



Upskilling and Reskilling in Improving Competence of Competitive Human Resources in the Era of Digital Economy

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Abstract: *This research aims to analyse upskilling and reskilling in improving the competence of competitive human resources in the digital economy era, especially in MSMEs. This research uses descriptive qualitative methods, with data collection through online document searches and literature reviews. The results showed that increasing the competence of MSME HR in the digital economy era is prioritised on how to gather resources and create the right synergy to direct each workforce, especially those with low to high competence. Creating a comprehensive approach to low competency HR can be addressed in a coordinated and coherent manner, comprehensive and ensuring that MSMEs have ongoing support. The implementation of upskilling and reskilling to improve the competence of MSME HR needs to involve the public sector, private sector and other stakeholders so that a good and comprehensive ecosystem is built.*

Keywords: *Upskilling, Reskilling, HR Competence, Digital Economy Era.*

INTRODUCTION

The main priority of the majority of countries in the world is how to strive for the country's economy to continue to grow and develop, and Indonesia is no exception. Economic growth in Indonesia cannot be denied due to the participation of Micro, Small and Medium Enterprises (MSMEs), where 99% of business actors in Indonesia are in the MSME sector. The existence of MSMEs is also able to play a role in alleviating unemployment because 96.9% of the national workforce works in this sector. Even MSMEs are also able to provide 60.5% support to the Gross Domestic Product (GDP). This information was compiled by the Ministry of Cooperatives, Small and Medium Enterprises (2022). Seeing the huge role of MSMEs in the Indonesian economy, the government should give serious attention and protection so that the existence of MSMEs is maintained in the current era of globalisation where there is intense competition among business actors.

Globalisation has caused trade to expand, business actors not only compete in the local scope but also at the national level and even at the world level. Buying and selling transactions are no longer carried out in traditional or conventional ways but have shifted to modern ways following changes in people's shopping behaviour who want shopping activities to be carried out easily, quickly and practically so that these conditions require MSME players to adapt immediately to digital technology.

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Business activities are now carried out with the support of digital technology. Seeing this condition is certainly a challenge for the country of Indonesia because there are still many MSME players in Indonesia who are not technologically literate so that it can threaten the sustainability of the business being run. MSME players who want to remain gradual must have digital capabilities to keep up with changes in people's shopping behaviour. MSMEs must understand digital literacy. Sugihartati (2020) and Jones & Hafner (2012) digital literacy is not only understood by the use of digital equipment, but is equipped with adaptability, as well as how a person can interact and socialise digitally.

Data from Bank Indonesia shows that around 4.3 million MSME players are integrated with online transaction systems, namely digitalisation. (Sugihartati 2020). Recently, the number of e-commerce users has increased significantly, this is reinforced by the results of research showing the potential of the community in making transactions using e-commerce, which in fact continues to increase and can even reach 40% every year (Ernest & Young, 2014). According to a survey conducted in 2020 by an organization dubbed the Association of Indonesian Internet Service Providers (APJII), the majority of Indonesians, or 73.7% of all internet users as of the second quarter of 2020, are aware that they can access the internet. In comparison to 2019, there was a rise of almost 25.5 million users.. And it is even possible that e-commerce users will continue to increase as the number of technology-savvy economic actors increases. However, the reality in the field shows that there are still many MSME players in Indonesia who are not technologically literate so that buying and selling activities are still carried out in traditional ways, have not utilised the internet as a promotional medium and payments are made in cash.

Slamet, Rachmat, et al. (2016) said that the fundamental problems of MSMEs in implementing the digital economy are related to the problem of low understanding of the use of information technology; lack of use of digital marketing and online market access; the use of technology in the production process is still not optimal; and the low quality of MSME products, so that MSME opportunities in empowering and developing MSMEs in the digital market are still limited. In addition, it needs to be recognised that many consumers still feel uncomfortable, causing hesitation to make digital transactions.

In order to maximize technology utilization and ensure that the firm is conducting business at its best, HR competency needs to match the sophistication of the technology it uses. This is consistent with the message (Federke, 2000) that highly developed technology employed by the business will not support operations to the best of its ability if employees lack technological competency commensurate with the sophistication of the technology being used..

The sophistication of technology used by a company must be commensurate with the mastery of technology owned by workers so that work results are optimal. A company has sophisticated technology but cannot be used optimally by the people in it, so the technology that supports business activities is useless (Fedderke, 2005). Human resources that have skills, have an independent spirit with strong self-control, self-strength, creativity and innovation to explore new jobs and respond quickly to any changes are important to be prepared in the current digital era (Dhakiri, 2019). Technological advances must be accompanied by technological competence of human resources so that the utilisation of technology in the company will be optimal.

Competence, according to Scupola (2008), is characterized by a blend of technical know-how, general knowledge, personality traits, and specific talents that provide an advantage over rivals. Winterton et al. (2000) identified four categories of competence: personal, meta-, functional, and cognitive. Personal competencies are those attributes of the individual that have been shown to improve performance, including resilience, planning, leadership, motivation, and effective communication. Meta-competences include anticipating, learning, and adapting. These consist of analytical abilities, mental acuity, and inventiveness. Effective managerial behaviors, such as goal-setting, team and strategic leadership, managing human resources, and supervising subordinates, are linked to functional skills. Experience-based knowledge and cognitive competence are related. Many small and medium-sized company (SME) organizations find success in their competencies, and information technology (IT) can be used to improve competencies. (2019, Kyoto)

The information technology capabilities of SMEs are still minimal so that in carrying out their business activities SMEs have difficulty in making plans and aligning information technology applications with what is their business goal. According to studies on information technology competency, many SMEs continue to struggle with organizing and coordinating IT applications with core competences and business objectives (Levy and Powell, 2004; Olatokun and Kebonye, 2010; Schlemmer and Webb, 2006). According to Eikebrokk and Olsen's (2007) perspective, there is a lack of systematic empirical research that defines critical capabilities for SMEs to successfully adopt and utilize e-business.. Competencies can be improved through optimising the potential of the workforce through upskilling and reskilling programmes (Dewi Anita, 2019).

The key to HR development in the digital era is through reskilling and upskilling programmes. The ability to adapt quickly is needed in developing a business, employees are given learning opportunities designed to instil, develop and perfect the essential skills that are

most needed. Dhakiri (2019) said that reskilling is directed as a learning effort for workers who are dismissed by the company while Upskilling is a learning effort for workers so that their abilities increase so that the quality of the company increases and the company's productivity is high. Increasing the competitiveness of human resources can be pursued through skilling programmes for workers who do not yet have skills, reskilling is pursued for workers who need to improve their skills, while for workers who want to switch to new skills through upskilling programmes (Antara, 2019).

Seeing the above conditions, it is important to conduct a study that examines the importance of upskilling and reskilling and their impact on human resource competencies in the digital economy era for MSME actors. An integrated approach to upskilling and reskilling of labour in MSMEs, combining many policy domains and stakeholders is expected to contribute to providing empirical studies in an effort to increase the effectiveness of targeted policies, and MSME problems in developing MSME HR competencies in the digital economy era can be addressed.

LITERATURE REVIEW

Digital Economy

Don Tapscott (1995) defined the digital economy as an economic activity that uses sophisticated digital technology to build communication through the creation and utilization of a variety of information on the internet. Don Tapscott (1995) and Thomas Mesenbourg (2001) both state that the following three elements constitute the core of the notion of the "Digital Economy": infrastructure for e-business (hardware, software, networks, telephony, human resources, etc.); E-business, or conducting business over a computer-mediated network, refers to any of the following processes: E-commerce (goods transfer, such as online book sales).

Competence

The work results / work performance shown by a worker can be used to measure how superior the worker's competence is. Someone who is competent in their field has a tendency to produce superior work performance. Boyatzis was the first person to initiate the concept of competence in 1982. Furthermore, Boyatzis (1982) defines competence as a person's ability which is demonstrated through the achievement of maximum work results in accordance with the achievement standards set by the organisation. (Yuliandi, 2014). Palan (2007: 6) defines Competence as a superior ability in a person that reflects the expertise, skills, knowledge, attitudes, confidence and motivation that are contributed to the work and shown through work results as the standard of achievement set by the organisation. According to Boyatzis (1982) in

Yuliandi (2014) competence is a person's ability that is demonstrated through the achievement of maximum work results in accordance with the achievement standards set by the organisation (Yuliandi, 2014). According to Ruky's opinion quoted by Sutrisno (2011: 209), there is a correlation between a person's ability and his work performance, where someone who has superior abilities is shown by commendable actions needed to do the job of providing support for maximum work performance. Digital competence is the ability a person has that can build a person's confidence and enthusiasm at work,

Spencer and Spencer (1995) put forward 5 (five) characteristics of competence that are familiar as the Iceberg Model as follows: (1) Motive is known as the stimulating force to move a person to do something to get/realise what is his/her needs and desires; (2) Trait is the action that appears in a person when responding to something in his/her own way; (3) Self concept is how a person assesses his/her personal self; (4) Knowledge is the variety of information that a person controls about something; (5) Skills, more ability that a person has to operate physical and mental work. Skills and knowledge are often called hard competencies, while self concept, traits and motives are called soft competence. The era of globalisation with all the changes that occur rapidly requires workers not only to be satisfied with the mastery of their field of work but in addition workers must also have self-readiness for mastery of abilities so that they are ready to face and take advantage of any changes. Therefore, it is a challenge for training programmes on how to collaborate well with these two competencies so as to create superior human resources who are ready to face new challenges in the future.

Technological Competence

Using a strategic approach can help improve Human Resource competences (Weill and Broadbent, 1998). Furthermore, it was shown that one can gradually acquire technological expertise. In order to increase technological capability, (Sato and Fujita, 2009) created the following model: Operational (in which the organization uses current technology but is unable to innovate with IT). IT is used for routine tasks and to the minimal extent necessary for the domestic market; Assimilative (contains learning current technologies and sustaining operations over time); Adaptive (contains creating a recognized brand in the domestic market, building customer relationships and market responsiveness, participating in technology networks and improving relationships with suppliers and customers efficiency and quality); and Innovative (contains the ability to create something new that has important originality and novelty compared to current technologies, the capacity to bring technological issues into business strategy and vice versa.

The idea is comprehensive and pertains to firms that outperform other organizations in terms of resources, competencies, processes, or knowledge firms (Garelli, 2006; Sahim, 2012). The IT-based competencies that guarantee value creation and competitiveness in e-commerce have been identified by Chaston et al. (2002). These competencies include financial resource competence, operational competence, and strategic e-market competence. The capacity to build direct ties with clients, use technology to cut out middlemen, develop and offer new products and services, and establish new business rules to achieve dominance in an industry's electronic channels are examples of strategic skills. Competence in financial resources entails being able to supply funds for things like website upkeep, internal information management system integration, hardware and software purchases, and appropriate customer service. capabilities in providing high-quality services, innovating, possessing labor capabilities, and other relevant areas can be found at the operations level. According to Scupola (2008), there are four categories of IT-based competencies that contribute to value creation in e-business: complementarity (the value of possible product and service combinations made possible by actors collaborating), lock-in (the value resulting from the costs incurred when transferring vendors), and novelty (e.g. adding value through innovations in web-based auctions and reverse marketplaces).

Upskilling and Reskilling

Etzion (2020) upskilling is the process of learning new skills or teaching workers new skills, while reskilling is the process of learning new skills so that they can do different jobs, or training people to do different jobs.

Dhakiri (2019) defines Upskilling as a training process for workers to increase the competitiveness and productivity of their company, while Reskilling is training for workers who are laid off or stop working and want to start a new career path. .

CEDEFOP (2020) for the purpose of community empowerment and the labor market, upskilling and reskilling are joint social goals and public goods, with shared obligations among governmental institutions, social partners, civil society, and beneficiaries..

RESEARCH METHODES

This research uses a descriptive qualitative method, with data collection through online document searches and literature reviews. This research examines and finds various theories, laws, arguments, principles, or ideas contained in the body of academic-oriented literature used to analyse Upskilling and Reskilling in improving HR competencies in the digital economy era.

FINDINGS AND DUSCUSSION

The digital economy has given Indonesian MSMEs unprecedented opportunities for inclusive growth in local, regional, and even global value chains. E-commerce, social media, the sharing economy, and cloud-based analytics/AI have all contributed to the technological leap of MSMEs. The digital economy is currently impacting the labour sector including: (Dhakiri, 2019)

1. Changes in job and skill requirements

The digital economy that marks the industrial revolution 4.0 raises a lot of questions related to whether jobs will increase or decrease, what kind of jobs are needed, what must be learnt and trained, how to learn and train.

2. Changes in work patterns and labour relations

Because working is no longer restricted by time or location, the nature of work may be modified to fit the circumstances at hand, including whether it will be temporary or permanent, and new labor rules are in place for different kinds of workers, digitalization has brought about more practical changes to the way people work.

3. Changes in the overall society

The current digital era brings new changes and is loaded with gaps in various aspects, namely the availability of computers, whether or not there is speed and ease of internet access, increased job and income uncertainty; and a new social security system?

The success of MSMEs has many challenges in terms of their success in participating in the digital economy. Based on the literature review conducted by researchers, it can be explained that increasing HR competency must be in line with increasing mastery of digital knowledge, including mastery of a broad scope of information and basic business education, industrial and HR development programs, capital, increasing online access, by adopting an alignment perspective as a first step. Kyobe (2015) found that SMEs need to utilize a variety of operational and strategic IT applications to leverage many non-technological competencies to develop the required IT-based competencies. Previous research also confirms that HR competency in the IT sector can ensure business efficiency, innovation, e-collaboration, e-intelligence and knowledge sharing are needed to achieve competitiveness in electronic buying and selling transactions. (Amit and Zott, 2001; Eikebrokk and Olsen, 2007; Raymond and Bergeron, 2008).

SME sales are positively impacted by digital marketing. Relevant inferences are also drawn from the analysis. Email, social media, search engine optimization, pay-per-click, and online advertising are some of the digital marketing methods available to SMEs. (2015) Kyobe

et al. Financial hardships and a deficiency of sufficient understanding regarding digital marketing are the main obstacles facing MSMEs in Indonesia. In order to boost sales of SME products, there is a need for better education on the use of digital marketing by MSMEs. Additionally, all interested parties must employ several digital tools in their marketing strategies. To ensure the continuous success of MSMEs, the effects of digital marketing at different sales levels should be tracked in order to develop appropriate policies.

The results of research studies found that SMEs need to utilize IT (Olatokun and Kebonye, 2010), but Capri (2020) utilizes IT requires proper alignment with other business aspects of the organization SMEs can benefit from various sources, with stakeholders who can contribute to success in increasing the dynamics of the entrepreneurial ecosystem. (Kniňová and Hronová, 2019). Another topic that emerged from this research is the need for exemplary leadership and stakeholders, the need for effective leadership, not only as a facilitator, but as a fair and consistent law enforcer and regulator. The technological revolution offers great hope for MSMEs. But this work is still a work in progress, and policymakers must follow a strict roadmap to achieve success. To do this, having an agile, diverse and creative workforce that continuously learns, adapts, acquires and perfects new competencies is critical.

The superior competencies possessed by MSME players are the main support for the progress of MSMEs. Therefore, MSME actors must have competencies in accordance with current developments. The era of digital technology provides many conveniences for MSME players in terms of transactions, marketing products, as well as the ease of obtaining various information for the development of the business they run, but provided that MSME players are literate in digital technology. This era of increasingly rapid development accompanied by tremendous technological developments requires human resources to develop their technological capabilities so that they can adapt to the technology used. Therefore, MSME players must continue to strive to improve and develop their capacity, by actively participating in various trainings.

Efforts to develop the personal capacity of MSME players can be achieved by providing training to increase their abilities (upskilling) or training for completely new abilities (reskilling). In this way, each employee will get the opportunity to hone the skills they already have. Reskilling (training for new skills) and upskilling (increasing capabilities) are the keys to success in improving the quality of superior human resources in implementing the digital economy. So the next concrete step that must be taken by the government is to provide support to the millennial generations in the country to become literate in digital technology because the millennial generation plays an important role in implementing industry 4.0. Moreover,

Indonesia will enjoy a demographic bonus period until 2030. This means that there are many new opportunities for 130 million people of productive age to get involved and develop businesses in the digital era. So reskilling and upskilling are very important because economic digitalization requires a different skill set from the previous economy. Through training programs, HR competency increases and this will have an impact on completing maximum work results as expected by the company. Merwe and Slowman (2014) said that training has a big influence on the development of training participants' competencies, apart from that it also provides various benefits for the company.

In order to foster greater proficiency in Indonesia's digital economy, policymakers should be motivated to work more closely with stakeholders to cooperate on initiatives that will advance: (Capri, 2020)

1. programs for girls to learn digital literacy beginning in elementary school;
2. employment and equal opportunity laws aimed at female employees and students;
3. cooperative partnerships with businesses, academic institutions, and NGOs;
4. government initiatives that give women chances to advance their digital skills;
5. financing for enterprises run by women.

CEDEFOP (2020) explains that an integrated approach to upskilling and reskilling pathways for low-skilled workers has various elements at the strategic level. It includes a nationally agreed approach (strategy/framework) and an embedded nationally defined vision (such as in the form of guidelines, defining a common language) built around unified, inclusive, tailored, accessible, adaptable ideas and pathways. flexible upskilling for low-skilled adults. The application of upskilling and reskilling to improve the competence of MSME human resources needs to involve the public sector, private sector and other stakeholders so that a good and comprehensive ecosystem is built. These efforts are presented in table 1 below:

Table 1. Efforts To Build An Upskilling And Reskilling Ecosystem For MSME HR

Effort	Public Sector	Private Sector	Stakeholder
Pay attention to and recognize existing competencies	Develop a qualifications framework to recognize formal and informal competencies	Conduct IT competency-based recruiting and work to develop relevant competency assessments	<ul style="list-style-type: none"> - Trade unions and professional associations can carry out competency assessments - National/international organizations can help by measuring competence with national/international competitiveness
Understand global competency demand	<ul style="list-style-type: none"> - Lead competency-based MSME governance, and carry out strategic reviews specific to the MSME industry to 	Engage in active participation in MSMEs, industry strategy review groups, competency centers, and data sharing	<ul style="list-style-type: none"> - Trade unions and professional groups have the ability to actively participate in competency assessment,

	<p>evaluate competency demand</p> <ul style="list-style-type: none"> - Survey employers, use labor demand forecasting models based on historical economic performance and demands, organize strategic foresight groups tailored to a given industry, and use big data analysis to obtain real-time information. 		<ul style="list-style-type: none"> - establish a committee for learning, and input data into the competency system.
<p>Build and maintain workforce learning motivation through active labor market policies and accessible resources</p>	<ul style="list-style-type: none"> - Create a unified approach that incorporates career counseling services, labor market data, and training programs. - Ensure that working groups or intermediary institutions that may effectively link government initiatives are used to coordinate all relevant resources to empower citizens - Providing a one-stop shop for employment and professional development needs of the workforce 	<ul style="list-style-type: none"> - Including career counseling and more incentives to work toward reskilling and upskilling; - Connecting new training options that can immediately apply recently learned skills; - Developing learning for employee performance assessment; - Use gamification to increase motivation and participation in self-paced modular courses 	<p>Professional associations, trade unions, and other neighborhood organizations can serve as powerful inducements to enroll in workforce competency education programs.</p>
<p>Develop simple learning modules that encourage continuous learning</p>	<p>Redesign curricula to provide programs that are shorter in duration, more focused, and in line with career opportunities.</p>	<ul style="list-style-type: none"> - Develop a modular learning program that enables quick reskilling in response to the growing need for competencies. - Collaborating with colleges and other organizations to develop pertinent degree and non-degree programs 	<p>Provide focused training opportunities and work with governmental institutions to coordinate the delivery of basic education.</p>
<p>Determine the roles of various stakeholders</p>	<ul style="list-style-type: none"> - Governments, legislators, and public intermediary institutions have the power to oversee continuous learning systems, - establish curriculum standards and develop a framework for introducing new skills, - ensure the caliber of human resources education programs, 	<ul style="list-style-type: none"> - Create chances for upskilling and reskilling employees within the organization, in business boards and sector alliances, and throughout the supply chain. - Co-finance staff members' possibilities for professional growth and provide sufficient funding to foster a culture of lifelong learning. Collaborate 	<p>Federation of Labor Unions can work in coordination with other stakeholders to identify competency needs, inform workers about training opportunities, support apprenticeships, and provide targeted training when needed</p>

	<p>provide safe access to learning technology,</p> <ul style="list-style-type: none"> - encourage equal access to education, find cooperative funding sources and set up incentives, organize social safety nets, and oversee competency improvement initiatives 	<p>with universities to provide access to talent pools that meet the necessary skill sets.</p> <ul style="list-style-type: none"> - Provide information for employer surveys and actively participate in upcoming research groups to support the skills anticipation system. 	
<p>Prioritize handling low-skilled human resources and older employees</p>	<p>Initiate incentive schemes aimed at enhancing proficiency, furnish funding and resources to susceptible segments of the labor force, and offer focused initiatives for workers with poor competence, aging workforces, and contract laborers.</p>	<ul style="list-style-type: none"> - Establish career development reviews and other tools to actively involve older employees; - Generate chances for direct knowledge sharing and learning across generations in the workplace; - Form a consortium of SMEs to address workforce training needs and foster networking 	<ul style="list-style-type: none"> - Civil society can also create networking and manage programs to increase competency with community learning centers, universities, and other educational institutions at local and regional levels. - Trade unions can actively support businesses and governments in providing inclusive programs for basic skills training. - By collaborating with businesses and governments to coordinate courses in an effort to meet the competency needs of a diverse workforce.
<p>Take advantage of the scalability and power of blended learning; expand your virtual and augmented reality initiatives</p>	<p>To enhance opportunities while optimizing resource efficiency, encourage the ongoing adoption of technology for mixed-format courses that may be taken in a variety of settings, including communities, colleges, vocational training centers, and other general education institutions.</p> <p>Increase the amount of teaching materials, course assessments, and certification programs in order to support the development of blended learning and check its quality</p>	<p>By using blended learning that is scalable and adjustable to digital literacy levels, you can maximize the potential for training and development for all employees as well as those across the supply chain. Use augmented and virtual reality to impart tacit knowledge in a scalable manner.</p>	<p>Participation in college can significantly boost the availability of flexible learning options</p>

CONCLUSION AND RECOMMENDATION

In the age of globalization, MSMEs must have a flexible, varied, and innovative staff that understands the value of constantly learning, adapting, and honing new abilities. In the age of the digital economy, improving the competency of MSME human resources is centered on how to assemble resources and forge the ideal alliances to steer every workforce—especially the less competent—toward higher levels of proficiency. This can be achieved by developing a thorough strategy for increasing the upskilling and reskilling of human resources with low competence so that they are expected to be able to overcome them in a coordinated, coherent, comprehensive manner and can guarantee that MSMEs have all the necessary resources and support continuously. In the contemporary digital economy era, learning/training programs that result in the building of IT competences are of utmost importance. To help policy makers and other stakeholders create and implement a coordinated and coherent approach to raising competency in this environment, particularly for MSME human resources with poor competency in the IT sector, an analytical framework needs to be developed.

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