing tools can enhance an organisation's performance through open innovation approaches. This addition increases understanding of SMEs' ability in Makassar to innovate, shaping the impact of digital marketing media and awareness of the use of information technology (IT Awareness) on SME performance in general.

**Third**, the study's focus on SMEs operating in the culinary sector in Makassar provides valuable insight for entrepreneurs in rural locations away from large cities. This multi-platform, innovation-focused approach provides modern, valuable insights for similar small and medium-sized enterprises (SMEs). It can help business actors raise IT awareness



of themselves and their staff members and help them use digital marketing media in conjunction with innovations to grow their business. This research aims to equip SMEs with knowledge of the best resource allocation for digital marketing and the development of IT Awareness in order to improve their business performance. In doing so, it analyses the relative impact of IT awareness and the use of digital marketing media through the role of innovation to improve the SME's performance.

## **THEORETICAL REVIEW**

**Resource Advantage Theory of Competition.** The leading theory underlying this research is the Resource Advantage Theory of Competition. This research focuses on how culinary SMEs in Makassar increase their awareness of using Information Technology (IT Awareness) and digital marketing tools to utilise existing resources, increasing the superiority of their resources and business performance.

The theory of resource superiority is the evolution of two fundamental theories from which it was derived. The theory was first put forward by Conner in 1991, and it states that organisations must be able to explain the factors limiting their existence and why they exist. Resource-based theory focuses on heterogeneous demand and mobile resources, which is the basis for this view.

According to (Juárez-Luis et al., 2019), resource advantages can explain various vital organisational strategies, such as relationship-based, competency-based, industry-based, market-oriented, brand equity, and segmenting market strategies. What is meant by resource excellence is the maximum utilisation of available resources, both tangible and intangible, which in turn are produced effectively and efficiently to be offered to their consumers (Agus, 2020).

The foundation of resource advantage theory is built on the error of focusing organisational strategy on the pursuit of organisational excellence. In general, organisations tend to focus on industry competition. After research from (Juárez-Luis et al., 2019) and (Islami et al., 2020), only company leaders began to focus on strategies for developing differentiated products and services which their competitors could not imitate. If a company can create these three conditions, then they will generate profits and achieve improvements in their company's performance. The organisation's capacity to innovate and make a difference with its resources is the framework and basis of resource excellence. For this reason, companies must consistently implement innovation and differentiation to achieve optimal advantages compared to their competitors. Companies must learn to continually improve their company's advantages, maintain them, and continue increasing their products' value.

(Islami et al., 2020) Argues that competition is contrary to balance, continuous learning and optimal efforts to achieve excellence. The superiority of these resources will determine a company's superiority in competition. Companies that are superior in utilising their resources will get a better position and a higher market share than their competitors.

Resource advantage is an evolutionary process where there is no balance during the competitive process. Thus, businesses implement learning and innovation processes derived from their internal resources. Since businesses and consumers lack accurate information, institutions, government regulations, and entrepreneurship will each impact economic success. Based on resource advantage theory, a company's ability to differentiate itself from the competition and/or offer more excellent value to its clients determines the value of its



resources. It ultimately affects the company's performance results in general (Juárez-Luis et al., 2019).

**Information technology awareness and SME performance.** How individuals communicate has changed due to recent technological advancements, especially within the Internet (Chatterjee & Kumar Kar, 2020). Likewise, leaders and employees must be technologically literate for companies in this digital environment to utilise this technology for their business (Grewal et al., 2020). As a crucial element, or perhaps more accurately, a tactical tool, the Internet is one of the twentieth century's most important technological developments.

(Ritter & Pedersen, 2020) Their research revealed that top businesses digitise their repetitive procedures and capabilities to become more proficient in using existing technology to differentiate themselves from their competitors and improve their company's performance. Information technology, or IT, is an essential component of the modern world and a necessary talent in the digital age. We can find the use of information technology in various fields. This also includes the marketing sector. (Voramontri & Klieb, 2019) This shows that the revolution in social media has resulted in new ways for customers to obtain information on products and services. We can find the use of information technology in various fields. This also includes the marketing sector. According to (Bouwman et al., 2019), information technology is a tool that company leaders can use to overcome the changes occurring. According to (Tutak & Brodny, 2022), information technology is a blend of computer hardware and software for processing, storing, and distributing information and communication technology.

Awareness of sustainable information technology and communication practices helps companies adopt various strategies and improve sustainable business performance effectively (Bouwman et al., 2019). For small and medium enterprises (SMEs), to improve the company's performance, it is essential to provide training for staff so that they are aware of information and communication technologies. (Bouwman et al., 2019; J. B. Halik et al., 2023). Therefore, companies need to be aware of the importance of information technology in their business activities going forward to have a competitive edge in this digital era. Based on various research findings, we propose the following hypothesis:

**H1:** In Makassar City, IT awareness positively and significantly affects the performance of small and medium-sized enterprises in the culinary sector.

**Digital marketing and SME performance.** (Verhoef & Bijmolt, 2019) Put forward the function of digital marketing in a more personal way. Individuals can express their thoughts through digital marketing media, which can then be accessed and responded to by other internet users. The current digital era is simultaneously changing business models. This change can occur when a company transforms itself digitally. The systems, structures, activities and processes carried out by companies will also change along with the use of digital technology (Melović et al., 2020), likewise with the marketing system. For example, we can see companies that have just adopted new digital channels as their marketing tools. This will undoubtedly change how they go to market, altering how companies value themselves and their partners and how they produce value for their consumers (Latiep et al., 2023).

According to (Kotler et al., 2019), digital marketing uses information technology and the Internet to enhance and expand traditional marketing functions. We often think digital



marketing is closely related to "interactive marketing", one-to-one marketing and "e-marketing". (Xliema, 2019) stated the definition of digital marketing as a commercial activity, including advertising based on the web. So, blogs, websites, email, AdWords and social networks can be categorised as digital marketing media. Here, digital marketing is a marketing activity that utilises developments in digital technology to reach consumers, which supports the company's strategy of implementing all aspects of its marketing mix. Previous research (Chatterjee & Kumar Kar, 2020; J. Halik et al., 2021) shows that digital marketing media can improve company performance. (Chatterjee & Kumar Kar, 2020) believes that digital media makes the interaction between consumers and producers more accessible, so producers can know what their consumers want. In this way, company turnover will increase and directly affect the performance of digital marketing media companies. The following hypothesis is proposed based on our previous explanation:

**H2:** In Makassar City, digital marketing is suspected to have a positive and significant impact on the performance of small and medium-sized enterprises in the culinary sector.

**Open Innovation and SME Performance.** Open innovation is a connecting line that allows SMEs to gain profits through innovation in the face of recent massive digital developments. By utilising incoming and outgoing knowledge flows, companies can quickly innovate their processes and products (Cenamor et al., 2019). Open innovation will also help companies overcome crisis conditions (crisis management) experienced by companies (Yuana et al., 2021). Open innovation encourages and explores internal and external company resources to manage company innovation systematically. Consciously integrate the results of this exploration with the resources owned by the company and adapt them to the company's capabilities so that the opportunities created can be utilised widely (Yun et al., 2020). For the innovation process to effectively accomplish its objectives and enhance organisational performance, enterprises need to preserve continuing interactions and relationships with their workers (Alqershi et al., 2020; Pap et al., 2022).

Open innovation is a novel approach that, in the context of small and medium-sized businesses (SMEs), permits top executives or organisational leaders to access the external capabilities of the enterprise to improve its performance. In essence, open innovation encourages the performance of these SMEs (Valdez-Juárez & Castillo-Vergara, 2021). Open innovation is a strategy that must be carried out to improve company, financial, economic, and innovative performance (Valdez-Juárez & Castillo-Vergara, 2021).

The development of digitalisation can be used as an opportunity to develop company performance optimally. Due to this, one of the most essential actions enterprises need to take is implementing an open innovation strategy (Tutak & Brodny, 2022). Technology is growing at a faster and faster rate, which is driving up the volume and speed of knowledge distribution. This has encouraged the popularity of open innovation practices carried out by many companies recently (Rumanti et al., 2022). With open innovation practices, it becomes easier for companies to utilise and take advantage of knowledge and technology transfer internally and externally to rapidly speed up innovation inside and outside the organisation, affecting market expansion.

Prior studies by (Londong et al., 2024) and (Rumanti et al., 2022) demonstrate the significance of the open innovation process in enhancing business success. In light of these factors, we put out the following theory:



**H3:** Open Innovation influences SME performance positively and significantly.

**IT Awareness and open innovation.** IT awareness is a must for every individual in this era of digitalisation. Technological advancements and marketing strategies geared towards the digital age will influence customer behaviour and brand perception when deciding which brands to purchase from the company (Xliema, 2019). For this reason, companies must be technologically literate and continue to carry out innovation processes following the wishes of their consumers, who are influenced by recent technological developments. In order to be able to carry out an open innovation process, companies first need to be aware of existing technology. The volume of globalisation in innovation, new technologies, and research through new information technologies, communications, new organisational models, and forms has made open innovation more and more vital (Lopes et al., 2022). In order to be able to carry out an open innovation process, companies first need to be aware of existing technology.

Previous research from (Hernández-Dionis et al., 2022) found that awareness of information technology had a positive and significant effect on the innovation process carried out by SMEs in Spain. Furthermore, we believe an open innovation process cannot be implemented if the organisations and individuals inside them lack sufficient knowledge of current information technology. As a result, we make the statement that follows:

**H4:** IT Awareness significantly and positively influences SMEs' Open Innovation processes.

**Digital marketing and open innovation process.** The current digital era has changed business models. This change can occur when a company transforms digitally. The systems, structures, activities and processes carried out by companies will also change along with the use of digital technology in companies (Melović et al., 2020). Likewise with the marketing system. For example, we can look at a company recently adopting new digital channels as a marketing tool. This will undoubtedly alter how companies join the market, altering how they add value for clients and how they regard their partners and themselves (Latiep et al., 2023). The development of digital technology can be an opportunity for the development of SMEs in the city of Makassar. SMEs can use digital marketing media to carry out an open innovation process to improve their business performance (Tutak & Brodny, 2022).

Furthermore, companies can also carry out an open innovation process by choosing marketing media that are most suitable for them and can reach their consumers (Londong et al., 2024). Previous research by (Kilay et al., 2022) said that using e-commerce platforms and all digital payment channels significantly impacts the innovation process SMEs in Indonesia carry out, affecting customer purchase preferences. One of the simplest ways to sway the decisions of prospective clients to buy is through social media. It would be an enormous mistake for businesses and brands to refrain from staying behind the times and not using social media to innovate in today's fiercely competitive world.

The author proposes the following theory regarding the relationship between open innovation and digital marketing based on the description given above:

**H5:** For SMEs in Makassar City, digital marketing positively and substantially impacts the Open Innovation process.



**The moderating role of open innovation.** Numerous studies have demonstrated the significant impact that open innovation, particularly in SMEs, has on business performance (Alqershi et al., 2020; Rumanti et al., 2022). However, only a few studies use innovation capability as a moderator, as observed in research conducted by (Dumitriu & Popescu, 2020; Londong et al., 2024; Verhoef & Bijmolt, 2019).

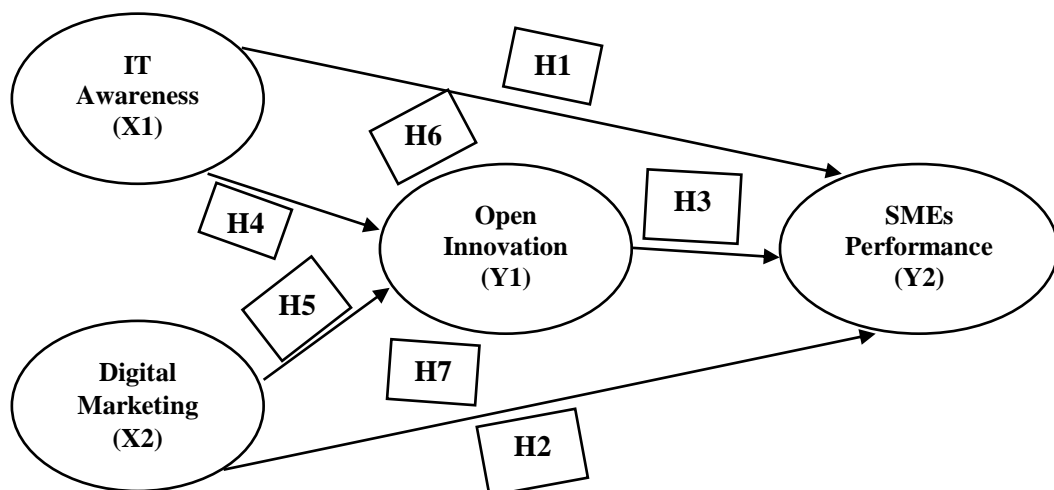
SMEs that want to continue to grow and develop need to continue to innovate. SMEs must utilise their capabilities and continue innovating by utilising internal and external resources to improve and develop their businesses. We include the open innovation process as a moderating variable in line with research from (Londong et al., 2024; Rumanti et al., 2022). Our aim in including the open innovation process as a moderating variable is to see and evaluate whether awareness of using information technology (IT Awareness) can improve SMEs' performance in Makassar more significantly when the open innovation process is implemented effectively. Therefore, research indicates that the association between IT awareness and SME performance may be strengthened through open innovation. (Dumitriu & Popescu, 2020).

In addition, open innovation can also strengthen the influence of digital marketing media on SME performance, as shown in research (Verhoef & Bijmolt, 2019). Based on this thinking, we put forward the following hypothesis:

**H6:** Through open innovation, IT awareness significantly and positively affects SMEs' performance in Makassar City.

**H7:** Through open innovation, digital marketing significantly and positively affects the performance of SMEs in Makassar City.

Based on the explanation given above, the researcher tried to describe this research model in **Figure 1**.



**Figure 1.** Research Model Framework  
Source: Author's Personal Conception (2024)





## METHODS

The objective of this research is to test hypotheses and provide explanations for the issues and objectives that have been constructed. Therefore, this research uses a quantitative, exploratory and causal approach. The study was conducted in Makassar, specifically at several small and medium-sized food industry businesses registered as research objects with GoFood and GrabFood. The research aimed to determine how SME entrepreneurs' awareness of technology and information and their understanding of digital marketing are influenced by their innovative processes. The research period takes place from September to November 2023.

This study's population is SMEs in Makassar City using social media and digital marketing platforms to operate or support their business activities. According to (Hair et al., 2019), population determination is divided into two, namely, the general population and the population with a specific purpose (purposive population). This research purposively took the population by determining the SMEs in Makassar that specifically operate in the culinary sector and have used digital marketing tools to carry out their operations and support their business activities. It is known that data from the Makassar City Cooperatives and SMEs Service in 2019 recorded 13,277 MSMEs consisting of 5,311 household businesses, 4,647 micro and small businesses and 3,319 medium businesses. However, the author cannot get the exact population of SMEs in the culinary sector. Because the behaviour of SMEs engaged explicitly in the culinary sector is still being determined, researchers used the Lameshow formula. Researchers need to use the Lameshow formula to calculate samples to determine whether the population in the research sample is unknown or unlimited (Singarimbun, M & Effendi, 2008).

$$n = \frac{z^2 \times P(1-P)}{d^2} \dots\dots\dots(1)$$

To determine the required sample size (n) for a study with a 95 per cent confidence level, a prevalence of 50 per cent (P of 0.500), and a desired sampling error (d) of 10 per cent (d of 0.100), we use the above equation (**Equation 1**)

So, the sample size obtained is as follows:

$$n = \frac{(1.960)^2 \times 0.500(1-0.500)}{(0.100)^2} = 94.040 \dots\dots\dots(2)$$

In this research, the author took a total sample of 94 respondents who were SME owners operating in the culinary sector in the city of Makassar.

The researchers then selected the sample that would be the object of this research using non-probability sampling techniques, especially purposive sampling. To select respondents in this research, we provided criteria that the SMEs who would be used as respondents had used technology and specific applications to support their business. We also chose SMEs registered with GoFood and GrabFood because they have utilised digital marketing media in running their business. The data from respondents' answers via questionnaires was then processed and analysed using Partial Least Square (PLS) analysis because the author found that this method was most suitable for testing complex path models



and could handle data with small sample sizes and high multicollinearity. Hypothesis testing was then carried out using Smart PLS version 4 software.

**Measurement.** All constructs used in this research were taken from previous studies. Awareness of Information Technology (IT Awareness) was measured using four indicators adapted from (Bouwman et al., 2019). The Digital Marketing variable is measured using four indicator items adapted from (J. B. Halik et al., 2023). Open innovation is measured using seven indicators we selected from research (Rumanti et al., 2022). Moreover, to measure the performance of culinary SMEs in Makassar, we use six indicator items adapted from (J. B. Halik et al., 2024; Nurdiana NURFARIDA et al., 2021). A 5-point Likert scale, ranging from "strongly disagree" (1) to "strongly agree" (5), is used for all measuring items in the questionnaire **Table 1** thoroughly lists all the measuring items used to conduct this research.

**Table 1.** Measurement Item

Construct	Item Code	Items	References
IT Awareness	IT1	SMEs already know information technology that is suitable for their business.	(Bouwman et al., 2019)
	IT2	My business (SME) has used digital technology to support my business activities.	
	IT3	SME owners and working employees have smoothly used digital applications as support in running their business	
	IT4	SME owners can solve the problems they face in running their business with the digital technology they have	
Digital Marketing	DM1	Digital marketing media can reduce costs and transaction times from SMEs to consumers.	(J. B. Halik et al., 2023)
	DM2	The two-way relationship between SMEs and buyers runs smoothly using digital marketing media.	
	DM3	Promotional programs launched through digital media can create more value for SMEs	
	DM4	Promotions by SMEs in Makassar through digital media can attract greater consumer interest in the products offered.	
Open Innovation	IN1	There is involvement of external parties (government, educational institutions, suppliers) in innovation carried out by SMEs	(Rumanti et al., 2022)
	IN2	SMEs get input from consumers and imitate what their competitors do in innovation.	
	IN3	SMEs have used the latest tools according to current developments and offer products that use the latest materials.	
	IN 4	SMEs already have tools or applications for which patents/copyrights/licenses have been purchased to support their activities.	
	IN5	SMEs seek other benefits from the internal innovation they have carried out.	
	IN6	SMEs have offered other businesses new methods that they can use to run their businesses.	
	IN 7	SMEs have sold licenses, patents and ways of making new products to other parties.	



SMEs Performance	SP1	Sales of products offered by SMEs have increased from year to year	(J. Halik et al., 2021; J. B. Halik et al., 2023)
	SP2	SME business capital has increased since the business was founded	
	SP3	The number of employees working in my business increases every year.	
	SP4	There has been a growth in the number of consumers purchasing SME products.	
	SP5	SME business profits increase every year	
	SP6	SMEs have experienced an increase in their businesses' size and location/branches.	

Source: Primary Data Processed (2023)

## RESULTS

**Participant characteristics.** This research involved 94 respondents who fulfilled the following criteria. These respondents are SME owners or managers who have used applications to support their business activities and digital media to market their business products. Based on the research results, 58.510 per cent, or 55 respondents, were male. The remaining 41.489 per cent, or 39 respondents from business actors in Makassar, were female.

Based on the time the business has been running, we summarise that of the 94 sample units, 54.255 per cent, or 51 business units, have been running their business for over three years. 34.042 percent or 32 business units are between 1 to 3 years old. The remaining 11.703 per cent, or 11 business units, are under one year old.

Of the 94 sample units studied, 95.744 per cent, or 90 business units, supported their operations with the Gojek digital application. In addition, 97.872 per cent, or 92 business units, collaborated with the Grabfood application to assist with their commercial endeavours. Then, 55.319 per cent, or 52 business units, use ShopeeFood to aid in their marketing and commercial endeavours. For details, the author has presented the respondent data in **Table 2**.

**Table 2.** Participant Characteristics (N = 94)

Variable	Frequency	Percentage
<b>Gender</b>		
Male	55	58.510
Female	39	41.490
<b>Length of Business</b>		
More than three years	51	54.255
Between 1 to 3 years	32	34.042
Under one year	11	11.703
<b>Digital Media Used</b>		
Gojek / GoFood	90	95.744
GrabFood	92	97.872
ShopeeFood	52	55.319
Others (Maxim, etc.)	15	15.957
<b>Application Used</b>		
<b>Use of SME support applications</b>		
Yes	92	97.872
No	2	2.128
<b>Social Media used as Marketing Media</b>		



Facebook	32	34
Instagram	66	70.212
Whatsapp	34	36.170
Tiktok	19	20.212
Other	9	9.574
<b>Acceptance of non-cash payments</b>		
Yes (QRIS, E-Money, EDC, etc)	94	100
No	-	-

Source: Primary Data Processed (2024)

**Validity and Reliability Test.** In this investigation, concept validity was evaluated using two approaches. The factor loading values for each questionnaire item are tested using the convergent validity test, the first technique. A construct's validity is assessed using the convergent validity value. A general rule (rule of thumb) states that an indicator factor loading value of 0.700 or higher is considered legitimate (Hair et al., 2019). However, factor loading values in the range of 0.500 to 0.600 are still suitable when creating new models or indicators (Haryono, 2017). All the validity indicator items used are legitimate because all of the statement items in **Table 3** have factor loading values more significant than 0.700.

**Table 3.** Evaluation of Measurement Models

Construct	Code	Loading Factor	Cronbach's Alpha	CR	AVE
<b>IT Awareness</b>	IT1	0.887	0.908	0.936	0.785
	IT2	0.887			
	IT3	0.926			
	IT4	0.843			
<b>Digital Marketing</b>	DM1	0.906	0.915	0.940	0.797
	DM2	0.929			
	DM3	0.908			
	DM4	0.825			
<b>Open Innovation</b>	IN1	0.837	0.931	0.944	0.708
	IN2	0.839			
	IN3	0.917			
	IN4	0.851			
	IN5	0.764			
	IN6	0.831			
	IN7	0.842			
<b>SMEs Performance</b>	SP1	0.854	0.913	0.933	0.700
	SP2	0.900			
	SP3	0.869			
	SP4	0.849			
	SP5	0.754			
	SP6	0.784			

Source: Primary Data Processed (2024)

The second approach determines each variable's average variance extracted (AVE) value to measure discriminant validity. Discriminant validity is said to be good if the AVE value of a variable is equal to or greater than 0.500 by established criteria (Hair et al., 2019). **Table 3** shows that the AVE value for all variables includes IT Awareness at 0.785, Digital Marketing at 0.797, the AVE Open Innovation value at 0.708, and the SMEs Performance variable at 0.700. This confirms that each variable shows good discriminant validity,



indicating that they are distinct constructs that effectively measure different aspects of this research.

**Table 4.** Discriminant Validity with the Fornell and Larcker Approach

Variable	IT Awareness	Digital Marketing	Open Innovation	SMEs Performance
IT Awareness	<b>0.886</b>			
Digital Marketing	0.384	<b>0.893</b>		
Open Innovation	0.485	0.605	<b>0.841</b>	
SMEs Performance	0.481	0.496	0.726	<b>0.836</b>

Source: Primary Data Processed (2024)

By contrasting the correlation value between the latent variables and the Average Variance Extracted Square Root (AVE), discriminant validity can also be verified. The square root value of AVE must be higher than the correlation between latent variables, using the Fornell-Larcker Criteria (Ghozali, 2021). This is demonstrated in **Table 4**, where the square root of AVE is greater than the correlation coefficient between the latent variables. As a result, every statement item in the research instrument is reliable and appropriate for use as a gauge.

We computed Cronbach's alpha values for all variables and performed a composite reliability test to evaluate the credibility of our research instrument. When an instrument's Cronbach's alpha and composite reliability values are equal to or higher than 0.700, it is considered reliable (Ghozali, 2021). The study's variables, including composite reliability and Cronbach's alpha values, exceeded this threshold, as indicated in **Table 3**. The results presented confirm that every variable utilised in the study is reliable.

**Structural model test.** The internal model of this study is measured next, and the R-squared shows its value. Initially, we evaluate the R-square value corresponding to every latent endogenous variable. We can better understand how some exogenous latent variables affect endogenous variables and whether this influence is statistically significant by looking at the R-square value of the structural model (Ghozali, 2021). If the value is more than 0.670, the R-squared value is solid/considerable; if the value is more significant than 0.330 but less than 0.670, the effect is moderate; and if the value is above 0.190 but less than 0.330, the influence is weak/small (Hair et al., 2019).

**Table 5.** R-Square Value

	R-Square	R-Square Adjusted
Open Innovation	0.441	0.429
SMEs Performance	0.551	0.536

Source: Primary Data Processed (2024)

The Open Innovation variable has an R-square value of 0.441. According to this R-square value, 44 per cent of the variability of the Open Innovation construct can be determined by the variability of the IT Awareness and Digital Marketing constructs, with the remaining variables being explained by factors external to those beneath research. According to (Ghozali, 2021), the model's R-square values are 0.670, 0.330, and 0.190, meaning that it is strong, moderate, and weak. As a result, the influence is moderate.



The R-square value of the SME Performance variable is 0.551. With this R-square value, it can be inferred that 55 per cent of the variation in SME performance can be accounted for by variations in IT Awareness, Digital Marketing, and Open Innovation constructs; the remaining variation is due to factors not included in the analysis. According to (Ghozali, 2021), the R-Square values are 0.670, 0.330, and 0.190; it can be concluded that the model is robust, moderate, and weak. Thus, the influence is moderate.

In the next step, we calculated the effect size (F-Square). This test determines if the external latent variable significantly impacts the endogenous latent variable. According to (Ghozali, 2021; Hair et al., 2019; Haryono, 2017), the exogenous latent variable's influence is classified as small if the F-square value is 0.020, moderate is 0.150, and significant is 0.350. The output results are displayed in **Table 6**.

**Table 6.** F-Square Value

Variable	IT Awareness	Digital Marketing	Open Innovation	SMEs Performance
IT Awareness			0.134	0.043
Digital Marketing			0.368	0.006
Open Innovation				0.459
SMEs Performance				

Source: Primary Data Processed (2024)

From the output above, the results can be described as follows: The IT Awareness variable towards Open Innovation has an F-square value of 0.134, so the influence is classified as small or weak. The Digital Marketing variable on Open Innovation shows an F-square value of 0.368, so the influence is considered significant/vital. The Open Innovation variable on SME performance has an F-square value of 0.459, so its influence is considered significant/vital. The F-Square value of the IT Awareness variable on SME performance is 0.043, so the influence is classified as small/weak. Moreover, finally, the Digital Marketing variable on SME performance shows an F-square value of 0.006, so the influence is classified as small/weak.

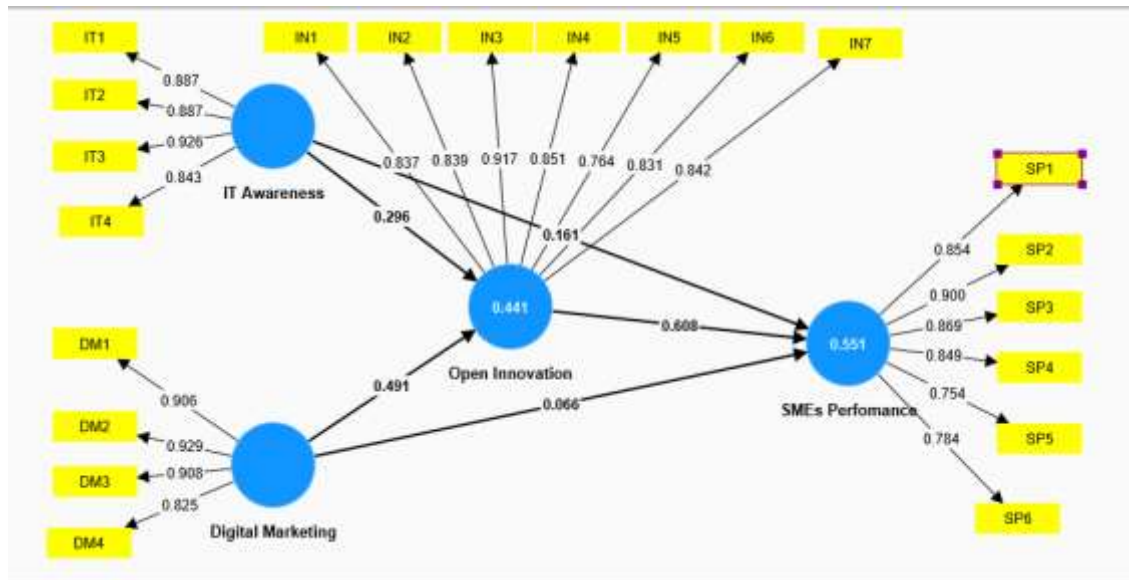
**Table 7.** Model Fit Result

	Saturated Model	Estimated Model
SRMR	0.058	0.058
d_ ULS	0.784	0.784
d_ G	0.632	0.632
Chi-square	307.035	307.035
NFI	0.826	0.826

Source: Primary Data Processed (2024)

The research model also demonstrates good relevance. The Standardized Root Mean Square Residual (SRMR) value, as seen in **Table 7**, is 0.043, less than the recommended threshold of 0.080 (Hair et al., 2019). **Figure 2** shows the path coefficients for the structural equation model.





**Figure 2.** Structural Equation Modeling  
Source: Primary Data Processed (2024)

**Hypothesis testing.** The SmartPLS 4 software's Bootstrapping capability is used to do hypothesis testing. It is generally acknowledged in economics and management studies that research should have a significance level of between 5 and 10 per cent. If the T-statistic value exceeds the minimum requirement of 1.960 and the significance level, represented by the P value, is equal to or less than 0.050, the hypothesis is deemed accepted. This suggests that exogenous and endogenous variables have a considerable impact. In contrast, the effect is deemed unimportant if the P-value is more than 0.050 and the T-statistic value is less than 1.960, suggesting that the relationship between exogenous and endogenous variables is unaffected. (Ghozali, 2021; Hair et al., 2019; Haryono, 2017).

**Table 9.** Path Coefficient and Hypotheses Testing

Hypothesis	Relation	Original Sample	Mean	SD	T-Statistics	P-Values	Description
H1	IT → SP	0.161	0.165	0.095	1.699	0.089	Not Supported
H2	DM → SP	0.066	0.062	0.119	0.055	0.581	Not Supported
H3	OI → SP	0.608	0.609	0.116	5.239	0.000	Supported
H4	IT → OI	0.296	0.300	0.100	2.962	0.003	Supported
H5	DM → OI	0.491	0.493	0.095	5.148	0.000	Supported
H6	IT → OI → SP	0.180	0.183	0.072	2.506	0.012	Supported
H7	DM → OI → SP	0.299	0.300	0.083	3.592	0.000	Supported

Note: IT = IT Awareness, DM = Digital Marketing, OI = Open Innovation, SP = SMEs Performance.  
Source: Primary Data Processed (2024)

**Table 9** shows the following conclusions can be drawn: The initial sample value is 0.161, which indicates a positive influence; the P-value is 0.089, greater than 0.050; and the



T-statistic value is 1.699, which is below the T threshold. -Table of 1.960. This does not support the relationship between IT Awareness and SME performance. Therefore, **hypothesis 1**, which states that IT Awareness influences SME performance, must be supported or rejected.

The results of the second hypothesis, which examines the possible relationship between the performance of SMEs in Makassar and their use of digital marketing media, are as follows: the original sample value was 0.066, indicating a weak influence; the P-value was found to be 0.581, higher than 0.050; and the T-statistic value was 0.055, lower than the T-table threshold of 1.960. Thus, using digital marketing media has a marginally favourable impact on the performance of small and medium-sized enterprises in Makassar, which further refutes **Hypothesis 2**.

The initial sample value of 0.609, which indicates a positive influence, a P-value of 0.000 (less than 0.050), and a T-statistic value of 5.239 (over the T-table threshold of 1.960) all support the association between Open Innovation and SME success. Thus, supporting **Hypothesis 3**, the open innovation process significantly and positively impacts SME performance. It is essential to point out that the Open Innovation variable had the highest initial sample value of any of the three independent variables analysed in this study, at 0.608, or 60.800 per cent. According to these results, the adoption of the Open Innovation strategy has a significant influence on enhancing SMEs' performance in Makassar.

The statistical study of the association between IT Awareness and open innovation in hypothesis 4 reveals that the T-statistic value is 2.962 (exceeding the threshold T-table of 1.960), the P-value is 0.003 (lower than 0.050), and the original sample value is 0.296 (showing a positive influence). This demonstrates that IT Awareness supports **Hypothesis 4** by positively and significantly affecting the Open Innovation process.

According to the statistical analysis, **hypothesis 5**, which looks for a connection between open innovation and digital marketing, has a positive influence, as indicated by the original sample value of 0.491. It was discovered that the T-statistic value was 5.418 (beyond the T-table cutoff of 1.960), and the P-value value was 0.000 (less than 0.050). This supports Hypothesis 5 and shows how digital marketing positively and significantly impacts the Open Innovation process.

**Moderation analysis.** This study used the indirect impact method and the SmartPLS moderation strategy to examine the moderating role of open innovation. The findings of our study are described in the sections that follow.

According to the analysis of Hypothesis 6, the P-value is 0.012, which is less than the significance level of 0.050, and the T-statistic value of the influence of the open innovation process moderating the impact of IT awareness on SME performance in the city of Makassar is 2.506, which is greater than the critical T-table value of 1.960. The results support Hypothesis 6, indicating that open innovation moderates a relationship between IT Awareness and SME achievement.

The research results for Hypothesis 7 show that the related P-value is 0.000, which is less than 0.050, and the T-statistic value of the effect of open innovation moderating the impact of digital marketing on SME performance is 3.592, exceeding the T-table value of 1.960. These findings affirm Hypothesis 7 by showing that the open innovation process moderates the association between digital marketing and SME performance.





## DISCUSSION

From the results of testing the direct relationship, this research hypothesis was answered well. Apart from that, this research model effectively explains several variables' vital role in SMEs' performance in Makassar. Hypothesis analysis shows that awareness of the use of information technology has a negative effect on the performance of culinary SMEs in the city of Makassar. Empirical facts in the field show that most SMEs in Makassar, or as many as 97.872 per cent, already know. They are familiar with information technology applications that they can use to support their business activities. Acceptance of payments via QRIS, E-Money and EDC machines shows that all respondents in this study confirmed this. This means that all respondents in this study are technologically literate. Previous research from (Nurdiana Nurfarida et al., 2021) and (Hadi Putra & Santoso, 2020) explains the importance of using media and information technology facilities in supporting the performance of SMEs.

However, this was refuted in this research. IT awareness has little effect on improving the performance of culinary SMEs in the city of Makassar. Although customer orientation towards SME performance will become stronger with the use of information technology media, SME players in the city of Makassar are expected to be able to follow trends in meeting the needs and desires of their customers so that they can create value both for customers and for the SMEs themselves. For this reason, IT Awareness needs to be supported by innovations from UKM to improve the performance of UKM in the city of Makassar, especially those operating in the culinary sector. This research suggests the importance of SMEs adopting social media as information technology because it contributes to increasing the dissemination of information carried out by culinary SMEs in Makassar to improve their business performance.

The use of digital marketing media was also found to have no positive or significant impact on improving culinary SMEs' performance in Makassar. Although the use of digital marketing media can benefit companies in terms of costs and fast transaction times, interactions can be carried out with consumers more quickly, how exciting programs can be launched through digital marketing media, and can produce a more attractive appearance in promotions that are carried out, through digital media (Chatterjee & Kumar Kar, 2020; J. B. Halik et al., 2023).

However, based on the results of this research, more is needed to improve the performance of SMEs in Makassar. Empirical facts from research in the field show that promotions carried out through pamphlets, flyers, vouchers, and brochures directly have more significant results on company turnover. Promotion via digital media is considered less effective because it cannot reach end consumers emotionally. From the consumer perspective, researchers also conducted short interviews. Consumers stated that although promotions via social media often seem more attractive to them, they often need clarification about the promotions offered, who to contact, and how to use them through digital marketing media. Thus, previous research by (Hawaldar et al., 2022) states that sales by companies are greatly influenced by digital media as well as our previous research (J. Halik et al., 2021) also states that digital marketing is a positive and significant influence on the performance of SMEs in the city of Makassar is also refuted by the results of this research. This is the impact of differences in the population and sample of this research, where in our previous research (J. Halik et al., 2021), the samples taken were SMEs in general, not SMEs operating



in the culinary sector as in this research. Apart from that, there are different perspectives on the questions asked in this questionnaire.

In addition, research (Keke, 2022) which aims to find the influence between digital marketing channels and consumer purchasing preferences found that all digital marketing channels, especially social media, significantly influence consumer purchasing preferences. As stated in this research, the shift from traditional to digital marketing with the advent of the Internet has greatly impacted consumers. This is an essential condition that must be resolved by culinary SMEs in Makassar. However, a further innovation process is needed to positively and significantly affect business performance.

The Open Innovation Process was found to influence SMEs' performance in Makassar positively and significantly. The results of direct influence research show that Open Innovation is a variable that significantly impacts the future development of SMEs. The coefficient value found to be optimistic means that the influence is positive, namely that the increase in the Open Innovation process will go hand in hand with the increase in the performance of Culinary SMEs in Makassar. Carrying out an open innovation process means that SMEs are trying to find their competitive advantages both from within and outside by utilising their resources. The indicator of open innovation states that SMEs have used the latest tools and materials to increase internal innovation, showing the highest mean value among the other seven open innovation indicators.

The indicator that states that businesses have sold licenses and opened franchises for their businesses shows the smallest mean value. This is understandable because empirical facts in the field show that businesses that sell their licenses as franchises are medium to large-scale businesses. SMEs also consider innovation necessary so that they stay loyal to their competitors. Apart from that, many businesses in the city of Makassar have licensed applications to support their business activities as an indicator of supporting SME innovation activities in the city of Makassar. SMEs in Makassar have offered new methods that other SME internal organisations can use. This indicates that in the innovation process carried out by these SMEs, they exchange information with each other to develop innovation within their respective SMEs. The author discovered the reality in the field that there were associations of restaurant owners, associations of coffee shop owners and associations of other business owners when conducting surveys in the field.

The results of the research on this relationship demonstrate that SMEs' overall performance can be improved by enhancing their innovation capabilities, which include regularly coming up with new ideas, launching new goods or services, being able to run a business creatively at all times, and identifying new ways to innovate. These findings align with research conducted by (Londong et al., 2024; Rumanti et al., 2022; Valdez-Juárez & Castillo-Vergara, 2021). The research above states that the Open Innovation process positively and significantly influences the performance of SMEs.

Awareness of Information Technology (IT Awareness)'s use positively and significantly influences the open innovation process. The innovation process by SMEs in the city of Makassar needs to start with knowing which information technology is appropriate for their business. After determining the right technology, SMEs must introduce information technology (applications) to everyone in the company, both employees and business owners, to use these applications to support the company's operational activities. The most important thing is how these applications can be used to solve the problems faced by these SMEs. From the results we found in the field, applications such as Quinos, Verizon,



AccountIT, and many other information technology applications have been used to support these businesses' operations.

These applications have various functions, such as helping to book daily and monthly sales and assisting SMEs in making their financial reports automatically every month. Apart from that, most of the SMEs surveyed by researchers in the field have also used banking financial applications such as M-Banking, SMS Banking, and barcode scanning for customer payments. This supports the open innovation process carried out by SMEs in the city of Makassar, especially those operating in the culinary sector. This agrees with a study from (Hernández-Dionis et al., 2022), which claims that the innovation process carried out by SMEs in Spain is positively and significantly impacted by their awareness of the use of information technology.

Digital marketing shows a positive and significant influence on the open innovation process of SMEs in the city of Makassar. This agrees with research put forward by (Kilay et al., 2022), which states that all electronic payment channels and the use of e-commerce media significantly influence the innovation process carried out by SMEs in Indonesia, influencing consumers' preference for making purchases. One of the simplest ways to sway the decisions of prospective clients to buy is through social media (Tamara et al., 2023). Ignoring social media would be an enormous mistake for businesses and brands in today's highly competitive environment. The most important value of using Digital Marketing for SMEs is reduced costs and transaction times, smoother two-way relationships with consumers, more excellent value from promotional programs launched through digital media, and reaching more people as potential consumers they need to be accompanied by innovation carried out by these SMEs so that they could affect SMEs' overall success.

Awareness of the use of information technology (IT Awareness) shows a positive and significant influence on improving the performance of culinary SMEs in Makassar after going through an open innovation process. This is where the open innovation variable's significant function in this study as a moderating variable becomes visible. Awareness of the use of information technology in supporting a company's performance does not directly impact the improvement of the performance of culinary SMEs, which is the object of this research. Innovations are needed as additional steps in improving the performance of these SMEs. The innovation process is described through seven indicators used to measure the Open Innovation process. The innovation process can be carried out by involving external parties in innovation activities carried out by the SME.

Based on empirical facts that the author found in the field, several SMEs have involved external parties in their innovation activities. For example, several SMEs hire third-party services to assess the performance of their employees. Apart from that, several SMEs collaborate with third parties to create applications supporting SME performance. Applications such as Quinos, Verizon, Account IT, and many other information technology applications are used to support the operations of these businesses. Consumer and competitor factors also influence the innovation process carried out by SMEs in the city of Makassar. To comply with and facilitate consumer desires, like it or not, SMEs must continue to use the latest information technology facilities to serve their consumers more quickly and satisfactorily. Competitors who use the latest information technology can also encourage these SMEs to innovate in their business activities. These things can encourage the increased performance of these SMEs. They are marked by increased sales, market, and profit growth for these SMEs.



The following innovation process is when SMEs use the latest tools and materials to increase internal innovation. The tools here can be used in the application, such as adequate interior, ways for consumers to place orders through the application that they consider to be the most effective, ways for consumers to pay, and so on. When researchers conducted surveys in the field, the most visible innovation was that almost all SMEs had provided digital payment tools to support their business performance. Payment tools such as Q-ris, TapCash, and Cashless are available in almost all the outlets researchers visited. Apart from that, from field observations, almost all consumer shopping notes are available in printed form. SMEs can also innovate through information technology to gain other benefits from the internal innovation that has been carried out. By utilising the technology they have, SMEs can innovate by expanding their brands, adding variants to their main products, and other innovations. The results of this research imply that the IT Awareness variable is one factor that strengthens why SMEs in Makassar carry out the Open Innovation process to improve their performance. In addition to increasing awareness of information technology, SMEs need to continue to carry out innovation processes in their businesses to improve the performance of these SMEs.

This research confirms previous research (Dumitriu & Popescu, 2020), which revealed that companies in Romania have utilised information technology in their marketing and artificial intelligence (AI), which means that these SMEs have carried out innovations. They are more developed in marketing than companies that only use conventional marketing.

The use of digital media in marketing SME products was found to have a positive and significant effect on improving SME performance after going through an open innovation process. For this reason, SMEs need to innovate to support their promotions using digital marketing media. The empirical fact that the author found in the field is that SMEs only display images of their business or their products as their business when utilising digital marketing media. We found it less effective in creating loyalty and customer purchasing decisions, which are the core of improving a company's performance. Even though almost all SMEs in the city of Makassar have used GoFood, GrabFood, and ShopeeFood, the exciting programs launched through these applications were deemed unable to create added value by around 41 per cent of respondents surveyed.

According to researchers, promotional programs launched through the big three applications can only create value for these SMEs if they create customer loyalty to the brands offered. Consumers only hunt for products at promotional prices offered by GoFood, GrabFood, ShopeeFood, and other digital marketing media. When there are no promotions, consumers do not place orders for products SMEs offer through the application. This is where SMEs in the city of Makassar need to carry out the importance of innovation in marketing through digital media.

When marketing their products through digital media, SMEs must look for breakthroughs and new things. SMEs need to find out what consumers want and can learn from their competitors to help innovation activities within SMEs. Besides, SMEs can utilise external parties to get involved in marketing innovation for their products. For example, endorsement services via Instagram are promoted by local influencers (Londong et al., 2024). Continuous efforts are also needed from SMEs to gain other benefits from the internal innovation that has been carried out. For example, SMEs can offer other products as a reward for purchasing their main product. For example, buy free food and drink, buy two get one free, and apply discount vouchers for subsequent purchases, as has been done



by several culinary SMEs in Makassar. Innovations carried out by SMEs need to be focused on creating consumer loyalty towards the products offered by these SMEs through digital media. This validates the findings of a study titled Marketing Perspectives on Digital Business Models: A Framework and Overview of the Special Issue that was carried out (Verhoef & Bijmolt, 2019). According to this research, a digital transformation can impact business performance outcomes at the company, brand/customer, and company levels depending on the firm's capacity to implement innovations to support its operations.

## CONCLUSION

The relationship between IT awareness, the usage of digital marketing channels, and open innovation processes for enhancing the performance of culinary SMEs in Makassar has been shown by this research in several noteworthy aspects. Almost all of the SMEs sampled in this research (98 per cent) have utilised particular software applications to support their business performance. This result refers to the utilisation of information technology in the form of applications to support the performance of SMEs in the city of Makassar. However, this has little impact on improving SME performance.

This needs to be supported by innovations carried out by these SMEs. The correlation between enhanced company performance and innovation highlights the significance of developing creativity and adaptability to achieve enduring achievement in today's constantly evolving business environment. Likewise, digital marketing media can improve SMEs' performance in Makassar. This research suggests the importance of open innovation processes in these efforts. The main thing that needs to be achieved in innovation for the use of digital marketing media is how to achieve customer loyalty and how efforts to utilise digital marketing media can strengthen the brand in the minds of consumers. The findings of this research show how IT Awareness and the use of digital marketing media on various platforms support SME innovation efforts. Innovation cannot be applied uniformly across various platforms, applications, and other means that support the performance of a business. An innovation strategy that is right on target is needed based on the policies of each SME.

**Limitations and Suggestions for Further Research.** Despite the results obtained, we realise that this study still has several limitations that pave the way for future research. **First**, this study was limited to Makassar and concentrated on SMEs in the culinary sector. This means that additional thorough research on SMEs in general, which is relevant to this topic, will be necessary. **Second**, this research uses a deductive approach, relying only on questionnaires to collect data. Future studies could benefit from implementing a qualitative method that includes focus-group discussions and in-depth interviews to collect more complete and comprehensive data about how SMEs generally use digital marketing tools, information technology, innovation processes, and business performance. **Third**, the scope of this study is limited to small and medium enterprises (SMEs) in the Makassar area which operate in the culinary sector. Given the study's theoretical implications, enhancing the number of respondents to the research is necessary for verifying its findings and making them more relevant. The author admits that there are regional differences in the features of SMEs in Indonesia. For this reason, more research on SMEs in Indonesia can be done to determine how information technology awareness and digital marketing media influence SMEs' performance in Indonesia and perhaps worldwide. Apart from that, further research can discuss SMEs operating in the culinary sector and other fields so that the digital marketing media used can be more diverse.



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