



Technology Transformation: Promoting Sustainable Indonesia MSMEs and Cooperative by Digitalization

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Abstract

This research was conducted to find out what steps the government has taken in striving for society to be 'digital literate', what obstacles are faced and what digital forms have been implemented by MSME players and cooperatives that have gone digital. The method used is an integrative review. The results of this study found that the government has tried various ways to make SMEs and cooperatives more "digitally literate", from infrastructure, training to collaborating with related institutions and companies that have gone online first in terms of systems of operational (transaction), marketing and also payment. Obstacles to infrastructure and available facilities as well as the lack of information and human resource skills in utilizing digital are challenges faced by the government, SMEs and cooperatives. Therefore, better coordination from up to bottom is needed so that understanding and utilization of digital can be distributed evenly. For MSMEs and cooperatives that have "go digital", found that they are still at the basic and intermediate levels, while the platforms used are still in the sharing economy, e-commerce, social media, cloud computing and other digital platforms related to applications to simplify transactions and operations.

Key words : MSMEs, Cooperatives, Digitization, Integrative Review

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INTRODUCTION

Technology is changing so rapidly and influencing all activities in our lives both personally and professionally. Technology is an important part of several life factors such as working, doing business to interacting, this is “the digital era”. The rapid development of this technology led. Satelli (2018) said that the digital era will end. Innovation of combining machine learning algorithms and new computational architectures such as quantum computing and neuromorphic chips, their functions would be very different with a digital computer. In line with that, Daugherty (2019) argued that a post-digital era would emerge where digital applications would be differentiated in new, more sophisticated ways. Technology, both in terms of tools and concepts would increasingly innovate. In business, the demand to be captured and conveyed by the market in a moment. Companies could understand consumers, employees, business partners and their goals better than ever. Companies would be more agile in moving and acting “right then” in consumer needs.

Based on the Cambridge Dictionary (2021), the digital meaning is as follows: 1) Record or store information as a series of numbers 1 and 0 to indicate whether the signal is present or not (for example: digital data); 2) Use of or relating to digital signals and computer technology (for example: digital recorders, digital cameras, digital television); 3) Using or relating to computers and internet (the digital revolution makes it easy to work from home, the existence of social media as an important tool in the digital world); and 4) Displays information in the form of electronic images (for example: digital displays/ clocks, digital watches, CDs that are converted to digital format and downloaded to mp3 players, digital cables/ satellites that produce

100 channels, light sensors as markers for digital screens/ open doors, digital images, security features on ID cards such as holograms and digital identification photos).

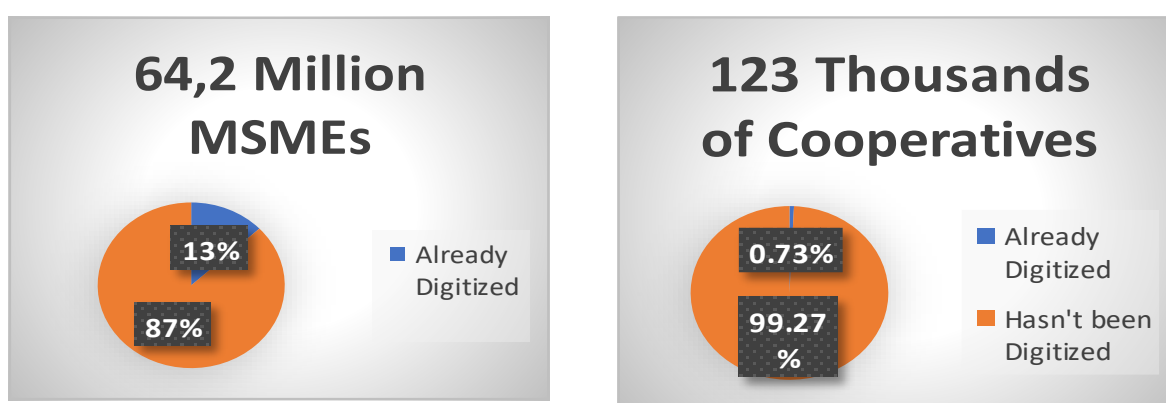
While digitize/digitalize still according to the Cambridge Dictionary (2021) is: 1) Converting something such as documents or photos into digital form / archived online (a form that can be stored and read by a computer); and 2) Start using digital technology such as computers and the internet to do something like digital marketing strategies, medical records and digital documents, digital records so they can be viewed online, digital processing, digital cable television networks.

This is challenge that must be faced by both individuals and business actors, especially micro, small and medium enterprises (MSMEs) and cooperatives which are currently still developing in Indonesia. Based on the Ministry of Cooperatives and MSME's data, of the 64.2 million National MSME players, only 13% or 8.3 million use digital technology, especially the e-commerce platform (Wantiknas, 2020) while for cooperatives, only 0.73% or 906 cooperatives out of 123 thousands active cooperatives using the digital system (Susanti, 2020). The first cooperative that has carried out digital transformation is KSP Nasari -an application called Nasari Digital (Nadi). This application is not only for members of the Nasari KSP but also for members of the Nasari Syariah savings and loan cooperative (KSPPS). The application contains features such as savings, loans, e-payments and live member annual meetings, in the future it will be developed for e-commerce (Republika.co.id, 2020).

A number of efforts have been made by the government to facilitate and encourage MSME players to be able to take advantage of digital platforms in their marketing, especially in a pandemic like this. Starting from the launch of a training program for digitalization of halal marketing and management for MSMEs, training for MSMEs and cooperatives

that can be accessed through edukukm.id, the launch of digitizing MSME financial reports, members of savings and loan cooperatives, credit cooperatives, “Warung Tetangga” (neighboring stalls) programs to legal aid programs for MSMEs. According to Vice President Ma'ruf Amin, MSMEs have a fairly large and crucial contribution to the Indonesian economy, which is 99% of the total number of business units in Indonesia. In addition, in terms of employment, MSMEs

contributed 97%, 60% of the National GDP, and contributed 58% of total investment and 14% of total exports (Wantiknas, 2020).



Source: The Ministry of Cooperatives and MSMEs data at Wantiknas, 2020 and Susanti, 2020 (Processed)

Figure 1. Diagrams of MSMEs and Cooperative Digital Users

Several studies have been conducted. As the study conducted by Suliswanto & Rofik (2019) in their research in East Java, 80% of MSMEs are actually integrated with digital, but only 12% are doing it professionally. 70% emphasize digital marketing through social media platforms like Instagram and Facebook while 30% prefer mixed methods. In this study it was also revealed that statistically, both MSMEs that use a single platform or multiplatform do not have a significant effect on the ratio of online transactions but have a significant positive effect on the ratio of online transactions and the quality of digital marketing management. In contrast to research conducted by Nurdany & Prajasari (2020). Although digitization is very important to simplify the flow of economic

transactions, streamline business processes and several other advantages, it is revealed that digitalization was not important for cooperatives in Yogyakarta. They believed that customers prefer the word of mouth marketing model. In addition, the low penetration of digital media from target customers is one of the reasons. In the cooperative itself, only 40% of the 20 cooperative respondents in Yogyakarta have adequate computer units, while the rest do not. In addition, only 45% of respondents have an internet network, but 55% of its use is not for communication between cooperative members. Therefore, education and optimization are needed so that digital media can be used so that cooperatives can compete in this digital era.

From the problems that occur above, the current study focuses on answering several research questions as follows: 1) What are the steps that have been taken in supporting and educating both MSMEs and cooperatives to be 'digital literate', both from the government and other related parties? 2) What are the constraints that cause the use of digital media still not able to be socialized and used equally by MSME players and cooperatives? And 3) What digital models are used by MSME players and cooperatives that have digitized (go digital) their businesses and products?

It is expected, a meeting point can be found so that the right solution in order that digitalization between MSME players and cooperatives can be carried out better.

METHOD

This study is a qualitative study where studies can be used to gather in-depth insights to a problem or to generate new ideas in a study (Bhandari, 2020). The purpose of this study is to find out in depth about what steps have been taken by the government and related parties in educating MSME players and cooperatives so that they are 'digital literate', what are the constraints that have caused digital media not to be can be socialized or used by MSME players and cooperatives equally and what digital models are used by MSME players and cooperatives that have "go digital" in their businesses or products.

The methodology used is integrative review (IR). Based on a study conducted by Torraco, Integrative Review was a form of research that reviews, criticizes, and synthesizes several literature that represent a topic in an integrated manner so as to produce a new framework and perspective on the resulting topic (Bartlett & Bartlett, 2019). Snyder (2019) suggested that the integrative review (IR) method was used to discuss topics that are currently developing

(mature) and emerging topics. In this study, the purpose of using IR is to discuss topics that are currently mature, namely the issue of digitization in MSMEs and cooperatives. It is undeniable that this pandemic encourages and demands all sectors including MSMEs and cooperatives to be technology literate and participate in this digital era. Creative data collections will be indispensable in IR because the aim is not to cover all published articles on the topic but rather to combine perspectives and insights from various fields of research or research traditions. For more details, see table 1 below:

Table 1. Approaches to Integrative Review (IR)

Approach	IR
Typical Purpose	Critique and synthesize
Research	Narrow or broad
Question	
Search Strategy	Usually not systematic
Sample	Research articles, books
Characteristics	and other published texts
Analysis and evaluation	Qualitative
Examples of Contribution	Taxonomy or classification theoretical model or framework

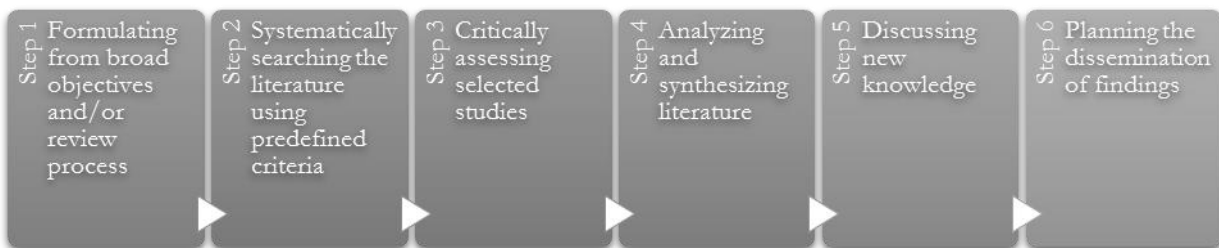
Source: From Snyder, 2019

The process for conducting IR is depicted in Figure 2. Toronto & Remington (2020) suggested that the first step is the formulation of a broad objective and/ or review of the questions. The problem will be identified and clearly defined. The development of the background and the significance of the problem will provide clarity as to why the study needs to be studied.

Based on the background of the problem, it is clear that the research was carried out due to the lack of technology-literate SMEs and cooperatives in this digital era. Even though the current pandemic condition is an urgency in the use of technology. So that this study is also to answer research questions.

The second step is a systematic search for literature using predetermined criteria. The objectives and questions in the study are used as a guide to formulate what is included in the criteria or not to identify or manage selected articles such as the year of publication, study design, language use, research limitations, use of boolean operators and abbreviated terms as well as the final search data of all required documents. Description of search methods

are needed to allow reviewers/ other researchers to replicate and evaluate their searches. The existence of criteria will effectively help prevent too many or too few samples. The initial screening is the screening of titles and abstracts that are potentially relevant to the criteria. Then the full text is evaluated whether it is included in the criteria or not. This process is then documented by the reviewer/ researcher and their reasons into a traceability flow chart.



Source: Remodeling from Toronto & Remington, 2020

Figure 2. Steps of the Integrative Review Process

The criteria identified by researchers in this study were based on the results of searches via Google as a sophisticated search engine that offers fast and easy web searches (Southern Adventist University, 2021). The criteria are as follows: 1) Articles related to the title digitization of MSMEs and cooperatives in Indonesia, steps of the government and related parties, constraints faced, digital models used by MSMEs and cooperatives who have “go digital” and integrative review methods. The digitization of MSMEs and cooperatives in other countries is also carried out using the simple random sampling method with the aim only as a comparison or input ideas by identifying which ones can be applied in Indonesia and which are not; 2) Articles can be in the form of published journals, books, guidelines issued by the government and related parties as well as appeals that are published or informed through digital media; and 3) Articles reviewed in Indonesian and English. Especially for articles related to research

questions, namely regarding the steps, constraints and forms/ models of digitizing MSMEs and/ or cooperatives. articles published in March 2020 to April 2021 (right at the time of the pandemic in Indonesia) were selected to find out the concrete steps that were being taken when the urgency of digital needs occurred. The articles published before that were used as comparisons using the simple random sampling method.

The third step is to conduct a critical assessment of the research/ literature that has been selected. Fourth, conduct analysis and synthesize literature. Fifth, holding discussions about new knowledge related to the topic and the last step, the sixth step is planning the dissemination of findings. These steps will be discussed in the results chapter.

For literature searches, an operator on google “the Boolean operator” will be used. The Southern Adventist University (2021) said that Boolean operators are words or symbols that are used as conjunctions to combine or exclude keywords in searches. This operator will focus

the search on the most useful results so that relevant articles will be selected. The following shows the Boolean operators that are commonly used in searches in table 2.

Table 2. Words or Symbols as Conjunctions in Boolean Operators

Boolean Operator	Example
AND Limit result	MSMEs AND Cooperative (Search for content that contains both MSMEs and Cooperative)
OR One term OR another	MSMEs OR Cooperative (Search for content that contains MSMEs or Cooperative)
- Exclude terms from search	MSMEs -Cooperative (Limits results to only those with MSMEs but not the term Cooperative)
-site: Exclude website from search	MSMEs -site: Wikipedia.org (Results are limited to sites other than Wikipedia)
~ Synonyms of term	~digitalization (Search for the term digitalization and its synonyms)
“ ” Exact phrase	“digitalization MSMEs” (Search for the phrase digitalization MSMEs)

Source: From Southern Adventist University, 2021 where the samples have been adapted to the research to be studied

While the keywords used are digitization, digitalization, digitize, MSMEs, MSMEs in Indonesia, cooperatives, cooperatives in Indonesia, government steps, go digital, go online, MSMEs constraints, cooperative constraints, MSMEs digital model, cooperative digital model, Integrative review and other relevant keywords until solutions are found to solve/answer problems that occur. Irrelevant articles will be discarded/ unused.

RESULTS AND DISCUSSION

Of the 67 articles that have been found in the form of journals, e-books, and published texts taken from reliable sources through searches using the Boolean operator, 44 articles matched the criteria while the rest did not. The discrepancy occurs because the

reference year for the research question did not match the criteria, the content of the article was more or less the same, so that selected one that was closer to the criteria, and the content of the article that was not suitable was used as a reference in answering research questions. The 6 articles from those selected, as previously explained, did not match the criteria (i.e. the year before the pandemic and digitization in other places besides Indonesia) but could be used as a reference as a comparison to be able to identify more deeply to answer research questions. The literature selection process can be seen at the flowchart in figure 3.

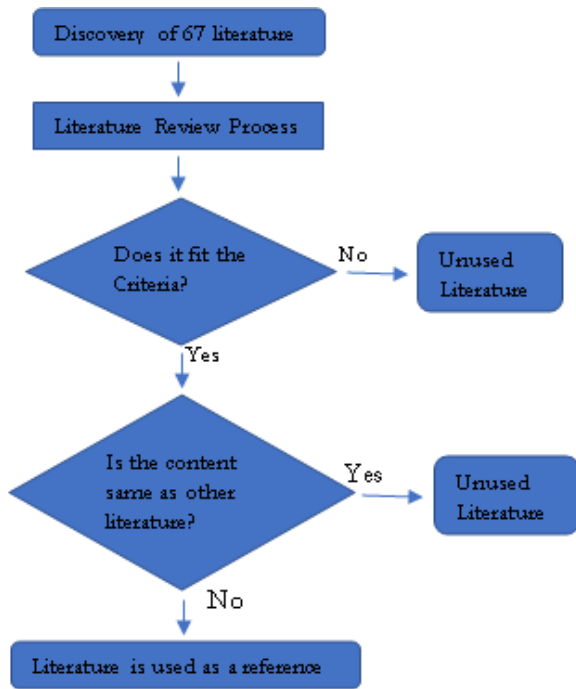


Figure 3. System flowchart of Literature Selection Process

As we know, the impact of Covid-19 is not only felt in Indonesia but also throughout the world. In China, during the

lockdown, MSMEs experienced a shortage of labor and raw materials, weak consumer demand, significant pressure on the balance sheet and cash flow, and the threat of bankruptcy (Dai, Hu, & Zhang, 2020). The World Economic Forum (2020) also describes the impacts such as the identification of half of businesses experiencing bankruptcy and industrial consolidation, industry failures in recovery and concerns of supply chain disruptions, prolonged global recession, network attacks and data fraud. Therefore, one of the Asia Pacific World Cooperation organizations in which Indonesia as a member has also attempted to provide strategic steps to its members as a solution for policy makers in each country, including encouraging digitalization to increase the MSMEs of its member countries in the midst of the Covid-19 pandemic (Karr, Loh, & Wirjo, 2020). Some of the benefits of digitization are summarized in Table 3 below:

Table 3. Benefits of Digital Application

No	Benefits	Source
1	<ul style="list-style-type: none"> Significantly beneficial for productivity, profit margins, cost reduction, customer loyalty and revenue growth of up to 17% so that can accelerate digital economic growth At the micro level, digital transformation has the opportunity to streamline business, empower employees, engage customers and drive productivity 	Based on an IDC survey since 2017 in 1560 business decision makers and IT in 15 countries in the Asia Pacific region in the fields of education, financial services, government, health, manufacturing and retail (Jimenez, Lim, Cheok, & Ng, 2018)
2	<ul style="list-style-type: none"> With efficient operational support it can reduce export time by up to 29% With efficient marketing, digitization can reduce the cost of exporting MSME products by up to 82% MSMEs players in several countries such as China, India, South Korea and Thailand claim that digitally can save more than US \$ 339 billion in export costs 	Asia Pacific MSME Trade Coalition (2018)

No	Benefits	Source
3	<ul style="list-style-type: none"> Application Advanced digital compared to the basic level can achieve growth of up to 28% 	Deloitte survey of Australian companies (Deloitte Touche Tohmatsu, 2019)
4	<ul style="list-style-type: none"> Statisticly significant increase in value added by 25% and productivity by 16% For MSMEs, they can advance by using more advanced digital technologies such as e-commerce and data analytics 	Study in Singapore (Tan & Chian, 2019)
5	<ul style="list-style-type: none"> Assist in managing remote transactions Efficiently Deliver goods Facilitating access to financial services Can be directly involved with new and existing customers 	Karr, Loh, & Wirjo (2020)
6	<ul style="list-style-type: none"> Service of savings and loan based on digital assets (Neo Holistic) more simple and practical, easily accessible to all Indonesians and even the world with a smartphone, has guaranteed investment in real assets and beneficial for all parties in the digital ecosystem Distribution of funds in terms of working capital financing is easier and cheaper Creating a transparent business system, can build trust and guarantee the safety of its members 	Merdeka.com (2021)

Source: data collected by multiple sources

The digitization process does not run well right away. Karr, Loh, & Wirjo (2020) put forward several obstacles to digitization as follows: a) Network security and data privacy issues; b) Asymmetric Market strenght and platform domination; c) The emergence of digital fraud; d) The continuous digital divide

problem and related to infrastructure; e) Online disinformation

Several efforts have been carried out by the government and policy makers in several countries to assist MSMEs. They have also promoted digital use as in table 4.

Table 4. Efforts of Governments and Policymakers in Several Countries in Assisting the Digitalization of MSMEs in 2020 (Pandemic COVID-19)

Country	Efforts	Purpose/description	Source
Singapore	Food Delivery Booster Package	Transitioning food and beverage business from offline to online. The government has also funded food companies to conduct remote transactions and deliver products via food delivery platforms	Enterprise Singapore (2020)

<i>China</i>	Emergency support services	Alibaba Multinational Technology Companies coordinates with the Chinese government introduced a number of emergency support services for MSMEs such as Alibaba Ecosystem, Alibaba Cloud, Alibaba Health, Alibaba Local Services, Cainiao, Ant Financial, Fliggy, Dingtalk, E-Commerce Platforms, including Lazada, Alibaba Foundation and Jack Ma Fundatioan and also AGI (Alibaba Global Initiatives) Entrepreneurs	Alibaba Global Initiatives (2020)
<i>Indonesia</i>	Movement of #BanggaBuatanIndonesia Cross ministries collaborate with digital platforms such as JD.ID, Gojek and others	A movement to buy domestic products aims to provide education and training for MSMEs	Mariska (2020) Karr, Loh, & Wirjo (2020)

Source: data collected by multiple sources

Deloitte Touche Tohmatsu (2019) explained that among small businesses, the classification of digital engagement can be seen in figure 4.

In an effort to encourage the digitization of MSMEs Karr, Loh, & Wirjo (2020) suggested several ways such as: a) Overcoming the digital divide and conducting digital orientation by facilitating internet access through devices such as mobile phones, tablets and computers; b) Promote lower data costs such as subsidies or crisis response

partnerships with telecommunications providers; c) Promoting digital literacy such as online training through videos. In this case, such as the collaboration with ASEAN, Google, and The Asia Foundation to partner in supporting the digitization of MSMEs through video and distance learning techniques in line with the ASEAN Action Agenda on Digitalization of ASEAN MSMEs; d) Support access mobile money and fintech (financial technology) by introducing mobile money and digital payment instruments.



Source: Deloitte Touche Tohmatsu, 2019

Figure 4. Digital Classification

a) Increase trust in digital solutions; b) Overcoming competition such as providing competition policy; c) Promote regional cooperation and public-private partnerships such as those that have been carried out, namely the ratification of the APEC Internet and Digital Economy Roadmap, The APEC Cross Border E-Commerce Facilitation Framework, the formation of the Digital

Economy Steering Group also the development of the APEC Privacy Framework and the APEC Framework for Securing the Digital Economy.

The journey of digitalization in Indonesia as a government effort in improving digital in Indonesia apart from the #BanggaBuatanIndonesia movement and collaboration with the digital platforms that have been previously mentioned is shown in table 5 below:

Table 5. Indonesian Government Efforts Towards Digitalization (Indonesia's digitalization mapping before until the time of the COVID-19 pandemic)

Source	Effort
Satriya (2020)	1990s, Indonesia succeeded in liberalizing the Telco industry. Since then, the modernity of the telecommunications sector combined with the provision of national infrastructure for satellite and cellular communication systems succeeded in developing more competitive services to the community, including rural MSMEs. It is evident that several cooperatives and local MSMEs in agriculture have experienced an increase in demand and income 2014, the Government issued the Indonesia Broadband Plan
Capri (nd)	2016, President Jokowi launched the National Movement of 1000 start-up digital initiatives that have made tremendous progress. In fact, large foreign technology companies are willing to invest massively in Indonesia's digital platforms. For example, Tokopedia received US \$ 1.1 billion from the Alibaba investor group, China. Likewise with Go-jek, a US \$ 1 billion startup is rapidly diversifying from ride-sharing services to digital payments and logistics applications with funding from Chinese technology giants Tencent Holdings ltd and JD.com. Even recently, Google, Temasek Holdings Singapore and Meituan Dainping from China collaborated on a campaign to raise \$ 1.2 billion on behalf of Gojek, including investment companies KKR and Warburg Pincus

Source	Effort
Satriya (2020)	2017, the Government published the Road Map for Ecommerce
Association of Southeast Asian Nations (nd) and Kominfo (2017)	November 2017, the Ministry of Cooperatives and SMEs together with the Ministry of Communication and Informatics introduced the “UMKM Go Online” program. This program launched the 100,000 MSME movement to go online simultaneously in 30 cities/districts in Indonesia in the vision of making Indonesia the digital energy of Asia. The purpose of this movement is to increase the awareness of digital SMEs by providing facilities and providing opportunities for MSMEs from various regions to be ready to compete in a wider market through seminars, workshops and training on the digitization of MSMEs. It is hoped that MSMEs will have the opportunity to distribute the largest People's Business Credit (KUR) within 1x24 hours, incorporate Creative House of State-owned Enterprises (RKB), transform financial inclusion and have the opportunity to make Taxpayer Identification Number (NPWP) simultaneously for all MSMEs players. MSMEs will be guided starting from the process, management to assisted online promotions starting from product shoots, product descriptions, prices to promotions in the marketplace. The government launched a collaboration with the 6 largest online marketplaces in the country such as Tokopedia, Blibli, Elevania, etc. to help promote and to sell MSME products, this program targets 8 million MSMEs to be digital by 2020. In addition, the Government provides one million free domain.id as well as free hosting for MSME business development
Satriya (2020)	2018, based on figures from the Ministry of Information and Communication (Kominfo), around 170 million citizens have used the internet, 330 million cellular connections with more than 270 million smart phones have been used by Indonesians. The data shows that there have been many ministries, companies, research centers and communities related to ICT capacity building and digitization has followed the Road Map of Making Indonesia 4.0 2019, Indonesia succeeded in uniting the entire archipelago with the Palapa Ring Project, connecting cities with fiber and subsequently broadband. Indonesia also made policies and regulations as outlined in the white book entitled "Indonesia Digital for Future Economy and Inclusive Urban Transformation"
Warta Ekonomi.co.id (2019)	The same year, 2019. The “Go Online” program continues. The program launched by the Ministry of Communication and Information collaborates with the Cooperative Office, the Industry and Trade Service, the Ministry of Cooperatives and MSMEs, the Ministry of Finance, the Indonesian Market Manager Association (Asparindo), the banking sector, the marketplace to digital payment players such as OVO, Gp-Pay, LinkAja, Dana, T-Money and Visionet. This program is carried out in 20 districts/cities in the form of market raid in 6 public markets in each district/city. This program assists traders to become proficient in online transactions
Petani Go Online (2019)	2019, in the maritime and food sovereignty sector, the Ministry of Communication and Information also has a program that prioritizes farmers and fishermen to go online. It is hoped that 1,000,000 farmers and fishermen will reach the target to go online. Through 2 supporting programs, namely the integrated National Fisherman Card and Basic Information Application for Fishermen, this program aims to provide solutions to problems in the fisheries sector through appropriate application development facilities to support fishermen and performance in the fisheries sector
Wantiknas (2020)	Support digitization through policies formulated in the National Coordination Meeting (Rakornas) with the theme Digital Transformation of Food MSMEs to Support Economic Recovery and Price Stability Towards Advanced Indonesia. Here, the Government mandates 5 steps related to digital and inflation transformation with the main points of expanding access and improving digital infrastructure and providing internet services On October 24, 2020, the launch of digitalization of financial reports for MSMEs, members of the savings and loan cooperative (KSP) -credit cooperative Obor Mas Maumere

Source	Effort
<p>Wantiknas (2020), Waseso (2020), Antara News.com (2020) and Satriya (2020)</p>	<p>Regarding COVID-19, the government through the Ministry of Small and Medium Enterprises, strives to increase human resource capacity, increase business processes, market and expand market access, provide access to legal assistance such as: MSME assistance programs affected, MSME digital market program, digitization with LKPP and the Ministry of BUMN, Halal marketing and management digitization program for MSMEs, digital training programs to increase human resource capacity. In addition, there is also a neighboring stall program (a campaign for shopping at neighboring stalls is carried out by the supply of staples to kiosks in collaboration with 9 BUMN in the food and logistics sector) and normal and new normal video series. The government also publishes a guidebook for MSMEs in running their business according to standard protocols. For the digital training program itself, the government carries out training stages by introducing platforms from using platforms, accessing fees, to developing digital businesses. With the following steps:</p> <ol style="list-style-type: none"> a. HR enhancement through edukUKM, webinar series, smart campus, digital heroes b. Raising UKM (Top Brand UKM) products through community and local solution applications consisting of the Indonesia Creative Store, namely the "Gotong Royong" market c. The process of digitization by embedding digitalization (foster siblings and MSMEs digital catalog-e-catalog / digital QR catalog) d. Promotional and marketing support through billboards, product promotion by the Center for Integrated Business Services for MSMEs (PLUT), reviewing products based on many applications through artists, influencers, etc e. Selection of MSMEs players who have enthusiasm as drivers and respect them as local heroes <p>The Ministry of Cooperatives and SMEs has also made breakthroughs, including:</p> <ol style="list-style-type: none"> a. Modern cooperatives, namely increasing the number of cooperatives in the digital ecosystem and utilizing digital technology as a solution in the business process b. Micro enterprises from informal to formal through the corporatization of micro business actors such as fishermen, farmers, producers and others in cooperative institutions c. The pillar of the supply chain is increasing the MSME ratio through supply chain participation d. The transformation of productive entrepreneurship by increasing the number of entrepreneurs through the intervention of new entrepreneurs and startups
<p>Laraspati (2020), PadiUMKM.id (nd)</p>	<p>The Ministry of BUMN initiated PaDi UMKM (a tender feature used for procurement needs between BUMN and MSMEs) which was later developed by PT. Telkom Indonesia as a central manager of information and B2B marketing services. 8 BUMNs that joined this program, namely PP (Housing Development), Waskita Karya, Wijaya Karya (Wika), Pupuk Indonesia, PT. Pertamina, BRI (Bank Rakyat Indonesia), Pegadaian and Permodalan Nasional Madani (PNM) as pilots in the MSME activity group including the BUMN House and CDC (Community Development Center) in each BUMN</p>
<p>Mola (2020)</p>	<p>To help MSMEs during a pandemic, PT. Bank Negara Indonesia (BNI) invites MSME players to sell online through the BNI Kreasi Nusantara Craft program. BNI together with MSMEs partners, the BUMN Creative House (RKB) also campaigned for #UntukUMKMIndonesia. The public can also place orders for superior MSME products by accessing Instagram @RKB.BNI and 14 social media accounts for BNI-assisted RKB spread across various cities in Indonesia. Currently, BNI is fostering 44 RKBs in Indonesia with thousands of MSMEs active in them. Activities include basic introductory training on the importance of online market development, how to register on the marketplace, product packaging, financial management to product photography. In addition to bringing SMEs to national and international exhibitions, BNI is also active in assisting SME financing with the KUR program by providing installment payment relief</p>

Source	Effort
Shofa (2020)	Grab launched several digital initiatives such as establishing a technology center at Gama Tower, Jakarta as an innovation center where Grab's research and development team provides solutions for MSMEs. MSME solutions are like merchant self-orientation tools that allow MSMEs to run the platform within 24 hours. More than 70 thousand merchants in Indonesia through the independently onboarding process joined Grab. Grab also introduced the #TerusUsaha campaign. Decacorn is also offering training to improve their digital provenance with around 500k MSMEs having been digitized
JawaPos.com (2020)	Improve coordination with ministries and institutions, universities and start-up companies to meet digital infrastructure access, financing, training, mentoring, incubation and MSME digital information systems

Source: data collected by multiple sources

Some of the steps above are also part of the government's solution to the obstacles faced by several MSME actors and cooperatives in Indonesia as in table 6 below:

Table 6. Digitalization Constraints in Indonesia

Source	No	Constraints
The case study was conducted by the Asia Pacific Foundation of Canada, at 8 MSMEs in Indonesia, namely Avantee, Blueboots, Evoware, Jala, Eparcel, Nunini, Sahabi and Ngabul Antique (Capri, nd)	1	MSME players only follow digital technology, laggs in other important fields such as HR training
	2	The majority of companies focus on using mobile applications, they are not aware of financial assistance such as from government, NGOs or private companies to improve their internet infrastructure, e-commerce and digital business activities.
	3	Lack of trust and information about where and how to get funding assistance
	4	lack of information, harmonization and coordination with government agencies regarding relevant regulations
Cooperative case study in Yogyakarta (Nurdany & Prajasari, 2020)	5	Digital media penetration is minimal, people prefer word of mouth marketing
	6	lack of facilities such as computers and internet
	7	The availability of internet is not for communication between members. It needs education and optimization of digital media
Interview with one of BNI's assisted-Nuri Ningsih Hidayati, founder of Marenggo Natural Dyes Batik (Mola, 2020)	8	have a website but it is still difficult to make it a sales channel. The website is still filled with a profile, not towards sales
JawaPos.com (2020)	9	<ul style="list-style-type: none"> a. Low knowledge and understanding of the benefits of technology b. Limited internet access c. Anxiety about the security of online transactions d. Limited capital and technological infrastructure such as the need for mobile devices and other devices
Pratiwi (2020)	10	<ul style="list-style-type: none"> a. Lack of supporting infrastructure b. Financial constraints

Source: data collected by multiple sources

Despite these obstacles, some MSMEs and cooperatives that have successfully and cooperatives have also succeeded in implemented digital in operating their utilizing digital. The following shows MSMEs businesses as shown in table 7.

Table 7. Implementation of Go Digital for MSMEs and Cooperative Actors

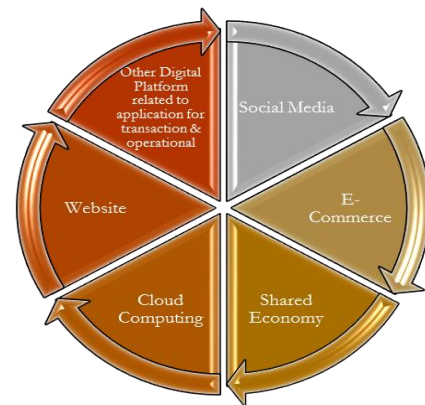
No	Name/Area	Digital Form	Description	Source
1	MSMEs in East Java	70% use a single platform, the rest use mixed platform	The single platform used is social media such as Instagram or Facebook. Mixed platforms using 2 or more platforms namely social media and e-commerce and / or websites	Suliswanto & Rofik (2019)
2	Union Indonesia Credit Cooperative	KOP-AJA (the first financial platform)	It is easy for people to invest and get daily interest by prioritizing safety in investing	Atmoko (2019)
3	Credibook	Financial recording services focus settlement accounts payable	The derivative of this product is digital payment, especially on the bill payment on side. In addition, Credibook also collaborates with several institutions in terms of capital financing	Kementerian Koperasi dan Usaha Kecil dan Menengah Republik Indonesia (2020)
4	KSP Nasari and KSPPS Nasari Shariah	Digital Application (Nadi)	Nasari There are features such as savings, loans, e-payments, live RATs	Republika.co.id (2020)
5	8 MSMEs in Indonesia, namely Avantee, Blueboots, Jala, Eparcel, Sahabi and Antique	e-commerce platforms such as Evoware, Tokopedia and Nunini, social media Ngabul	for shipments using the post or traditional express such as FedEx, DHL or UPS	Capri (nd)
6	Marenggo (MSMEs)	social media, Whatsapp and email	-	Mola (2020)
7	Batiksoul (MSMEs)	Guitars websites and social networks and e-commerce platforms	-	Mola (2020)
8	Pesan Antar	Use of applications such as go-food	Deliver goods	Rimawati & Sula (2020)
9	NHC company partners with the cooperative	DinDir gold is called NHCoin	The digital asset in the form of purposes, barter transactions and savings and loans or pawning	Putra (2021)
10	Visi Indonesia Company	Sentosa Developing mobile banking for cooperatives	Applications can be used to create exclusive data specifically for members. Can facilitate online savings and loan activities without being tied to space. Opening access to additional income and funding with members, by distributing cheaper goods, sharing members' wallet income and	Pratiwi (2020)

No	Name/Area	Digital Form	Description	Source
			providing access to Bank Sampoerna as a new source of funding. Reducing operational costs can be done by automating sending and adding money, sending messages or notification so that admin is more effective and efficient. The addition of new members is possible with digital advertisements on the platform, the ease of the onboarding process and organizing events	

Source: data collected by multiple sources

Digital comes in many forms. Some experts call it a platform. Tohmatsu (2019) stated that there are 10 digital forms, namely: Digital marketing, Infrastructure and data, Customer Relationship Management, Social Media Strategy, Business Analytics, Marketing Automation, Cloud, Cyber security, Websites and e-commerce, also Inventory Management. Meanwhile, Watts (2020) argued that there are 4 types of digital platforms, namely social media (such as Facebook, Twitter, Instagram, LinkedIn), Knowledge (such as StackOverflow, Quora, Yahoo! Answer), media sharing (such as Youtube, Spotify, Vimeo) and service oriented (such as Uber, Airbnb and Grubhub). And there are many other forms of digital platforms. Based on these classifications, Capri (nd) in his research stated that MSMEs and cooperatives in Indonesia mostly use 4 digital platforms as shown in figure 5.

Based on the literature above, it can be seen that MSMEs and cooperatives in Indonesia have started to utilize digital, especially in social media, e-commerce, shared economy, cloud computing, websites and other digital platforms that are related to applications to simplify transactions and operations as shown in figure 6.



Source: Capri, nd

Figure 5. Four Platform Strenghts Used by Indonesian MSMEs



Figure 6. The digital platform currently utilized by the average MSME and cooperatives in Indonesia

Several MSMEs and cooperatives through the government or independently have collaborated with related institutions in terms of digitization both the operational (transaction), marketing and payment systems.

CONCLUSION

During its development, the government has made a number of efforts to make Indonesians 'digitally literate', starting from before pandemic until the current pandemic. In its efforts, the government is not alone but also collaborates with several agencies, including government agencies, state-owned enterprises (BUMN) and related companies. Some of these efforts are also part of the government's steps to overcome obstacles ranging from infrastructure, availability of tools, lack of information to inadequate human resources in operating tools. The government has made efforts such as human resource training, video learning and so on. However, deeper coordination is needed so that digitalization can be evenly distributed from top to bottom.

It is very important that these digitalization efforts be carried out in a centralized manner starting from information about policies, training to funding from up to bottom, namely from the center which is then distributed through representatives to the lowest line, namely the RT/RW level or the village/ hamlet level.

From the various forms of digital platforms that exist, it can be concluded that on average MSMEs and cooperatives in Indonesia use digital in the form of cloud computing, social media, e-commerce, shared economy, websites and other digital platforms related to applications to simplify transactions and operations. Several MSMEs

and cooperatives through the government or independently have also collaborated with institutions related to digitization in both operational (transaction), marketing and payment systems. Meanwhile, if viewed from the digital classification ranging from basic to advanced, MSMEs and cooperatives in Indonesia on average are still in the basic and intermediate stages.

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