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Toward cooperative competitiveness for community development in Economic Society 5.0

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Abstract

Purpose – Economic Society 5.0 is the answer to the challenges of the Industrial Revolution 4.0 through the creation of new value from the development of advanced technology that aims to reduce the gap between human and economic problems. Excellent human resources and adequate digital infrastructure are requirements in an Economic Society 5.0. Cooperatives as community economic organizations are players in the Industrial Revolution 4.0. Because of low competitiveness, cooperatives cannot create new and sustainable income streams, particularly digitalization capabilities. This study aims to encourage the competitiveness of cooperatives in the West Java region, Indonesia, in an Economic Society 5.0 by identifying the correlation between digital capabilities, digital orientation, employee resistance, government support, digital innovation and competitiveness.

Design/methodology/approach – This study uses a quantitative method through surveys as data collection techniques by distributing questionnaires to 386 leaders of cooperatives in West Java. Hypothesis testing uses analysis technique of structural equation modeling with partial least squares tool.

Findings – There are five hypotheses that are supported in the proposed model in this study. Digital orientation and government support have a positif and significant effect on digital innovation, in contrary; digital capability and employee resistance do not show any effect. Digital orientation, government support and digital capability also have a positive and significant effect on competitiveness. Meanwhile, employee resistance and digital innovation have no significant effect on competitiveness. Digital innovation was also found not to mediate the relationship between digital orientation, government support, digital capability and employee resistance with competitiveness.

Originality/value – This study provides new insights into the study of cooperatives as community's economic institutions. This study adds empirical evidence of the factors that influence the competitiveness of cooperative institutions in Indonesia as a driver of the community's economy. This study also provides

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practical implications for the development of cooperative competitiveness in developing countries, particularly in Indonesia.

Keywords Competitiveness, Community development, Cooperative, Economic Society 5.0

Paper type Research paper

1. Introduction

Economic Society 5.0 is an economic condition that focuses on community by providing solutions through new technologies in all industries and social activities to achieve sustainable economic development (Higashihara, 2018; Keidanren Policy and Action, 2016; Nakanishi, 2019). One of the initiatives to build this condition must start from business organizations as the most influential institutions of modern society (Potocan *et al.*, 2021). One of the accelerating economic improvements is through economic digitization, particularly cooperatives, and small and medium enterprises (SMEs), to realize an Economic Society 5.0. Cooperatives are business entities that play a role in strengthening the community's economy as the basis of the national economy. The entities develop the national economy as a joint effort based on the spirit of kinship and economic democracy (Regulation of Minister of Cooperatives Number 09 of 2018, 2018). Therefore, cooperatives play a vital role in supporting the national economy, the existence and management of cooperatives in Indonesia need attention from the government to achieve the planned goals.

Economic Society 5.0 has a close relationship with companies and super-innovative communities (Konno and Schillaci, 2021), emphasizing digital factors in managing companies. Digital capabilities are one of the human factors that can create value for organizations through collaborative processes that are integrated with customers (Chuang and Lin, 2015; Saunila *et al.*, 2018). Innovation is identified as necessary for competitiveness by introducing new operational elements and the use of technology to improve efficiency and business processes (Damanpour *et al.*, 2009; Muston-Ollila and Lyytinen, 2004; Piening and Salge, 2015). Competitiveness is the primary output of entrepreneurship and business activities in the economy (Amoros *et al.*, 2012). A common perspective on entrepreneurship enables people to participate in economic, social and regional development by encouraging job growth and new business activities through value creation, growth, profit, managerial capability and innovation (Gartner, 1990; Ramadani *et al.*, 2015). Therefore, government support is needed by companies in encouraging and helping to create an environment for the innovation process, which will have a positive impact on organizational performance (Jansen *et al.*, 2006; Lall and Teubal, 1998; Lazzarini, 2013; Lichtenthaler, 2009; Sapir *et al.*, 1993; Wei and Liu, 2015). Technology and consumer needs have modified the global competition paradigm. One of the examples is applying online systems as a new digital tool to overcome competitive pressures (Lányi and Kruzslicz, 2021; Saridakis *et al.*, 2018).

The United Nations and developed countries agree that cooperatives have a valuable and positive role in enhancing the economic and social development of the community (Bidin, 2007). In 2012, the United Nations declared International Cooperatives to promote the growth and strengthening of cooperatives worldwide in the development of the global social economy and to support small producer opportunities and services, such as access to information, markets, technology, natural resources, credit, training and warehousing (Food and Agriculture Organization of the United Nations, 2012). Cooperatives have contributed to people and communities' economic and social development through their operations in various economic enterprises (Shafii *et al.*, 2019). That causes cooperatives to become the pillars of the national economy in several countries. In Malaysia, the cooperative movement has positively impacted Malaysia's economic development since 85 years ago (Manap and

Tehrani, 2014). Cooperatives have also created an essential source of income as a form of socio-economic development in Vietnam (Tran *et al.*, 2021).

There are 127,124 cooperatives spread throughout Indonesia, of which the West Java region occupies the second largest number of registered cooperatives with a total of more than 14,706 in 2020, although most of them are inactive (Indonesian Statistic Agency, 2021). Cooperatives in Indonesia have an active status if they regularly report in the last three years, based on data from the Ministry of Cooperative and SME (2020), only 25.03% of cooperatives are declared active. The Head of West Java Province's Cooperatives and Small Business Office, Kusmana Hartadji appealed for cooperatives to improve themselves in the face of the Industrial Revolution 4.0. In this era, all individuals and business entities, including cooperatives, must continue to monitor and equip themselves with digitalization and automation (Rachmawati, 2019). Prof Rully Indrawan, Secretary of the Ministry of Cooperatives and Small and Medium Enterprises, said that in the last four years, from 2017 until 2020, as many as 81,686 cooperatives in Indonesia have been dissolved. In West Java, almost half of the cooperatives have been disbanded because of the low quality and durability of the cooperatives. Therefore, they must change the way of doing business by using the development of information technology (Andiyawan, 2020). Every cooperative member must be equipped with creativity and innovation to utilize digital technology in management to accelerate the adaptation and transformation to face environmental changes.

Community development is seen as a process that mobilizes resources and builds the capacity of local people by working together to improve social and economic conditions in their communities. Cooperatives are considered a proper vehicle for community development because local communities run cooperative businesses to control the socio-economic society (Majee and Hoyt, 2011). Consequently, in Economic Society 5.0, cooperatives need to capture both nationally and internationally market opportunities through reliable employees who can take advantage of digital technology. This study aims to encourage the competitiveness of cooperatives in West Java, Indonesia, by identifying the correlation between digital capabilities, digital orientation, employee resistance, government support, digital innovation and competitiveness. Verification analysis was used as the next step to determine the relationship between variables. A questionnaire was distributed to the heads of cooperatives with active status in West Java, determined based on a proportional simple random sampling technique.

This paper is organized as follows. Section 1 clarifies the introduction that describes the theoretical and practical background that underlies the importance of this research. The literature review in Section 2 discusses the theories behind competitiveness and factors influencing today's digital environment, community development and the development of cooperatives in West Java. Section 3 explains the research methodology that consists of the sample and the data collection, measurement and analysis. Furthermore, the data processing results are described, including quantitative data using the partial least squares (PLS) correlation results. Section 4 contains a descriptive analysis to provide a comprehensive picture of the research results. Section 5 explains the result of hypotheses testing and the final findings. Section 6 is practical implications containing suggestions for every party to develop the competitiveness of cooperatives in community development in the era of an Economic Society 5.0. In Section 7, the conclusion states the limitation of this research and suggestion for further study.

2. Literature review

2.1 Cooperative organization in community development

Community development has been defined in many different ways. Most practitioners regard community development as an outcome – a physical, social and economic

improvement in society – while most academics view community development as a process: the ability of people to collaborate and increase their capacity to do so (Phillips and Pittman, 2014). To understand community development, we need to understand what is meant by the term *community*. "Community" can refer to a location (communities of place) or a collection of individuals with similar interests or ties either nearby or apart (communities of interest) (Phillips and Pittman, 2014). The National Research Council (1975) defines a community as a group of people who live close to each other and are united by common interests and mutual assistance. Ismail (2009) defines a community in general as a group of individuals who live close together, interact regularly, share the same goals and depend on each other to meet particular needs. Community members have a sense of community, commitment to the group's welfare, openness in communication and a sense of responsibility to others and themselves. Community development can be defined as an initiative undertaken by the community in partnership with an external organization or company to empower individuals and groups by providing them with the skills they need to make changes in their communities (Ismail, 2009).

The practice of community development refers to various types of activities carried out in local communities, villages, neighborhoods or places of residence (Kumpulainen and Soini, 2019). This practice is an effort to improve the community's welfare and is often applied in village development, along with the social problems that arise in the village (Horlings, 2016; Pawar, 2014). The United Nations (UN, 1971) defines community development as an organized effort of individuals within the community undertaken to help solve community problems with minimal assistance from external organizations. These external organizations can include governmental or non-governmental organizations and companies of diverse types and sizes, such as SMEs or multinational corporations. The main contribution of the concept of community development is the recognition that a city or neighborhood is not just a collection of buildings but a "community" of people facing problems along with an untapped capacity for self-improvement. Community development has grown into a recognized discipline of various academic fields, including sociology, economics, political science, planning, geography and others (Phillips and Pittman, 2014).

Cooperatives are urgently needed to help decipher the problems that arise through a community development orientation to assist in the self-development of innovations selected by collaboration (Handayani and Supriyadi, 2016). Cooperatives can generate community participation as development partners, not only as a target group. The acceleration of cooperative innovation aims to empower the community, which is directed toward increasing entrepreneurship, creativity, initiative, business tenacity and the courage to take risks. Cooperatives are a central organizational mechanism for a more resilient community economic system. They can serve as an effective tool and an essential instrument for community development that can provide a broader impact in improving the socio-economic community by focusing on the vision and resolution of broader socio-economic issues (Jiboye *et al.*, 2019; Vieta and Lionais, 2015). Cooperatives become a socio-economic movement by presenting an alternative economy through increasing the participation of local communities. Head of Village-Owned Enterprises (BUMDes) Sukatani and Chair of the Garut Regency BUMDes Association remarked that cooperative services could help village-owned enterprises serve as pillars of rural economic activity by increasing community capacity through economic encouragement to community businesses (Kania *et al.*, 2021).

2.2 Competitiveness

Competitive advantage exists when a company can provide the same benefits as competitors but at a lower cost (cost advantage) or when a firm offers benefits that exceed

competing products (differentiation advantage). The sources of competitive advantage are technology and innovation, human resources and organizational structure (Wang *et al.*, 2011). "Competitiveness" refers to the ability to reduce costs, seize emerging opportunities and face business threats so that the opportunity becomes a competitive advantage, which is the key to organizational success (Barney, 1991; Jahanshahi and Bhattacharjee, 2019). Competitiveness is measured through several aspects, namely, profitability, efficiency and growth (Wisenthige and Guoping, 2016). "Profitability" measures the increase in profit and the level of risk in facing financial difficulties, while "efficiency" includes the ability to produce more products and profits using currently existing resources. "Growth" measures the increase in assets and sales that are useful in the development of cooperatives. Competitive advantage could be viewed as a method to explain an organization's competitiveness. An analytical context could become a means of discovering how an organization's strategy leads to an inevitable result or strategic position according to specific strategic indicators (Pramudiana *et al.*, 2017). An emerging contemporary perspective has gained popularity as the industry embraces the disruptive era, namely transient competitive advantage.

2.3 Digital innovation

Digital innovation is defined as the implementation of new ideas in creating market offerings, business processes or models resulting from the use of digital technology (Garud *et al.*, 2013; Nambisan *et al.*, 2017). The unique nature of digital technology enables new types of innovation processes that differ from industrial-era analog innovations (Henfridsson, 2014). Digital innovation has three key characteristics: convergence, generativity and a distributed nature (Hoffman, 2018). Driven by the ubiquitous coverage of computing and the exponential growth of data processing capacity with meager cost, computers are now able to incorporate the features of communication devices, and smartphones are taking up most of the computer's functions (Pon *et al.*, 2015; Tilson *et al.*, 2010). Competition in digital platforms is relatively high, so it is necessary to use technology for innovation in digital platforms (Dutta and Sarma, 2021). Barriers to the growth of innovation include the reluctance to close down failing programs or organizations, overreliance on high performers as a source of innovation, technologies available but constraining cultural or organizational arrangement, no rewards or incentives to innovate or adopt innovations, poor skills in operational risk or change management, short-term budget and planning horizons, delivery pressures and administrative burdens, and a culture of risk aversion (Mulgan and Albury, 2003). Digital innovation has become an integral part of digital users whose utilization depends on their level of internet skills (Dutta and Sarma, 2021; Wittendorp, 2017). A company's digital innovation is measured by ownership, excellence, uniqueness and the novelty of its digital products (Khin and Ho, 2019; Paladino, 2007).

2.4 Digital capability

Technological skills and competencies are vital resources required for the innovation process (Freel, 2005; Renko *et al.*, 2009). Irrespective of the adept use of technology in an organization, its use and services require effective and efficient management (Lu and Ramamurthy, 2011). The capability to transform a broader resource base to execute a digital strategy is essential in the digital economy to maintain a company's competitiveness even in a highly changing environment (Peteraf *et al.*, 2013; Sousa-Zomer *et al.*, 2020). In the context of digital products, digital capabilities are defined as the company's skills, talents and expertise in managing digital technology in developing new products. A successful digital

transformation supports an organization in developing multiple capabilities in many different areas (Carcary *et al.*, 2016). Meanwhile, dynamic capabilities are part of the competencies that enable companies to create new products and processes and respond to changes in market conditions (Teece *et al.*, 1997). Digital capability is measured through two aspects, namely, dynamic managerial capabilities and organizational capability. Dynamic managerial capabilities include managerial cognition related to understanding the current situation, future developments, market situations and adapting to changes. Managerial social capital is related to formal and informal relations with external parties and the allocation of resources to seize opportunities and challenges of change. Managerial human capital includes mastery of digital knowledge, digital experience and expertise in using digital technology. Organizational capabilities describe the mastery of learning and development activities, network management and the ability to reach potential markets (Li *et al.*, 2018).

Although some significant studies have supported the relationship between capabilities and technological innovation, only a few papers have reported the impact of digital capabilities on digital innovation. Khin and Ho (2019) identified that digital capability has a positive effect on digital innovation. Digital capabilities are fundamental to change customer experiences, operational processes, and business models (Westerman, 2012). The skills gap emerges as one of the obstructions in the digital transformation process. Digital capability needs to be implemented to materialize the full potential of a strategic change, and the capability has become a significant element for incumbent companies to compete in the digital era (Sousa-Zomer *et al.*, 2020; Warner and Wager, 2019). Companies need new dynamic capabilities to stay competitive in a digital age, which relies on the company's ability to experience disruptions and seize and reconfigure business elements appropriately and continuously (Raj *et al.*, 2020; Svahn *et al.*, 2017; Vial, 2019). Companies need digital transformation capabilities to implement digital strategies and maintain competitiveness by constantly changing their resources to a broader basis, creating insights regarding the complexities of digital transformation (Sousa-Zomer *et al.*, 2020; Warner and Wager, 2019). Organizations with strong digital transformation capabilities ensure responsiveness and competitiveness in a dynamic environment (Sousa-Zomer *et al.*, 2020). This study proposes the following hypothesis:

H1. Digital capability has a positive and significant effect on digital innovation.

H2. Digital capability has a positive and significant effect on competitiveness.

2.5 Digital orientation

Digital orientation is defined as the company's commitment to applying digital technology to provide innovative products, services and solutions. Without dedication to technology trends and adopting proper digital technologies, a company will not be able to develop innovative solutions by current business trends. Digitally oriented companies are more likely to generate digital innovations (Khin *et al.*, 2012). Supported by a resource-based theory, companies with a superior technology orientation accomplish greater levels of innovation due to their expanded vision and commitment to using novel technology to develop innovative products. Digital orientation is measured from three aspects, namely market, entrepreneurial and learning orientations. "Market orientation" means having the flexibility to respond to market information as well as the initiative to seek and comprehend information to seize market opportunities. "Entrepreneurial orientation" refers to innovating behavior, commitment and readiness to use the latest technology in product development, as

well as readiness to innovate by using digital technology. Meanwhile, "learning orientation" focuses on an environment that is open to fresh ideas, adoption of the latest technology, development of technology-related skills, the courage to take risks and understanding consumers' needs (Quinton *et al.*, 2018).

Several works have discussed the relationship between technology orientation and innovation. Some researchers found a positive relationship between technology orientation and product innovation (Hortinha, 2011; Yang *et al.*, 2012). Khin and Ho (2019) identified that digital orientation has a positive effect on digital innovation. Adopting an online system as a new digital tool will help overcome competitive pressures even though many companies are still not fully aware of this situation (Saridakis *et al.*, 2018). The use of new technology and the use of online will become the company's competitiveness through operational efficiency and the creation of a better customer experience (David Goerziga and Bauernhansl, 2018; Li *et al.*, 2018; Goldfarb and Tucker, 2019). More empirical tests concerning the positive effects of technology orientation on innovation are still needed (Khin *et al.*, 2012). This study proposes the following hypothesis:

H3. Digital orientation has a positive and significant effect on digital innovation.

H4. Digital orientation has a positive and significant effect on competitiveness.

2.6 Employee resistance

The global economy has an impact on customers, competition and change. Change itself is something to be experienced by individuals and organizations in a dynamic environment. Changes that occur often spark resistance from all parties involved or affected by these changes. Resistance can either emerge from individuals or groups, and organizations. The causes of individual resistance include habits, a sense of security, fear of uncertainty, economic factors and perceptions. For groups, organizational resistance includes inertial barriers, a limited focus of change, a threat to expertise, power relations and resource allocation (Robbins and Judge, 2017). Resistance as an outcome of social construction is measured by responding to change, new things, seeking new ways of working and composure in facing sudden changes (Langstrand and Elg, 2012; Thakur and Srivastava, 2018).

Very dynamic changes, especially in the digital era, are very likely to be responded to by the emergence of resistance to threats felt by individuals in organizational settings (Ford *et al.*, 2002; Langstrand and Elg, 2012). The status quo will produce passive resistance, which is a general tendency to consciously refuse before evaluating a new product due to innovation (Heidenreich and Kraemer, 2015; Nel and Boshoff, 2021). A study from Zwick (2002) found that internal resistance to innovation arises because employees do not know the benefits. Then according to Joachim (2018) that resistance has a negative effect on innovation adoption. Talwar *et al.* (2020) said that resistance is one of the leading causes of innovation failure. This study proposes the following hypothesis:

H5. Resistance has a negative and significant effect on digital innovation.

H6. Resistance has a negative and significant effect on competitiveness.

2.7 Government support

The "perception of organizational support" is defined as a form of employees' beliefs about the company's concern regarding work, working convenience and the employees'

contributions (Rhoades and Eisenberger, 2002). Organizational support is the employees' perspective of the company's appreciation for what they do and the extent to which the company cares that their needs are important (Higazee *et al.*, 2016). Organizational support can be materialized in the form of competitive salaries, provision of proper working equipment, flexible working hours, provision of company facilities and good career opportunities. Within the scope of a country, government support is crucial for improving the community's economy. A case study in India shows that the government's role in encouraging young communities through the facilitation of schemes and policies to launch a business has boosted the economy (Agarwal *et al.*, 2020).

Government support is measured through several aspects, covering scientific, technical and manufacturing support and consulting, financial, informational, learning, human resource development and export supports. Scientific, technical and manufacturing support includes assistance for technology implementation, establishing collaborations and innovative environments through cooperation and establishing international collaborations on innovation. Consulting support includes easy access to information, consulting and setting up a network or technology platform. Financial support includes providing credit facilities, funding for starting new businesses and the efficient use of technology. Informational support includes providing information and telecommunication networks, developing a culture of innovation, providing information regarding development programs and using public facilities and required infrastructure. Learning and human resource development support include establishing innovative networks, providing educational programs, improving digital competence, providing cooperative management and opportunities to participate in international programs. Export support includes cooperation with foreign organizations, assistance in promoting cooperative products, planning international expansion and providing access to information and international networks as partners (Kolisnichenko, 2017).

Support from various parties to jointly face changes in the digital era is important, especially support from the government. Government support in encouraging and assisting companies to create an innovative environment will have a positive impact on organizational performance as international competitiveness for innovative companies in achieving sustainable growth (Lall and Teubal, 1998; Lazzarini, 2013; Sapir *et al.*, 1993; Jansen *et al.*, 2006; Lichtenthaler, 2009; Wei and Liu, 2015). The government must allocate resources to produce a product's comparative advantage (Cele *et al.*, 2021; Suwannarat, 2017; Boyle, 2002). A study by Zhang *et al.* (2017) found that institutional support positively affects product and process innovation and company performance. This study proposes the following hypothesis:

H7. Government support has a positive and significant effect on digital innovation.

H8. Government support has a positive and significant effect on competitiveness.

2.8 Mediating role of digital innovation

Competitiveness and performance improvement are positive impacts that organizations can get when they continue to innovate. Innovation, which refers to introducing new operational elements and the use of technology to improve efficiency and business processes, is identified as important competitiveness (Piening and Salge, 2015; Muston-Ollila and Lyytinen, 2004; Damanpour *et al.*, 2009). Increased innovation results by taking the form of a platform will create corporate value (Agostini *et al.*, 2020). This positive impact has been found in various studies on large companies and SMEs (Lee and Tsai, 2005; Hernandez-

Espallardo and Delgado-Ballester, 2009). In the context of digital innovation, several research results also show positive results. Research by Westerman *et al.* (2011) and Weill and Woerner (2015) show better earnings for companies that use digital technology. Previous studies have also shown a direct influence of technological capability and technology orientation on innovation (Sainio *et al.*, 2012; Zhou and Wu, 2010). However, Chae *et al.* (2014) found no relationship between IT capability and organizational performance, so they suggested that other researchers include other variables in the relationship between IT capability and performance. We argue that the innovation variable can be a mediator variable in this relationship. In line with Al-Ansari *et al.* (2013), who suggested that innovation can be used as a mediator in the relationship between technology orientation and performance. Therefore, given the limitations of previous research on the indirect effect of technological capability and orientation on performance, particularly in cooperatives. Related to resistance, Joachim (2018) found that resistance has a negative impact on innovation adoption.

Meanwhile, the adoption of innovation has a positive effect on the competitive advantage of SMEs (Distanont and Khongmalai, 2018). It means that the relationship of resistance to indirect competitive advantage needs to be clarified. This study proposes the following hypothesis:

H9. Digital innovation has a positive and significant effect on competitiveness.

H10. The influence of digital capability on competitiveness is mediated by digital innovation.

H11. The influence of digital orientation on competitiveness is mediated by digital innovation.

H12. The influence of resistance on competitiveness is mediated by digital innovation.

H13. The influence of government support on competitiveness is mediated by digital innovation.

3. Research methodology

3.1 Sample and data collection

This research is a quantitative research by distributing online questionnaires to the heads of cooperatives in Indonesia in the period January to May 2021. Respondents were selected based on proportional simple random sampling technique. The population of this study involves all cooperatives with active status throughout 27 cities and regencies in West Java, namely, Banjar City, Tasikmalaya City, Cimahi City, Depok City, Bekasi City, Cirebon City, Bandung City, Sukabumi City, Bogor City, West Bandung Regency, Bekasi Regency, Karawang Regency, Purwakarta Regency, Subang Regency, Indramayu Regency, Sumedang Regency, Majalengka Regency, Cirebon Regency, Kuningan Regency, Ciamis Regency, Tasikmalaya Regency, Garut Regency, Bandung Regency, Cianjur Regency, Sukabumi Regency, Bogor Regency and Pangandaran Regency. The respondents who filled out the questionnaire were the heads of cooperatives selected based on a proportional simple random sampling technique with a sample size of 386 heads of cooperatives in West Java. In this study, respondents consisted of 59.35% men and 40.65% women. Based on age, 62.58% of the respondents were under 27 years old, 7.10% were between 27 and 32 years old, 12.26% were 33–38 years old and 18.06% were between 39 and 44 years old. Regarding how long the cooperatives had been established, 61.29% of respondent cooperatives had been

established for more than 12 years, 13.55% had been established for 6–8 years, 12.26% for 9–11 years, 9.68% for 2–5 years and 3.23% for less than two years.

3.2 Measurement

The variables used in this study include digital capabilities (DC), digital orientation (DO), resistance (RS), government support (GS), digital innovation (DI) and competitiveness (CV). Fourteen indicators are used to measure DC based on Li *et al.* (2018), 12 indicators to measure DO based on Quinton *et al.* (2018) and 13 indicators to measure RS based on Thakur and Srivastava (2018). Meanwhile, GS is measured through 31 indicators based on Kolisnichenko (2017), DI through six indicators based on Paladino (2007) and CV through six indicators based on Wisenthige and Guoping (2016). Table 1 shows the indicators for each variable. Measurements were carried out through the mean score and PLS. The mean score interpretation is used as a descriptive statistic (Moidunny, 2009) to measure the current implementation of the measured variables. The mean score will be calculated for each indicator. The PLS method is used to measure the correlation between variables to determine which ones significantly influence the competitiveness of cooperatives. The PLS method demands significantly fewer requirements on sample size and distribution than covariance analysis and does not require normally distributed input data. PLS provides consistent and reliable results and can be applied to complex structural equation models with many constructs (Urbach and Ahlemann, 2010).

3.3 Data analysis

For data assessment, descriptive analysis is used to describe the current condition related to RS, DC, DO, DI, GS and the level of CV using the mean score technique. Criteria for the mean score are: 1.00–1.80 is very low, a mean >1.81–2.60 is low, >2.61–3.40 is medium, >3.41–4.20 is high and a mean >4.21–5.00 is very high.

Next, the structural equation model (SEM) analysis from PLS approach was carried out to assess the suitability and validity of the measurement construct prior to the examination of the structural model for path coefficients or relationships between variables. PLS is a reliable tool to test predictive models because it has the advantage that it can be used to predict models with a weak theoretical basis. These data do not meet classical assumptions such as not normally distributed, multicollinearity problems, autocorrelation problems, small sample sizes and can be used for formative and reflective constructs (Tenenhaus *et al.*, 2005).

The PLS model consists of two components, namely, the measurement model (outer model) and the structural model (inner model). A measurement model is a model that relates the observed manifest variable to the latent variable. At the same time, the structural model describes the relationship between latent variables in the SEM-PLS model. The evaluation criteria for the measurement model include convergent validity, discriminant validity and reliability. Convergent validity is the extent to which a measure is positively correlated with alternative measures of the same construct. High outer loadings on the constructs indicate that the related indicators have many similarities captured by the constructs (Hair *et al.*, 2014). An acceptable value for convergent validity is if loading factor > 0.5 (Bagozzi *et al.*, 1991) and average variance extracted (AVE) > 0.5 (Fornell and Larcker, 1981). Discriminant validity is the extent to which a construct is completely different from other constructs by empirical standards. Discriminant validity value is good if the square root AVE is greater than the inter construct correlation coefficient (Fornell and Larcker, 1981). Reliability is measured through composite reliability (CR) with the criteria of CR > 0.7, it means it has high reliability. In addition, Henseler *et al.* (2015) proposed the heterotrait-monotrait

Dimension	No.	Indicator	No.	Indicator
DC	1	Knowledge in understanding the current situation	8	Ability to allocate resources to deal with market changes
	2	Knowledge in predicting future business development	9	Digital knowledge ownership
	3	Knowledge in understanding the market situation	10	Experience in dealing with digital changes
	4	Knowledge in adapting to change	11	Expertise in using digital technology
	5	Possession of formal relationships with outsiders	12	Implementation of learning and development
	6	Possession of informal relationships with outsiders	13	Ability to manage network (channel)
	7	Ability to allocate resources to capture market opportunities	14	Ability to reach the potential market
RS	15	The assumption that changes in the external environment will bring something positive	22	Ability to stay calm in situations that are not going according to plan
	16	Openness to unexpected events	23	Ability to change plans suddenly
	17	Tendency to try new things at work	24	Convenience in dealing with changes
	18	Looking for better ways to change routines at work	25	Tendency to resist when pressured to change
	19	Tendency to like the surprise of something new	26	Rejection of something new even though it is positive
	20	Ability to suppress the emergence of work stress due to change	27	It will not change once they conclude something
	21	Ability to relieve tension in planned change	–	–
DO	28	Flexibility in responding quickly to market information	34	Readiness to innovate by utilizing digital technology
	29	Taking the initiative to seek information on new market opportunities	35	Create an environment that is open to innovative ideas
	30	Understand external information to capture market opportunities	36	Start adopting the latest technology
	31	Develop behavior to innovate radically	37	Encourage the development of new skills in the use of technology
	32	Commitment to utilizing digital technology in product development	38	Encourage the courage to take risks
	33	Readiness to apply the latest digital technology in managing cooperatives	39	Understand consumer needs by designing innovative products
DI	40	Ownership of digital products with higher quality than competitors	43	The cooperative's digital product platform is different from those of competitors
	41	Advantages of cooperative digital product features compared to competitor products	44	Current product development into digital products
	42	The uniqueness of cooperative digital applications compared to competitors	45	The novelty of cooperative digital products at launch

Table 1.
Variable and indicator

(*continued*)

Dimension	No.	Indicator	No.	Indicator
GS	46	Financial support for innovation programs in cooperatives	62	Funding collaborations between cooperatives and large companies
	47	Cooperative business funding from the government	63	Providing information and telecommunications network systems
	48	Providing incentive system for business development	64	Develop a culture of innovation in cooperatives through internet technology
	49	The government assists the process of implementing technology for cooperatives	65	Provide complete information regarding cooperative development programs
	50	The government creates an innovative environment through joint collaboration	66	Provide information related to the effective use of public facilities for cooperatives
	51	The government creates collaboration between cooperatives and third parties	67	Providing infrastructure information for cooperative development
	52	The government helps create mutually beneficial international innovation collaborations	68	Creating innovative networks for cooperatives
	53	Provides support in the form of innovative consultation	69	Provide HR competency improvement programs in cooperatives
	54	Provide easy access to online information	70	Provide educational programs for cooperative human resources
	55	Help create a network and technology platform for cooperatives	71	Provide cooperative management support
	56	Provide credit facilities for cooperatives	72	Provide opportunities to participate in international programs to exchange experiences
	57	Providing soft loans for business development	73	Facilitate cooperation with foreign organizations
	58	Provide compensation for the implementation of innovative projects	74	Help promote cooperative products to the international market
	59	Provide loans for the use of the latest technology	75	Help planning the expansion of cooperative products abroad
	60	Provide funding to create new businesses under cooperatives	76	Provide access to information and international networks that have opportunities as partners
	61	Provide funding for efficient use of technology	–	–
CV	77	The ability to generate profits that continues to increase	80	Ability to maximize profits with available resources
	78	The level of risk of the cooperative experiencing financial difficulties	81	Ability to increase assets that are useful for cooperative development
	79	The ability of cooperatives to produce relatively more products than other cooperatives	82	Ability to increase sales every year

Table 1.

correlation ratio (HTMT) as an approach to assess discriminant validity. Henseler *et al.* (2015) used threshold values of 0.85 and 0.90.

The next analysis for structural model evaluation includes R^2, Q^2 and f^2. R^2 shows the level of determination of exogenous to endogenous variables. The value of R^2 shows the value of determination, the higher the value of R^2, the better the value of determination The Q^2 (Stone–Geisser) score measures how well the model and its parameter estimates generate the observed values. The greater the value of Q^2 (or $Q^2 > 0$), indicating the predictive model is more accurate and relevant (Chin, 1998). f^2 shows a change in the value of R^2 in the endogenous construct. Changes in the value of R^2 indicate whether the exogenous construct has a substantive effect on the endogenous construct. If the value of $f^2 < 0.02$, then the effect of exogenous latent variable is insubstantial, $0.02 < f^2 < 0.15$ is weak, $0.15 < f^2 < 0.35$ is moderate and $f^2 > 0.35$ is a strong category.

4. Results

This section describes the current condition regarding implementing each indicator of the variables DC, DO, RS, GS, DI and CV of cooperatives in West Java. Each indicator will have a mean score to determine the criteria for the assessment results, as shown in Table 2. Criteria for the mean score are: 1.00–1.80 is very low, a mean >1.81–2.60 is low, >2.61–3.40 is medium, >3.41–4.20 is high and a mean >4.21–5.00 is very high. From the descriptive analysis, it can be seen that the result of DC, DO, GS, DI and CV of cooperatives was in high criteria. Resistance is very low criteria means that cooperatives tend not to resist the changes in the business environment.

4.1 Measurement model evaluation

The hypothesis in this study was tested using the PLS approach, assisted by using WarpPLS. Evaluation of the measurement model is done by calculating the coefficients of convergent and discriminant validity. Convergent validity assesses the extent to which a measure is highly correlated with alternative measures gauging the same construct (Hair *et al.*, 2014). Discriminant validity ensures that the construct measure is empirically unique and represents an interesting phenomenon not captured by other measures in the SEM. In this study, all constructs are modeled as reflective constructs so that all indicators must have a high proportion of variance (Hair *et al.*, 2014). To determine convergent validity, the coefficients of reliability (factor loadings) and AVE were computed, and the results can be seen in Table 3. Reliability is measured through CR with the criteria that if it has a CR > 0.7, it means it has high reliability. Table 3 shows the evaluation of the measurement model.

The loading factor value of all indicators was above the threshold value, which was 0.5 (Hair *et al.*, 2014). Meanwhile, the AVE value for all variables was above 0.5, thus confirming the existence of convergent validity for DC, DO, RS, GS, DI and CV (Hair *et al.*, 2014; Henseler *et al.*, 2009). CR testing was conducted using WarpPLS, with the reference that if

Table 2. Descriptive result

Dimension	Mean	Criteria
DC	3.83	High
RS	1.22	Very low
DO	3.92	High
DI	3.57	High
GS	3.45	High
CV	3.80	High

Dimension	Indicator	Loading factor	AVE	CR	Dimension	Indicator	Loading factor	AVE	CR
DC	1	0.909	0.772	0.979	DI	40	0.950	0.896	0.981
	2	0.904				41	0.956		
	3	0.896				42	0.959		
	4	0.922			GS	46	0.883	0.816	0.993
	5	0.812				47	0.901		
	6	0.799				48	0.913		
	7	0.905				49	0.929		
	8	0.905				50	0.927		
	9	0.872				51	0.867		
	10	0.841				52	0.928		
	11	0.813				53	0.911		
	12	0.873				54	0.904		
	13	0.918				55	0.906		
	14	0.916				56	0.889		
RS	15	0.819	0.668	0.962		57	0.897		
	16	0.885				58	0.927		
	17	0.889				59	0.932		
	18	0.909				60	0.930		
	19	0.846				61	0.944		
	20	0.914				62	0.936		
	21	0.925				63	0.944		
	22	0.913				64	0.920		
	23	0.892				65	0.897		
	24	0.915				66	0.910		
	25	0.549				67	0.926		
	26	0.494				68	0.931		
	27	0.444				69	0.788		
DO	28	0.860	0.735	0.971		70	0.774		
	29	0.896				71	0.791		
	30	0.880				72	0.922		
	31	0.647				73	0.920		
	32	0.911				74	0.916		
	33	0.897				75	0.907		
	34	0.797				76	0.908		
	35	0.873			CV	77	0.882	0.753	0.947
	36	0.883				78	0.601		
	37	0.883				79	0.893		
	38	0.819				80	0.942		
	39	0.906				81	0.941		
						82	0.897		

Table 3.
Measurement model evaluation

the CR coefficient was $\geq$0.70, the questionnaire was reliable. Based on Table 3, the CR value for all variables was above 0.9, thus confirming the high reliability of DC, DO, RS, GS, DI and CV. Table 4 shows the results of the Fornell-Larcker criteria in this study. The results showed that the measurement model in this study had met the criteria of discriminant validity, convergent validity and reliability.

Next, HTMT analysis was used to estimate the correlation between the constructs. The interpretation of the indicators from the two constructs shows a clear HTMT value less than one, the actual correlation between the two constructs is most likely different from one, and they must be different (Henseler *et al.*, 2015). Table 5 shows that HTMT in this study met the

requirements of discriminant validity, which indicates that the two constructs, are different empirically.

4.2 Structural model evaluation

Structural model analysis was conducted to evaluate the relationship between variables. The comprehensive results of the analysis are presented in Table 6.

Based on the path coefficient value and the *p*-value for the direct influence, DO and GS have a significant positive influence on DI and CV. This positive path coefficient indicates that the higher the DO and GS, the greater the possibilities of DI and CV of the cooperative.

Tabel 4. Fornell-Larcker criterion

		(1)	(2)	(3)	(4)	(5)	(6)
1	DC	0.879					
2	RS	−0.583	0.817				
3	DO	0.742	−0.703	0.857			
4	DI	0.674	−0.603	0.783	0.947		
5	GS	0.702	−0.492	0.595	0.689	0.903	
6	CV	0.771	−0.584	0.794	0.722	0.722	0.868

Note: Square roots of average variances extracted (AVEs) shown on diagonal

Table 5. Heterotrait-monotrait confidence interval

	CV	DC	DI	DO	GS	RS
CV						
DC	0.796					
DI	0.725	0.691				
DO	0.814	0.753	0.797			
GS	0.728	0.716	0.700	0.596		
RS	0.677	0.715	0.687	0.826	0.558	

Table 6. Results of hypotheses testing

Hypothesis	Influence	Path coefficient	*P*-value	Interpretation	Conclusion
Direct influence					
H1	DC → DI	0.020	0.401	No significant	Rejected
H2	DC → CV	0.244	<0.001	Significant	Supported
H3	DO → DI	0.541	<0.001	Significant	Supported
H4	DO → CV	0.458	<0.001	Significant	Supported
H5	RS → DI	−0.038	0.317	No significant	Rejected
H6	RS → CV	−0.026	0.373	No significant	Rejected
H7	GS → DI	0.329	<0.001	Significant	Supported
H8	GS → CV	0.291	<0.001	Significant	Supported
H9	DI → CV	0.038	0.316	No significant	Rejected
Indirect influence					
H10	DC → DI → CV	0.001	0.495	No significant	Rejected
H11	DO → DI → CV	0.021	0.357	No significant	Rejected
H12	RS → DI → CV	−0.001	0.490	No significant	Rejected
H13	GS → DI → CV	0.013	0.412	No significant	Rejected

In addition to DO and GS, DC also has a significant positive influence on CV. This positive path coefficient indicates that the higher the DC mastered by cooperative management, the greater the possibility of CV. Regarding indirect influence, DI cannot be a variable that intervenes between DC, DI, RS and GS toward CV. The effect size of the relationship between constructs needs to be done to see the relevance of the resulting significant effect. Table 7 shows the effect sizes of the relationships between constructs.

A strong effect is found in the relationship between digital orientation and digital innovation ($f^2 = 0.424$). The moderate effect is found in the relationship between digital capability and competitiveness ($f^2 = 0.188$), the relationship between digital orientation and competitiveness ($f^2 = 0.348$), the relationship between government support and digital innovation ($f^2 = 0.228$) and the relationship between government support and competitiveness ($f^2 = 0.201$). Then the weak effect is found in the direct relationship between resistance to digital innovation ($f^2 = 0.027$) and the relationship between digital innovation and competitiveness ($f^2 = 0.028$). There was also found the relationship that showed insubstantial effect between digital capability and digital innovation ($f^2 = 0.014$), resistance to competitiveness ($f^2 = 0.018$) and the influence mediated by digital innovation, both for the relationship between digital capability and competitiveness ($f^2 = 0.001$), digital orientation and competitiveness ($f^2 = 0.016$), resistance and competitiveness ($f^2 = 0.001$) and government support and competitiveness ($f^2 = 0.009$). It means that the effect sizes of the proposed structural model have insubstantial, weak, moderate and strong effect sizes.

The predictive relevance of Q^2 was used to verify the validity of the model predictions. The results of the study found that digital innovation ($Q^2 = 0.608$) and competitiveness ($Q^2 = 0.605$) had a good predictive model and relevance (Chin, 1998). Table 8 shows the Stone-Geisser score, which shows the Q^2 value for the endogenous digital innovation and competitiveness variable.

As displayed in Figure 1, the value of R^2 in the endogenous variables DI and CV was 0.693 and 0.783, respectively. The finding indicates that the exogenous variable can explain the variant in each endogenous variable by 69.3% and 78.3%, respectively.

Hypotheses	Influence	F^2	Interpretation
Direct influence			
H1	DC → DI	0.014	Insubstantial effect
H2	DC → CV	0.188	Moderate effect
H3	DO → DI	0.424	Strong effect
H4	DO → CV	0.348	Moderate effect
H5	RS → DI	0.027	Weak effect
H6	RS → CV	0.018	Insubstantial effect
H7	GS → DI	0.228	Moderate effect
H8	GS → CV	0.201	Moderate effect
H9	DI → CV	0.028	Weak effect
Indirect influence			
H10	DC → DI → CV	0.001	Insubstantial effect
H11	DO → DI → CV	0.016	Insubstantial effect
H12	RS → DI → CV	0.001	Insubstantial effect
H13	GS → DI → CV	0.009	Insubstantial effect

Table 7.
Size effect (f^2)

5. Discussion

The research question in this study is "What are the factors that influence the competitiveness of West Java's cooperatives in Economic Society 5.0?". Meanwhile, this research aims to encourage the competitiveness of cooperatives in West Java, Indonesia, through the correlation between digital capabilities, digital orientation, resistance, government support, digital innovation and competitiveness. The hypothesis testing using SEM-PLS is done to answer the research question and to achieve the research objective. The results of hypothesis testing show that digital orientation and government support have a significant positive influence on digital innovation, but digital capability and resistance have no significant influence on digital innovation. Digital orientation, government support and digital capability also have a significant positive influence on competitiveness. Meanwhile, resistance and digital innovation have no significant influence on

Table 8
Stone-Geisser (Q^2) score

		SSO	SSE	Q^2 (= 1−SSE/SSO)
1	CV	755.000	297.906	0.605
2	DC	2,114.000	2,114.000	
3	DI	906.000	355.188	0.608
4	DO	1,661.000	1,661.000	
5	GS	4,681.000	4,681.000	
6	RS	1,510.000	1,510.000	

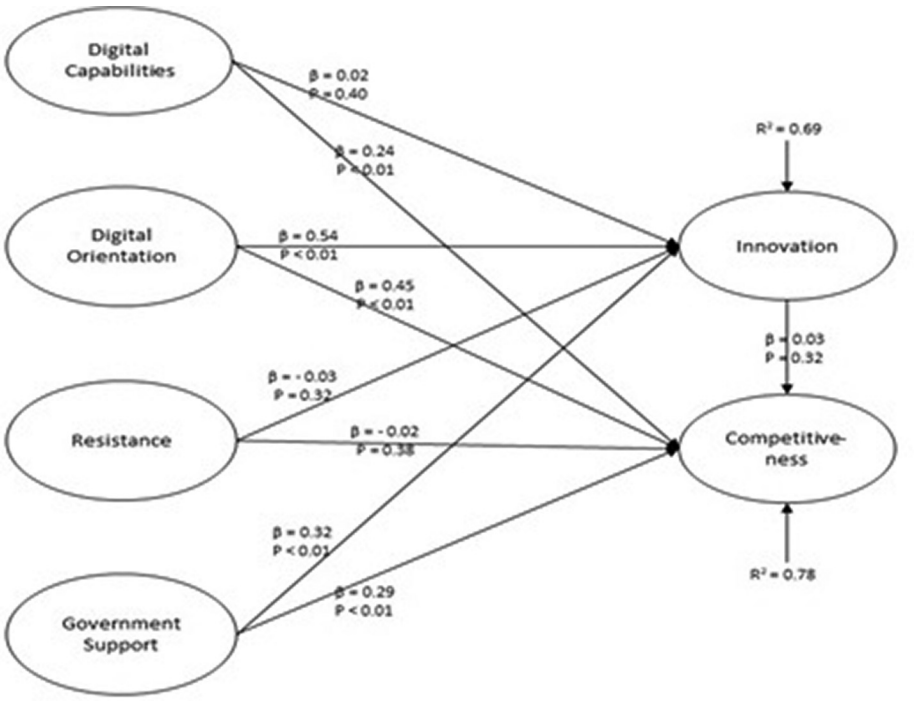

Figure 1.
Structural equation model

competitiveness. Digital innovation does not mediate the influence between digital orientation, government support, digital capability and resistance to competitiveness.

H1 is rejected, which states that digital capability has a positive and significant influence on digital innovation. The positive path coefficient (0.020) indicated that the higher the digital capability mastered by the cooperative management, the greater the digital innovation of the cooperative. However, because the *p*-value coefficient (0.401) was greater than 0.05, the influence was insignificant. This finding is not in line with research from Khin and Ho (2019) that identified digital capability has a positive effect on digital innovation. *H2* is proven supported in this study, which states that digital capability positively influences competitiveness. The path coefficient value on the influence of digital capability on competitiveness was 0.244, and the *p*-value was <0.001 indicates that the higher the digital capability mastered by the cooperative management, the greater the competitiveness of the cooperative. In addition, because the *p*-value coefficient was less than 0.05, the influence was deemed significant. This finding is in line with Yasai *et al.* (2019) research that the digital capability variable has a positive and significant effect on business performance. The use of technology is an extremely vital point in shaping competitiveness in the current and future digital era (Saridakis *et al.*, 2018).

H3 in this study is supported, which states that digital orientation has a positive and significant influence on digital innovation. The path coefficient value on the effect of digital orientation on digital innovation was 0.541, and the *p*-value was <0.001. This positive path coefficient indicated that the higher the digital orientation, the greater the possibilities of digital innovation of the cooperative. The *p*-value coefficient was less than 0.05, indicating that the influence was significant. This finding is accordance with research from Khin and Ho (2019), which states that digital orientation has a positive effect on digital innovation. *H4* is proven supported, stating that digital orientation has a positive and significant influence on competitiveness. The path coefficient value on the influence of digital orientation on competitiveness was 0.458, and the *p*-value was <0.001. The positive path coefficient indicated that the higher the digital orientation of the cooperative management, the greater competitiveness of the cooperative. The *p*-value coefficient was less than 0.05, so it can be concluded that the influence was significant. The use of new technology and online as part of digital orientation will become the company's competitiveness through operational efficiency and the creation of a better customer experience (David Goerziga and Bauernhansl, 2018; Li *et al.*, 2018; Goldfarb and Tucker, 2019). In a dynamic environment, it is necessary to have a global mindset to monitor developments and trends in the industrial world and change according to people's needs (Li *et al.*, 2018).

H5 is rejected, stating that resistance has no significant influence on digital innovation. The path coefficient value on the influence of resistance on digital innovation was −0.038, and the *p*-value was 0.317. The negative path coefficient indicated that the higher the resistance of the cooperative management, the lower the possibilities of digital innovation of the cooperative. However, because the *p*-value coefficient was greater than 0.05, the influence was deemed not significant. This finding is not in line with research from Joachim (2018), which states that resistance affects innovation adoption. *H6* is also rejected, stating that resistance has no significant influence on competitiveness. The path coefficient value on the influence of resistance on competitiveness was −0.026, and the *p*-value was 0.373. The negative path coefficient indicated that the higher the digital capability, the lower the cooperative's competitiveness level. However, because the *p*-value coefficient was greater than 0.05, the influence can be deemed not significant.

H7 in this study is proven supported, which states that government support has a positive and significant influence on digital innovation. The path coefficient value on the

influence of government support on digital innovation was 0.329, and the p-value was <0.001. The positive path coefficient indicated that the greater government support for cooperatives, the greater possibilities of digital innovation of cooperatives. In addition, because the p-value coefficient was smaller than 0.05, the influence was deemed significant. It is in line with Zhang *et al.* (2017) research, which states that institutional support positively affects product and process innovation. The implementation of learning and development activities in cooperatives that focus on understanding the global business environment and digital technology requires attention from all parties involved, especially cooperative employees as the actors and other parties such as the government and non-government organizations (Islam, 2019). Cooperative employees must develop an interest in gaining knowledge and skills related to digital technology. This development activity must focus on skills related to the use of technology and digital media and the importance of understanding external information to seize market opportunities (Quinton *et al.*, 2018). Next, *H8* is supported, which states that government support has a positive and significant influence on competitiveness. The path coefficient value on the influence of government support on competitiveness was 0.291, and the p-value was <0.001. The positive path coefficient indicated that the greater government support for cooperatives, the greater possibilities of cooperative competitiveness. The p-value coefficient was smaller than 0.05, so it can be concluded that the influence was significant. Research supports this from Zhang *et al.* (2017), which states that institutional support positively affects business performance.

H9 is rejected, which states that digital innovation has no significant influence on competitiveness. The path coefficient value on the influence of digital innovation on competitiveness was 0.038, and the p-value was 0.316. The positive path coefficient indicated that the higher the digital innovation, the higher possibilities of digital innovation of cooperative. However, because the p-value coefficient was greater than 0.05, the influence was deemed not significant. It is not in line with Distanont and Khongmalai (2018) research, which states that adoption of innovation positively affects the competitive advantage. This finding does not mean that digital innovation is unimportant in creating the cooperative's competitiveness, but it shows that the current focus of cooperatives is not yet oriented toward product ownership as a result of digital innovation. Indicators of digital innovation are measured by ownership of digital products, the uniqueness of digital applications, and the novelty of digital products (Khin and Ho, 2019). This condition shows that cooperatives are currently making non-digital innovations as the main target for building competitiveness.

H10, *H11*, *H12* and *H13* in this study are rejected. The results show that digital innovation was not a mediating variable the influence of digital capability, digital orientation, resistance and government support on competitiveness. The path coefficient value of the indirect effect of digital capabilities on competitiveness through digital innovation was 0.001 and p-value = 0.495. The p-value coefficient was greater than 0.05, indicating that digital innovation was not a mediating variable for the influence of digital capability on competitiveness. The path coefficient value of the indirect effect of digital orientation on competitiveness through digital innovation was 0.021 and p-value = 0.357. The p-value coefficient was greater than 0.05, indicating that digital innovation was not a mediating variable for the influence of digital orientation on competitiveness. The path coefficient value of the indirect influence of resistance on competitiveness through digital innovation was −0.001 and p-value = 0.49. The p-value coefficient was greater than 0.05, indicating that digital innovation was not a mediating variable for the influence of resistance on competitiveness. The path coefficient value of the indirect influence of government support on competitiveness through digital innovation was 0.013 and p-value =

0.412. The *p*-value coefficient was greater than 0.05, indicating that digital innovation was not a mediating variable for the effect of government support on competitiveness. In this study, digital innovation was not a mediating variable for the effect of digital capability, digital orientation, resistance and government support on competitiveness.

Based on the result of measurement model evaluation indicated that the research model has good validity and reliability. Meanwhile, based on the structural model evaluation, it shows that there are five supported hypotheses. Most of the rejected hypotheses are more about digital innovation variables as exogenous, moderating and endogenous variables. This finding shows that the current competitive conditions in the cooperative-related industry in West Java, Indonesia, are not yet at the level of innovation and digitalization. Digital innovation has not become a necessity and the primary choice to win the business competition in cooperatives. Non-digital innovation is still the main goal to support the development of cooperative competitiveness so far. The statement of the Deputy for Cooperatives and SMEs, Rulli Nuryanto, also reinforced this situation who stated that the development of digital cooperatives had only emerged as the government's top priority in 2021 (Anggraeni, 2021). Therefore, digital innovation remains very important in adapting to the era of industrial revolution 4.0 to shape society 5.0.

6. Practical implications

Cooperatives are one of the institutions that are expected to play a major role in creating the development of economic society activities through an approach that allows extensive community involvement through technology utilization. Based on the results of structural model evaluation, to encourage the competitiveness of cooperatives in West Java, it can be focused on developing factors that have a significant influence, namely, digital capabilities, digital orientation and government support.

Cooperatives' increasing digital capabilities require continuous assistance and systematic, structured and comprehensive development activities to optimize competence. Continuous education and mentoring require collaboration between various parties, namely, the government, academia, the community, the media, and the cooperative itself. The development of the interest of cooperative employees to acquire knowledge and skills related to digital technology can be done by using internal resources in the cooperative industry in the form of regular brainstorming activities between cooperatives that have advanced in digitization and cooperatives that still need assistance. Local governments need to design a reward system intended for cooperatives with the best tutoring, the most inspiring cooperatives, cooperatives with positive growth trends and other rewards to maintain motivation in the learning process.

In building a digital orientation, every cooperative needs to initiate a program to establish open communication for all employees to provide fresh and creative ideas. The openness and willingness of employees to receive information from each party will accelerate readiness to respond to changes. Leaders should initiate information disclosure by eliminating unnecessary bureaucracy to have proper access to creative ideas. This transformation is carried out to trigger the motivation of each cooperative and its employees to continue to innovate.

The government is the main party responsible for building a digital ecosystem, including the cooperative industry. The media, society and educational institutions must also play an active role in creating this ecosystem. By collaborating with various parties, the West Java Cooperatives and SMEs Office can provide a digital platform that serves as a forum for cooperatives to interact, display the profiles and products of each cooperative and integrate applications that are utilized by cooperatives in West Java. A consultant will be responsible

for discussing issues raised by the cooperative through this digital platform. This platform can also be a medium of information about government activities or programs that cooperatives can participate in, including developing business partnerships through collaboration with local, national and international institutions. Partnership development is one of the keys to growth opportunities to increase cooperative capabilities by transferring technology, technical and managerial skills and other resources that enable cooperatives to transform into solid business entities. The government must also monitor cooperative activities using the provided platform and reward the most active cooperatives.

Provision of information and telecommunications network systems and support for developing a culture of innovation through internet technology is also needed to facilitate the use of digital media. The central government needs to coordinate with local governments regarding the provision, maintenance and arrangement of data communication network hardware and software. In addition, the government is expected to ensure the use of intranet development services, internet access in their respective regions and recovery of hardware and software operational disruptions in data communication networks. This government support is critical because many places are not covered by communication signals, both analog and digital communications, in West Java. If this problem is not immediately addressed, it will significantly hamper the digitization of an area, including the development of cooperatives in that location.

7. Conclusion

Several indicators served as the main priorities to be developed in building competitiveness in the Industrial Revolution 4.0. The variables comprising digital capability, digital orientation and government support significantly influence the competitiveness of cooperatives. Meanwhile, the variables of resistance and digital innovation have an insignificant influence in building competitiveness due to the current competitive environment of cooperatives, which is still dominated by non-digital innovations. All parties must be aware that the readiness of cooperative human resources regarding the development of cooperative management still requires efforts to improve. In examining the current condition of competitiveness, efforts are required to strengthen the commitment of all interested parties to carry out a collective movement establishing a force, particularly in improving the competitiveness of cooperatives.

The limitations of this research include, this study only focuses on cooperatives in West Java, which is the province with the second largest number of cooperatives in Indonesia. Further study is expected to expand the scope of research to cover all regions of Indonesia. In addition, this study still focuses on quantitative analysis. Therefore, further study is expected to combine with qualitative analysis involving various parties, namely, the Ministry of Cooperatives and Small and Medium Enterprises, academics, and the media, to formulate more detailed policies in the management of cooperatives in Indonesia.

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