

# Digital Literacy SME West Sumatra Province

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## ABSTRACT

The COVID-19 pandemic has hurt almost all economic sectors, including Small, medium enterprises (SME). The significant changes that occurred during the pandemic were the demands for the acceleration of digital transformation, and the mastery of information technology seemed to be an absolute necessity, especially during the COVID-19 pandemic. Online marketing is the best way to market globally, considering limited mobilizations to reduce the spread of the covid-19 pandemic. This study aims to overview digital literacy, especially for small and medium enterprise (SME) entrepreneurs in West Sumatra Province. The research methods used are quantitative and descriptive analysis. Data collected through 379 direct surveys selected samples spread across districts/cities in West Sumatra, namely Padang City, Bukittinggi City, Agam Regency, and Pesisir Selatan Regency, one of which was one of the areas with SME that absorbs great energy work. The findings show that 57 percent of business actors have used the internet. Mastery of applications technology such as MS Office software is still minimal, which is only about 10 percent, and only 7 percent of businesses already have their web. In addition, business actors generally do not use fintech loans (2 percent). During the COVID-19 pandemic, nearly 75 percent of SMEs stated the need for online marketing. Almost half of them have used digital banking as a means of payment and used social media for marketing their product (47.2 percent). Using social media was dominated by WhatsApp, Facebook, Instagram. However, only a few SMEs use e-commerce like Shopee, Bukalapak and Tokopedia (9 percent) in marketing. There is still minimal internet use for purchasing raw materials, developing business ideas, or promoting or advertising. This study recommends that the government and relevant stakeholders strive to improve further digital literacy and access for marketing and business development for business actors. Besides that, need sustainable assistance to SME businesses for the economic recovery of the SME business sector during the COVID-19 pandemic especially and to improve global competitiveness. This study recommends that the government and relevant stakeholders strive to improve further digital literacy and access for marketing and business development for business actors. Besides that, need sustainable assistance to SME businesses for the economic recovery of the SME business sector during the COVID-19 pandemic especially and to improve global competitiveness. This study recommends that the government and relevant stakeholders strive to improve further digital literacy and access for marketing and business development for business actors. Besides that, need sustainable assistance to SME businesses for the economic recovery of the SME business sector during the COVID-19 pandemic especially and to improve global competitiveness.

**Keywords:** *Digital literacy, Small and medium enterprise, Covid-19 pandemic, West Sumatra*

## 1. INTRODUCTION

The Covid-19 pandemic has had an impact on almost all economical sectors and their ecosystems. Almost all SME sectors experienced a decline in sales turnover due to a lack of demand for goods and services due to restrictions on mobility to reduce the spread of COVID-19. The results of the Central Statistics Agency (BPS) survey in July 2020 showed that more than 80%

of large and small-medium enterprises experienced a decline in sales, with the most affected business sectors being the accommodation and food and beverage services, and transportation and warehousing sectors. Furthermore, the survey results also show that efforts are made to survive during the pandemic, including diversifying Business by adding products, business fields, and business locations and even switching business sectors to increase income [1].

SME is one sector that has an essential role in the Indonesian economy. The SME sector has contributed to the National GDP by 60.5 percent, absorbing 96.9 percent of the total workforce and 99.9 percent of available employment. The number of SMEs in Indonesia also continues to experience an increase from 61.65 million units in 2016 to 65.46 million in 2019. Productivity per worker has also increased from 45.83 million in 2016 to 58.83 million in 2016. 2019[2].

The resilience of SMEs due to the crisis during the COVID-19 pandemic is felt much different from the monetary crisis in 1997. So far, SME is considered one of the economic shields with the best resilience to the situation (Saputra 2020) (Kemenkop SME 2020). The decline in purchasing power due to restrictions on outside interactions made people turn to digital purchases. As a result, SMEs, which still depend on offline sales, were forced to close their businesses due to reduced demand. However, companies that can adapt to digital generally survive [3]. The main obstacle for SMEs in adapting Information Technology (IT) is strongly influenced by digital literacy [4].

The COVID-19 pandemic has made digital transformation run faster than ever imagined and is a must to survive and compete on a local and global scale, as well as the demands of technological change. In addition, the pandemic has also changed the behavior of internet users and pushed the digital entrepreneurship phenomenon—the shift of offline Business to digital Business. After the pandemic, there was an increase in businesses entering the digital ecosystem to 19% from 13% in the pre-pandemic period [5].

The Ministry of Cooperatives and SME has even launched a digital economy with a target of 30 million SME players entering the digital ecosystem by 2024 through the Gernas program (Gerakan Proud Using Indonesian Products). The use of digital technology is very much needed because digital platforms can increase efficiency and add sales channels, even more so during this covid-19 pandemic[6]. Besides that, Building a digital technology foundation in business processes is part of a short-term and long-term strategy that is considered to save SMEs from the impact of the COVID-19 pandemic[7]. Besides that, Indonesia has enormous potential, and besides that, it is also considered the fastest and most significant in the Southeast Asia region [8]. This is partly due to many people ranked 4th globally, with 70.7% of the population being productive. In terms of internet users, Indonesian mobile phone users currently reach 345.3 million, or 125.6% of the population. Population with internet penetration of 73.7% and internet traffic increasing by 15-20%[9].

The challenges of the Digital Economy in Indonesia, as released by the Ministry of Communication and Informatics, include the level of internet use in

Indonesia which is only 64%. This condition is still lagging behind other ASEAN countries such as Singapore (88%), Malaysia (83%), Thailand (75%), and Vietnam (70%). Indonesia's average mobile internet speed is still far below other ASEAN countries, with inadequate Internet quality, data security, low consumer privacy, lack of digital mastery for industry, and the low number of SMEs entering the digital ecosystem[2]. In fact, since the declaration of the ASEAN Economic Community (MEA) in 2015, competition has become more wide open because all economic components such as capital, goods, services, investment, labor are freely traded. Domestic SMEs will compete with products from the ASEAN region, and based on a survey by the Ministry of Communication and Informatics, very few entrepreneurs understand this MEA era (28%)[10]. This condition certainly makes digitalization an unavoidable necessity.

SMEs in West Sumatra also play a crucial role in creating jobs, reducing unemployment, and creating added value in the Gross Regional Domestic Product economy. The follow-up Economic Census in 2017 noted that there were more than 580,000 small business units that absorbed 1.29 million workers or 98.8% in the non-agricultural business sector. However, the various problems SMEs face and the SME competitiveness index for provinces throughout Indonesia released by Bappenas in 2014 show that West Sumatra is in position 16 (sixteen) of 25 areas, even below the provinces of Papua, Riau, Bengkulu, and Jambi. [11].

As is the case at the national level, the COVID-19 pandemic also evenly impacted all business actors in cities in West Sumatra, where the most complained about marketing problems due to declining demand and a decrease in turnover by more than half, compared to before the pandemic. [1]. As in other areas, SMEs in West Sumatra Province also continue to defend their Business from the impact of the COVID-19 pandemic. Like SMEs in other areas, the online method is a widely adopted strategy.

Through the RPJMD (Regional Medium-Term Development Plan) document of West Sumatra Province, the government has also targeted the digital economy as one of its priority programs. One of the crucial things that need to be considered in developing this digital economy is digital literacy for business actors . Digital literacy is understood as a competency related to media, acquisition, or mastery of information technology and information and communication technology (ICT) development capacity[12]. Better digital literacy skills will make people synergize digital media with activities to support their productive business activities. Several research results show that the general problem faced so far is the lack of use of ICT, starting from the service and mastery of computer operations and internet use[13]. This is due to the lack

of skilled human resources, and there are still many businesses that are not digitally literate[14].

Therefore, as a stage for the development of the digital economy, it is necessary to study the extent of digital literacy of business actors in each region. This study aims to analyze the digital literacy picture of SMEs, especially those engaged in the processing sector, to support the acceleration of digital transformation. Image analysis digital literacy is essential for planning a series of digital education[15]. What the government will do to achieve the digital economy targets in the RPJMD and make the Kemenkop SME movement a success.

**2. MATERIALS AND METHODS**

This research is a type of descriptive quantitative research. The data used are primary and secondary. Techniques Primary data collection was carried out through surveys using offline questionnaires spread across four districts/cities in West Sumatra and direct interviews with related SMEs. The research object is SME actors in West Sumatra who carry out the production process (manufacturing), commonly called Small and Medium Industries. Determination of the number of respondents is done by sampling with the purposive sampling technique using the Slovin. Formula [16] and obtained a sample of 379 SMEs. The sample frame is referenced from data on SME actors published by the Department of Industry and Trade of West Sumatra Province. The purposive sampling technique is used to determine the type of SME based on the Indonesian Standard Classification of Business Fields (KLBI), which will be the object of research. The districts/cities that were sampled for the study were based on regions that included SME's with the most

significant employment absorption, such as Padang City, Bukittinggi City, Agam Regency, and Pesisir Selatan The survey was conducted from June to August. At the same time, secondary data is obtained from literature studies, articles, press releases, official publications, and data from the official site. The variables chosen to describe digital literacy are the use and mastery of digital[15] and digital understanding [17], which is explained by the number of SMEs using the internet, the use of the internet, computer technology, and the use of social media. In addition, it is also more specific to describe the digital strategies carried out by SMEs during the pandemic and perceptions related to the need for online marketing.

**3. RESULTS AND DISCUSSION**

**3.1. Overview of the Digitization of West Sumatra**

*3.1.1 Internet User*

Based on the 2020 APJII survey, the Sumatra region contributed 21.6% of the contribution of internet users in Indonesia, and West Sumatra contributed 2.5 percent of internet penetration in the Sumatra region. Meanwhile, internet users in West Sumatra were 84.2% in 2019, and during the 2020 pandemic, an increase of 7.6% [18]. This is also in line with the BPS survey that there has been an increase in internet use by an average of 5% in West Sumatra for the last three years since 2018. This indicates that digital transformation continues and even increases during the COVID-19 pandemic.

**Table 1.** Percentage of Population Age 5 Years and Over Who Access the Internet in Last 3 Months in 4 Regencies/Cities in West Sumatra Province (Percent)

Year	Province	Pessel	Agam	Padang	Bukittinggi
2020	36.49	41.15	46.35	56.18	59.35
2019	41.15	30.80	40.99	60.52	69.27
2018	46.35	36.03	48.74	63.61	73.84

Source: BPS, National Socio-Economic Survey

*3.1.2 West Sumatra Digital Finance*

Bank Indonesia reported an increase in digital Finance, which indicated a rise in public preference for digital transactions during the pandemic in the fourth quarter of 2020. BI-RTGS transactions increased by 21.83% (YoY) compared to the fourth quarter of 2019. The flow of BI-RTGS transactions was more many come from outside the West Sumatra region than transactions originating from West Sumatra.

Meanwhile, the number of server-based electronic money in West Sumatra increased from 3,458 to 3,771 accounts. The amount of electronic money was offset by an increase in the nominal transaction to Rp227.79 million in the fourth quarter of 2020, or higher than the third quarter of 2020, which amounted to Rp.2.74 million [19].

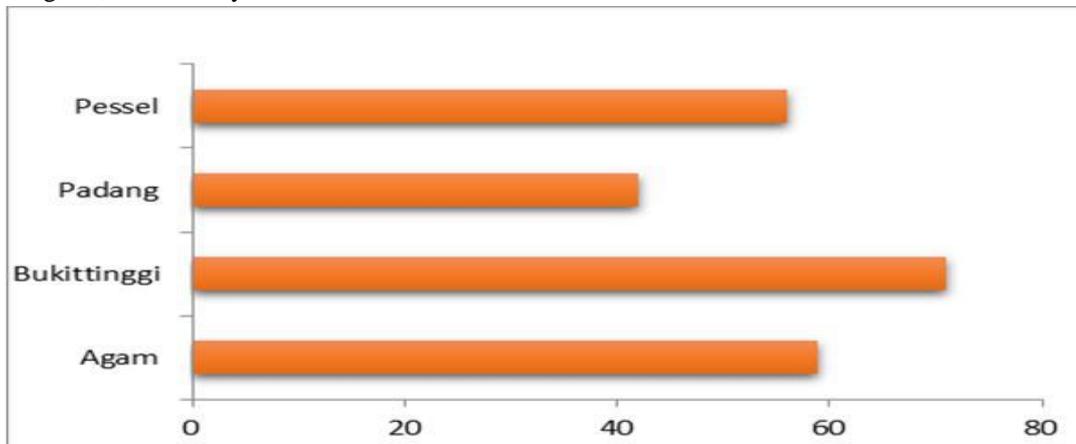
### 3.2. SME Digital Literacy

#### 3.2.1. Use of Information and Communication Technology (ICT) in SMEs

Mastery of ICT is crucial at this time. ICT is a medium that can penetrate the global market and increase competitiveness on the upstream (suppliers) and downstream (marketing) sides. The technological acquisition is defined as the ability to generate and manage the process of technological change. This mastery process involves taking, obtaining, using, implementing, adopting, imitating, improving, and mastering advanced technology[20]. The digital literacy studied includes the number of adoptions or users, internet users' goals, and mastery of ICT.

#### 3.2.1.1 Adopt (User) Internet

The survey results in the research area show that of the 379 sample respondents surveyed directly, it shows that, on average more than half of the respondents are already using the internet (57%). The city of Bukittinggi, as a center for tourism and wholesale trade in West Sumatra and even in Sumatra, has the most Information Technology users compared to other areas. The results of this survey are in line with the study conducted by BPS that of the 4 sample areas, Bukittinggi is the largest user (figure 1). Internet users in the Bukittinggi area reach 71%, both small and medium industries. While overall mastery of information technology, both for ms-office applications and also social media [21].

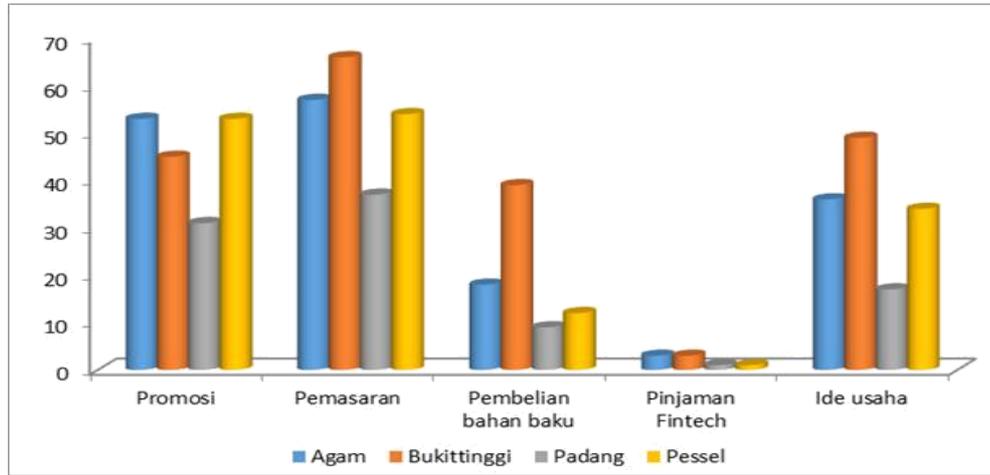


**Figure 1** Internet users in the sample of SMEs in 4 districts/cities of West Sumatra Province (percentage) Source: survey results, data processed, 2021

Furthermore, Agam Regency is the area with the second largest internet users (59%) based on the sample in this study. Quite large, besides that the variety of business sectors in this area is quite diverse. Meanwhile, Pesisir Selatan Regency and Padang City are based on the sample of these businesses, which are not enough internet users compared to the other two regions. Whereas in general, BPS data explains that Padang is the second largest area of internet users when compared to different samples, but this is not the case with businesses. The industry. The type of business acquisition based on the KBLI sample recorded in this study also influenced this result, where what was

registered as a sample of processed food and beverage businesses that mainly distributed their Business directly to customers, production techniques were still semi-mechanical and perhaps did not feel they needed the internet in their Business.

Meanwhile, in terms of using the internet, most industrial businesses use the internet for marketing or online sales purposes from the selected sample (figure 2). On average, more than half of the respondents have used the internet to help their sales (53.5%). With the development of the digital world, marketing techniques have shifted from being traditional to change with just oneclick.



**Figure 2** Internet Usage by Purpose On the SME Sample at 4 Regency/City West Sumatra Province (percentage)

Source: survey results, data processed, 2021

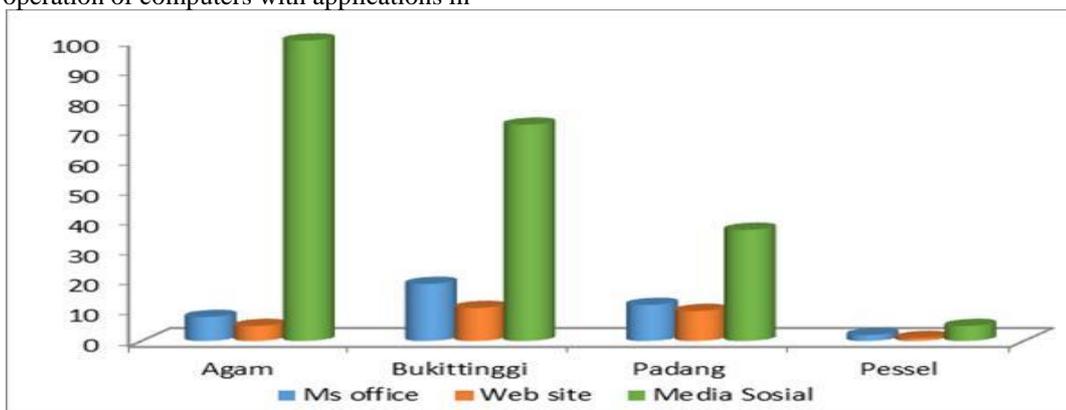
Furthermore, internet usage is also mainly used for the promotion of business results (45.5%), and there are still few who use the internet for business development (34.5), purchasing raw materials (19.5%), and even for online loans ( 2%). This shows that the use of the internet by the business world is still at the normative level. Few use the internet to increase business opportunities or marketing strategies or establish communication with the upstream sector (suppliers). This finding is also in line with the results of this study [22] which shows that the average internet adoption in businesses is quite good, but it is still limited for business management

3.2.1.2 Technology Mastery

In addition to the use of the internet, which can be operated easily on smartphones, tablets, and similar media, the operation of computers with applications in

them is also essential to support the use of the internet via computers and for business administration. This application is necessary for making orderly Business, sales reports, balance sheets, profits, losses, contracts, and other business documents.

The survey results show that computer applications such as Ms office are still low in Business (average 10%). The use of computer applications in the processing industry businesses sampled was 19% in Bukittinggi City, 12% in Padang City, and 8% in Agam and Pesisir Selatan Regencies, even 2% (figure 3).The everyday use of computers, among others, can be because they feel they don't need it, financial problems, and limited expertise [23]. The lack of mastery of SME science and technology makes SME performance in Indonesia much lower than in developed countries.



**Figure 3** ICT Mastery In the sample of SMEs in 4 districts/cities of West Sumatra Province (percentage) Source: survey results, data processed, 2021

The use of the web for promotion and business management is also very minimal, with the same use as computer applications (7%). Meanwhile, the use of

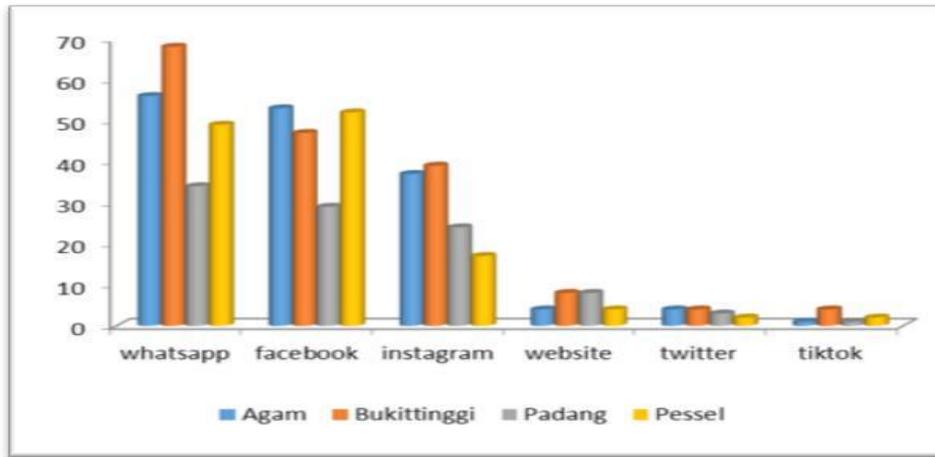
social media appears to be dominant in business actors. During the COVID-19 pandemic, social media is the most accessible platform for all people, including the

business world, from the oldest to the youngest [24]. All of the sampled businesses in Agam Regency have used social media for their Business, and this is also the case with 70% of the sample in Bukittinggi. This area is very famous for its textile and apparel centers, both of which have been hit hard by the COVID-19 pandemic (interview results, 2021).

### 3.2.2 Use of Social Media

Survey results [25] revealed that Indonesia is among the top 10 countries that most use social media, and the average community uses social media within 3 hours above the global average. This is closely related to internet availability and the Indonesian people's widespread use of Android smartphones. The most widely used social media include you tube, whatsApp, and instagram. This is also in line with the results of a

survey of the research area that WhatsApp is also the most widely used social media by the business world in each sample area (51.75%). Bukittinggi City (68%) and Agam Regency (56%) have the highest WhatsApp users. At the same time, Facebook and Instagram are the choices after the WhatsApp application (Picture 4). This shows that SMEs prefer a more straightforward usage, are easy to use, do not contain many pictures, save internet packages, and focus on sending messages (chat). The most exciting thing for business people from this WhatsApp application is a particular business chat service that helps them market their products [26]. In line with the preferences of the national community as consumers who also like the WhatsApp application, online marketing has the potential to be done via WhatsApp.



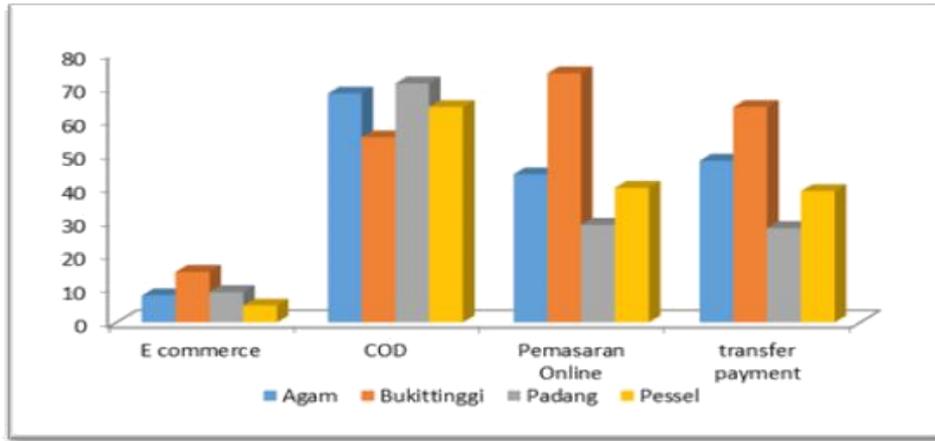
**Figure 4** Use of social media the sample of SMEs in 4 districts/cities of West Sumatra Province (percentage)  
Source: survey results, data processed, 2021

### 3.2.3 Strategy on Covid-19 pandemic

Several research findings show that since the Covid-19 pandemic, many people have turned to online shopping and have forced business actors to make efforts to maintain Businesses with mobility restrictions such as PSBB (Large-Scale Social Restrictions) and PPKM (Large-Scale Social Restrictions). Enforcement of Restrictions on Community Activities). SMEs that change their marketing strategies by digital means, improve product quality and services, and build customer relationship marketing to foster customer loyalty will survive [27]. Online marketing is the answer to the pandemic situation. Mobility restrictions have hampered the traditional buying and selling system. It requires face-to-face and natural things and digital

marketing to be an absolute solution to restore market demand (supply meets need).

Some of the strategies taken by businesses to survive the pandemic are also doing online marketing and providing online payment systems such as transfers. On average, almost half of the sample surveyed make marketing and online payments. The high number of internet businesses in Agam Regency and Bukittinggi City is also directly proportional to the number of enterprises implementing online marketing and payment strategies (figure 5). However, the cash on delivery (COD) payment method is mainly used to reduce risk and make it easier to get some money. In all samples, the choice of COD strategy was the most extensive choice, with an average of 64.5% effort.



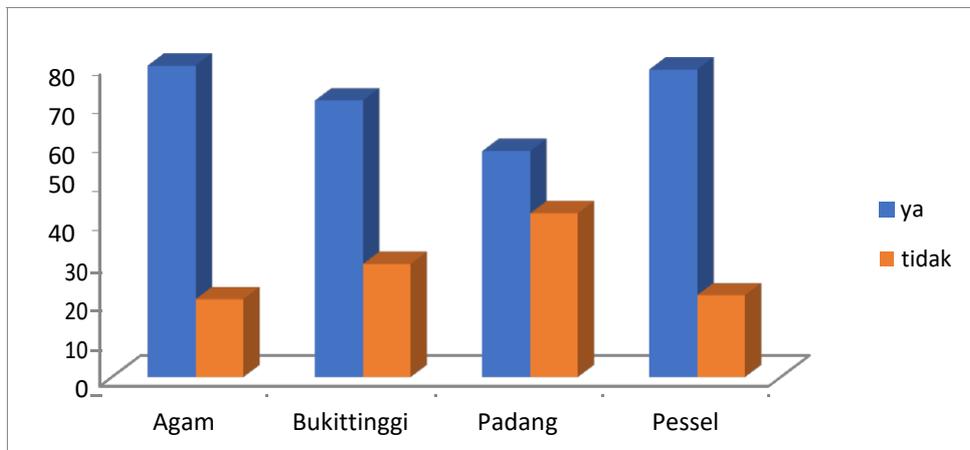
**Figure 5** SME digital strategy during the covid-19 pandemic the sample of SMEs in 4 districts/cities West Sumatera Province (percentage)  
Source: survey results, data processed, 2021

Meanwhile, it is very minimal in using e-commerce media as a strategy to survive the COVID-19 pandemic. The survey results show that, on average, only 9% of businesses use e-commerce in each region (such as Shopee, Bukalapak and Tokopedia). The use of e-commerce media as promotional media is mainly in the Bukittinggi and Padang areas. Things that affect business participation in e-commerce media include skills and understanding for e-commerce management because SMEs choose media that are easy to operate. E-commerce is allegedly the primary way to replace little traditional shopping to meet consumer needs due to restrictions on activities during the COVID-19 pandemic.[28]. Several studies have shown that e-commerce has a positive and significant effect on SME performance in general [29]. During the Covid-19 pandemic, in general, there was an increase in world e-commerce transactions due to restrictions on mobility

and social distancing, as people carried out work, school, and purchase activities from home.[28].

### 3.2.4 SME's Perception of the Need to Do Online Marketing

Next, to achieve the target of 30 million business digitalization sectors launched by the government, the need to identify the business sector's perception of the digitization itself is carried out. Based on Figure 6, it can be seen that SMEs tend to say that they need online marketing (72%) but with variations in perception in each region. Agam Regency, which includes its processing industry classified as advanced, almost 100% said it needed it. In contrast, businesses in the capital city and the growing processing industry group did not necessarily state that they fully required online marketing. This is thought to be due to the factors of the respondent's type of Business, education, age, and entrepreneur mentality owned by the entrepreneur [30].



**Figure 6** SME's perception of digital needs in the SME sample in 4 Regency/City of WestSumatra Province (percentage)

Source: survey results, data processed, 2021

#### 4. CONCLUSION

The digital literacy of SME actors in the research sample area of West Sumatra Province can still be limited and needs improvement. In terms of internet adoption, namely the number of users, on average more than half of businesses already use the internet and the most use of marketing and business promotion. Meanwhile, the use of computer technology is still relatively low, and business actors use social media more for operations. Social media that are more accessible to the business world are WhatsApp, Facebook, and Instagram applications. Meanwhile, to survive the COVID-19 pandemic, businesses have carried out digital strategies by marketing and providing online payment systems through social media. It is still scarce to use e-commerce media such as shopee and the like for marketing. Furthermore, the dominant business community expressed their need for online marketing for business development, which is undoubtedly a positive thing for the digital economy target.

Based on the research findings, a strategy is recommended to increase digital literacy for business actors, starting from mastering and utilizing ICT in business development operations. The development of the insight of business actors is essential. The use of the internet is limited to marketing and can also be done to innovate and develop Business. So that we need comprehensive digital education and sustainable assistance so that the business world is ready to enter the digital ecosystem with all the prerequisites. This case also required endorsement from stakeholder other than government, company, and college to accelerate digital transformation for business actors.

#### AUTHORS' CONTRIBUTIONS

All authors are major contributors

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