Partnership Model Between MSMEs and Industrial Companies in West Java to Improve MSME Performance Through Digital Competency, Sustainable Value Creation, Community Involvement and Development

Karlina Merliana
Magister of Industrial Engineering
Telkom University
Bandung, Indonesia
karlinamerliana@student.telkomuniversity.ac.id

Luciana Andrawina
Magister of Industrial Engineering
Telkom University
Bandung, Indonesia
luciana@telkomuniversity.ac.id

Iphov Kumala Sriwana
Magister of Industrial Engineering
Telkom University
Bandung, Indonesia
iphovkumala@telkomuniversity.ac.id

Abstract — Micro, Small, and Medium Enterprises or MSMEs are crucial to Indonesia's economy, contributing over 50% to the national GDP, absorbing 97% of the workforce, and demonstrating significant potential for growth through partnership programs, digital transformation, and sustainable value creation, despite challenges such as fluctuating economic growth and low levels of collaboration with large enterprises. This study aims to design an effective partnership program between industrial companies and MSMEs in West Java. Focusing on MSMEs, this study examines how the variables of digital competence, sustainable value creation and community involvement and development are able to influence partnership programs which ultimately have an impact on MSMEs performance. The population in this study were MSMEs business actors in West Java who had collaborated with industrial companies. While the sampling technique used purposive sampling where the sample used in this study was 97 MSMEs business actors. Data analysis used Smart PLS 4 based Partial Least Square. Based on the results of the direct influence analysis, it shows that Digital Competence has a significant effect on community involvement and development; community involvement and development have a significant effect on partnership programs; sustainable value creation has a significant effect on partnership programs; and Partnership Programs have a significant effect on SME Performance. While the results of the indirect influence analysis show that digital competence has a significant effect on community involvement and development and partnership programs.

I. INTRODUCTION

Micro, Small, and Medium Enterprises or MSMEs play a critical role in driving economic growth, contributing over 50% to Indonesia's GDP and absorbing 97% of the workforce [1]. These enterprises enhance local economies, provide employment opportunities, and foster business skills development. Indonesia's economic growth rate from 1986 to 2015 averaged 5.1%, with a projection to grow up to 5.7% annually by 2045 [2]. Despite fluctuations and challenges like the COVID-19 pandemic, MSMEs remain the largest contributors to GDP [3] [4]. West Java, as the second- largest GDP contributor, mirrors national economic trends. The growth rate of West Java's GRDP in 2023 decreased due to the weakening of the transportation equipment and metal processing manufacturing sectors [5]. However, MSMEs still have the highest contribution to the GRDP rate in West Java because their contribution reached 57.14% [6]. The high contribution of MSMEs to economic growth in West Java and also in Indonesia requires a strategy that can help improve the performance of MSMEs. The partnership program directly has a significant influence on the performance of MSMEs [7]. West Java has implemented regional regulations to support MSMEs, emphasizing partnerships with cooperatives and large enterprises. Although MSMEs contribute significantly to economic development, challenges persist in achieving growth targets and fostering effective partnerships. These partnerships aim to strengthen business networks and improve production quality, capacity, and sustainability. West Java's SMEs, despite their prevalence, show a low rate of partnerships, with only 11% engaging in collaborations if compared with Central Java which have 13%, West Java actually has a greater number of MSMEs than Central Java [8].

Partnership programs not only enhance MSME performance but also serve as an implementation of corporate social responsibility, aimed at contributing to sustainable development as outlined in the 2030 Sustainable Development Goals (SDGs). Examples include PT Jababeka Infrastruktur's skill training programs, PT Adaro Indonesia Tbk's sustainability partnerships, and PT Indominco Mandiri's seaweed farming initiatives. Government-backed corporate social responsibility can further increase MSME competitiveness and performance[10]. Of the seven main or core subjects of social responsibility, this research will only focus on one of the core subjects of social responsibility, namely community involvement and development in

accordance with research which states that community involvement has a positive impact on development [11]. The level of community engagement, communication and partners can improve the sustainability performance and maturity of MSMEs [12]. The low percentage of partnerships between MSMEs and other companies in West Java are challenges for the government to develop partnership programs that can be implemented properly to improve the performance of MSMEs. The implementation of corporate social responsibility (CSR) programs in West Java, as reported by the Regional Development Planning Agency (Bappeda) of West Java Province, reveals that partnership-based CSR activities supporting sustainable programs with MSMEs remain relatively low compared to donation-based CSR activities. According to the 2022 report, partnership programs accounted for 16% of non-donation CSR activities in 2021 and increased to 45% in 2022. However, this figure is still below the desired target, as interviews with Bappeda representatives indicate a greater emphasis on partnership programs with MSMEs over donation-based initiatives to promote sustainable development. Donation- based CSR primarily involved short-term assistance, such as oxygen supplies during the COVID-19 pandemic, food aid, community event funding, and other non-sustainable economic growth measures. In contrast, partnership-based CSR focuses on long-term economic growth by supporting MSMEs through initiatives such as access to financing, training and mentoring, infrastructure support, licensing, certification, standardization assistance, and market access facilitation.

Apart from government assistance, MSMEs must also be able to improve their abilities so that partnership programs with other businesses can take place properly. Digital competence can have a significant influence not only on partnership programs but on the performance of MSMEs [7]. Digital competencies are the knowledge and skills needed to gain an advantage in areas of business operations that can be improved through digital solutions [13]. Apart from digital competence, there are other factors that can improve partnership programs, namely sustainable value creation [14]. Sustainable value creation involves integrating environmental, social, and economic aspects into a business or organization to create long-term value [15]. Sustainable value creation has become an unavoidable challenge for businesses and society as it requires a change in mindset and commitment to balance economic, social and environmental aspects in decision-making. The process of sustainable value creation involves collaboration between stakeholders and internal and external integration efforts in the company's operational value chain [16].

The state of the art in this research serves as an initial step to highlight its novelty by mapping the latest advancements and achievements in the field.

of problems through literature reviews and initial data collection, including interviews to understand Novelty here is defined as the absence of other researchers presenting findings similar to this study, as evidenced by an extensive review of published articles and research databases [16]. This research focuses on designing a partnership program between industrial companies and MSMEs to enhance MSME performance in West Java by elaborating on variables previously used in related studies, namely digital competence and sustainable value creation. While many studies treat partnership programs as reflective implementations of corporate social responsibility (CSR), no research has been found that qualitatively examines the relationship between partnership programs and CSR, particularly in community engagement and development—a core CSR element that can improve MSME competitiveness [17]. Moreover, existing studies have not directly analysed whether community engagement and development impact MSME performance or serve as mediators in the relationship between partnership programs and MSME performance. This study also emphasizes the critical role of sustainable value creation in improving MSME performance through partnership programs. Another distinguishing feature is its focus on MSMEs with prior partnership experience with industrial companies, which sets this research apart as its state of the art.

II. METHOD

Based on previous research, it is found that partnership program can affect the performance of MSMEs [7] and sustainable value creation affects partnership program [14]. Both factors affect partnership program and the performance of MSMEs. In addition to partnership program, it is important for MSMEs to have digital competencies and sustainable value creation to influence partnership program and MSME performance [7] [14]. Partnership program often a form of corporate social responsibility (CSR), are particularly effective in improving MSME performance [17]. CSR programs, such as those that engage and develop communities, have been recognized as key to fostering partnerships between MSMEs and larger enterprises, enhancing competitiveness [18]. However, most studies have yet to focus specifically on industrial-company partnerships with MSMEs or quantitatively examine the role of community engagement in improving MSMEs performance. This study explores the optimal partnership model between industrial companies and MSMEs in West Java, a region with the highest number of MSMEs and a robust industrial sector. It introduces community engagement and development as mediating variables between partnerships and MSMEs performance while also examining the influence of digital competencies and sustainable value creation on partnerships. This research aims to identify the most significant factors contributing to the success of partnership programs in improving MSMEs performance. The findings will guide the West Java Provincial Government in fostering sustainable economic practices and implementing effective CSR strategies within industrial companies. Using Structural Equation Modeling (SEM), this study builds a conceptual model based on survey data from SMEs to evaluate the relationships and effects of the observed variables.

The research begins with the identification issues between SMEs and industrial companies. This phase establishes the research objectives and formulates accurate problems based on collected data. Subsequently, the study elaborates on relevant concepts and variables, enhances the literature review, formulates hypotheses, and develops a conceptual research model. Operational variables are then identified, questionnaires are designed, and experts are selected as respondents to provide insights into solving the research problem. Data processing involves analyzing respondent profiles, validating and testing data using PLS-SEM, and

refining the structural equation model. The analysis and discussion phase evaluates the research model and hypotheses with input from experts to develop partnership programs based on significant variables. Finally, conclusions are drawn to answer the research objectives, with recommendations provided for future research and practical insights for relevant stakeholders. The study focuses on active SMEs in West Java as the population, with purposive sampling used to select SMEs that meet specific criteria: having operated for at least one year, having collaborated with industrial companies, and meeting SME size definitions of fewer than 99 employees, annual revenue below 50 billion IDR, and capital below 10 billion IDR.

III. RESULT AND DISCUSSION

A. Identification Variable and Indicator

Based on the results of brainstorming with government parties, MSMEs, industrial company and conducting a literature study process on research variables, the indicators that make up each variable can be summarized as in the Table 1.

B. Formation of Structural Model

Digital competence is a concept that has spurred various research fields, particularly in relation to advancements in information and communication technology [28]. Digital skills offer significant operational benefits for SMEs [13]. Digital competence indicators include networking, social media, customer relationship management, communication, financial accounting, inventory management, team management, time management, and project management [29]. Similarly, identifies indicators such as networking, social media, web design, communication, business applications, e-commerce, and management of inventory, teams, and projects [7]. SMEs must enhance their digital competence, as higher levels are associated with improved performance [7]. Digital competence also significantly impacts partnership programs and SME performance [7]. This study aims to reconfirm whether digital competence has a significant relationship with partnership programs among SMEs in West Java. H1: Digital competence significantly influences partnership programs.

Sustainable value creation can strengthen partnership programs [24]. It comprises five factors introduced by [30] and further utilized by [24] to examine their influence on partnership programs and SME performance. In this study, these factors serve as dimensions for measurement, including product value, human resources value, technological equipment value, process value, and organization management value. These prior studies form the basis for the current research hypothesis. H2: Sustainable value creation significantly influences partnership programs.

Corporate social responsibility (CSR) can enhance performance not only directly but also as a mediating variable. Implementing CSR initiates improved corporate performance by increasing customer trust and loyalty toward the brand, which, in turn, boosts performance [9]. Community involvement and development are core elements of CSR [31]. Partnership programs, as activities carried out under CSR implementation, align with this principle. Based on these insights, the following research hypothesis is proposed**:** H3: Partnership programs significantly influence community involvement and development.

Previous studies have shown that community involvement and development significantly influence the competitiveness of SMEs [32]. Partnership programs also have a significant impact on competitiveness and performance [7]. Building on these findings, understanding the relationship between digital competence and partnership programs requires first measuring the link between corporate social responsibility and partnership programs. Based on this, the following hypothesis is proposed: H4: Community involvement and development significantly influence SME performance.

Partnership programs significantly influence SME performance [7]. As an implementation of corporate social responsibility, partnership programs positively correlate with SME performance [20]. Additionally, community involvement and development can enhance SME competitiveness [32]. Based on this approach, the following hypothesis is proposed: H5: Partnership programs influence SME performance, with community involvement and development acting as a mediating variable.

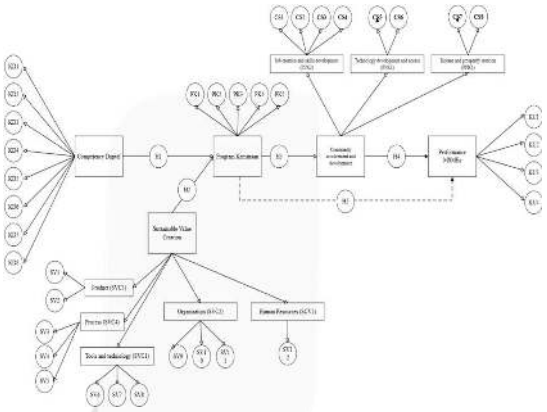

FIGURE 1
Conceptual

C. PLS-SEM Structural Model Testing

Stage 1: Measurement Model Test (Outer Model)

The measurement of the outer model is conducted to examine the relationship between each indicator and its dimension to determine whether it is reliable and valid. This study employs a reflective measurement model, where variables such as digital competence, sustainable value creation, partnership programs, community involvement and development, and SME performance are measured reflectively. The research model consists of both first-order and second-order constructs. The evaluation of the reflective measurement model includes indicator reliability, internal consistency, convergent validity, and discriminant validity [33]. The first step in evaluating the reflective measurement model involves examining the external loadings of the indicators. High external loadings on a construct suggest that the related indicators share significant commonality, which is reflected in the construct. External loadings, also referred to as indicator reliability, are assessed using outer loading

values. Indicators with outer loading values of 0.7 or higher are considered reliable. Indicators with values below 0.4 are deemed unreliable, while those between 0.4 and 0.7 require further analysis. In such cases, the Average Variance Extracted (AVE) is evaluated; if the AVE exceeds 0.5, the indicator remains reliable, but if it is below 0.5, the indicator is deemed unusable [33]. The second step in testing reliability involves assessing internal consistency through composite reliability (CR) and AVE. CR value above 0.7 and an AVE value above 0.5 indicate good reliability. After reliability testing, validity testing is conducted, focusing on convergent and discriminant validity. Convergent validity is examined using the AVE, which should exceed 0.5. This indicates that the construct explains more than half the variance of its indicators, following the same logic applied to indictor reliability. Discriminant validity ensures that constructs or variables do not overlap meaning that indicators of a variable are not highly correlated with indicators of different constructs. Discriminant validity is evaluated through cross-loading values, where an indicator is valid if its cross-loading is highest within its variable. Additionally, the Fornell-Larcker criterion can be applied for further validation. This research uses the disjoint two-stage which estimation method involves two stages. In Stage 1**,** each dimension of religiosity is linked to motivation and satisfaction variables. The measurement model at the first-order level is evaluated, focusing on loading factors, composite reliability (CR), average variance extracted (AVE), and discriminant validity. The latent variable scores (LVS) for religiosity and motivation dimensions are then saved. In Stage 2, an Excel file is created by merging the LVS data for religiosity and motivation with satisfaction measurement items. A second-order model is run, evaluating the measurement model for the religiosity, motivation, and satisfaction variables, checking their loading factors, CR, and AVE. In the second order, the focus of measurement is on variables. At this stage, latent variables grouped into a dimension will be positioned as indicators of that dimension. Latent variables Income and prosperity creation, job creation and skills development, technology development and access will be used as indicators for the variable Community involvement and development. While the latent variables of organization, equipment or technology, products, processes and human resources will be used as indicators for the variable sustainable value creation as a Figure 3 and Table 2 is the test result after conducting the second iteration by removing the indicators: KD7, KD8, CS4 after conducting validity and reliability testing on the first order.

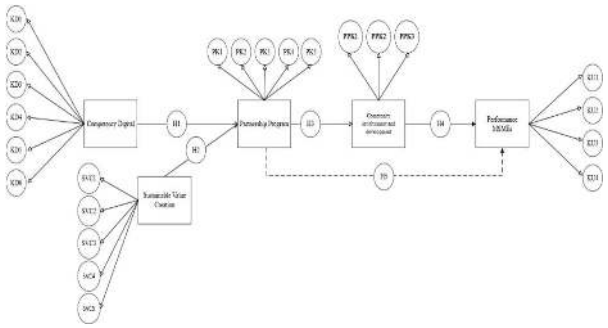

FIGURE 2
Second Order PLS-SEM Model

The reliability measurement results for the second-order model are presented in Table 4, reflecting indicator reliability and internal consistency. The data show that the performance variable of SMEs is measured by four indicators with outer loadings ranging from 0.793 to 0.890, indicating strong correlation with the SME performance variable. The reliability of the SME performance variable is acceptable, with a composite reliability of 0.902 and a Cronbach's alpha of 0.856, both above 0.70, and convergent validity indicated by an AVE of 0.668, which is greater than 0.50. Among the five valid measurement items, the performance of SMEs is most strongly reflected by KU3 with an outer loading of 0.89, indicating increased productivity. The variable of Community Involvement and Development is measured by three indicators with outer loadings ranging from 0.848 to 0.936, showing strong correlation with the Community Involvement and Development variable. The reliability of this variable is acceptable, with a composite reliability of 0.928, a Cronbach's alpha of 0.885, both above 0.70, and convergent validity indicated by an AVE of 0.12, which is greater than 0.50. Among the three valid measurements, Community Involvement and Development is most strongly reflected by PPK1 with an outer loading of 0.89, indicating the creation of development and prosperity. The Partnership Program variable is measured by five indicators with outer loadings ranging from 0.732 to 0.847, showing strong correlation with the Partnership Program variable. The reliability of the Partnership Program variable is acceptable, with a composite reliability of 0.889, a Cronbach's alpha of 0.595, above 0.70, and convergent validity indicated by an AVE of 0.642, which is greater than 0.50. Among the five valid measurements, the Partnership Program is most strongly reflected by PK5 with an outer loading of 0.847, indicating innovation and technology transfer. In the Digital Competence variable, there is an indicator with an outer loading below 0.7 but still above 0.4. The CR value is above 0.899, and the AVE is 0.642, both acceptable, indicating that the PK1 indicator, which relates to marketing areas, has the weakest correlation compared to other indicators, particularly with KD6, which is e-commerce, the strongest indicator reflecting digital competence. For the Sustainable Value Creation variable, five indicators with outer loadings ranging from 0.763 to 0.895 show strong correlation with the Sustainable Value Creation variable. The reliability of this variable is acceptable, with a composite reliability of 0.925, a Cronbach's alpha of 0.898, both above 0.70, and convergent validity indicated by an AVE of 0.713, which is greater than 0.50. After conducting the reliability test, the next step is to perform validity testing through discriminant validity. As shown in Tabel 3 which presents the cross-loading measurements, and in Table 4 which shows the Fornell-Larcker criterion results, these findings indicate that the discriminant validity of the five variables in this study is met. This is because the square root of the AVE is greater than the correlations between variables.

Stage 2: Structural Model Evaluation (Inner Model)

The structural model testing is conducted based on data that has met the reliability and validity criteria. Following the second-order testing, the path diagram of the research model is obtained, as shown in Table 5 after which the structural model testing is performed. The evaluation of the structural model is related to hypothesis testing of the effects between the research variables

The main objective of this study is to design a partnership program formulation with industrial companies based on the most influential variables to improve the performance of SMEs in West Java. To achieve this goal, it is necessary to first analyse the relationships between these variables based on the hypotheses that have been formulated. Based on the test data and evaluation using SmartPLS, as shown in Table 5.

Of the five hypotheses, one hypothesis, H4, was rejected because the t-statistic value and p-value were not significant, meaning that community involvement and development do not significantly affect SME performance, although they have a positive relevance. This also affects the mediation relationship between the partnership program and SME performance, while the direct relationship between the partnership program and SME performance is significant. The model testing results can be seen in Figure 4

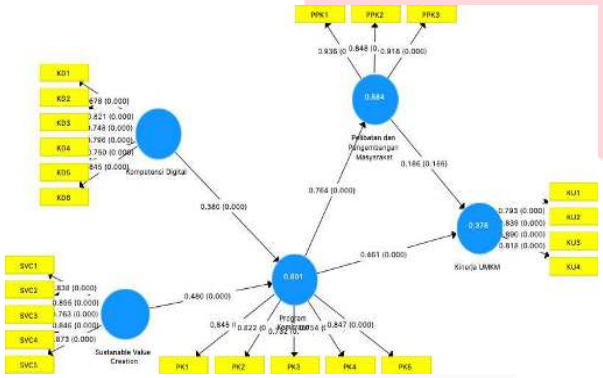

FIGURE 3
Significance and Relevance of Research Model Figures

D. Assessment of Hypothesis Decisions

H1: Digital competence significantly influences partnership programs

Enhancing digital competence is a critical strategy for determining the direction and sustainability of MSMEs, as digital transformation has a positive correlation with MSME performance, with digital technology being a key influencing factor [35]. This study confirms a 38% relationship between digital competence and partnership programs, with e-commerce emerging as the most impactful indicator, as reflected in Table 4.15. The highest outer loading score of 0.845 indicates that MSME digital competence is best represented by the ability to use e-commerce to build community access with partners. E-commerce extends beyond online buying and selling, encompassing business development, marketing, sales, delivery, customer service, and payment processes, supported by global partner networks [35]. To optimize MSMEs' use of digital technology and e-commerce, the government must ensure accessibility to fast and stable digital networks, particularly in rural and underdeveloped areas. Collaborative training programs with technology companies, industries, or educational institutions can enhance e-commerce skills, while the development of a dedicated national e-commerce platform for MSMEs can facilitate market access. Additionally, robust data protection and secure digital transactions are essential to fostering trust among MSMEs and consumers.

H2: Sustainable value creation significantly influences partnership programs

According to [13] sustainable value creation (SVC), derived from sustainable manufacturing, significantly influences partnership programs. This study confirms that SVC impacts partnership programs by 48%, with "organization" being the most critical indicator. The ability to create sustainable value through responsive problem-solving by employees is identified as a key driver of SVC. MSMEs with strong organizational responsiveness to problem-solving are better positioned to enhance sustainable value creation, thereby positively influencing partnership programs. Integrating partnership strategies into manufacturing activities provides substantial benefits for MSMEs' sustainability and competitiveness. Enhancing managerial awareness to create sustainable value and fostering collaborations with stakeholders is crucial for MSMEs to achieve competitive advantages. Government support is also essential, including policies that encourage MSMEs to embed SVC principles into their operations and training programs on SVC concepts. Additionally, MSMEs must be motivated to prioritize sustainable value creation, as its impact on partnership programs is more significant than digital competence.

H3: Partnership programs significantly influence community involvement and development

Several studies highlight that partnership programs are part of corporate social responsibility (CSR) initiatives, aligning with SNI:ISO standards that emphasize maximizing contributions to sustainable development through social responsibility. A core element of CSR is community engagement and development. This study confirms a significant 76.4% influence of partnership programs on community engagement and development, with the most reflective indicator being programs that sustainably enhance the use of technology by both parties. Technology adoption in MSMEs should incorporate dynamic process perspectives, capturing the characteristics of emerging technologies while considering MSME-specific traits [37]. Supporting MSMEs with frameworks that facilitate technology adoption enables them to compete more effectively in digital transformation. Industrial companies and MSMEs can collaborate on technology-based initiatives, such as selling underutilized but functional machinery to MSMEs in related sectors. Such programs benefit both industrial companies, by optimizing asset use, and MSMEs, by boosting productivity and competitiveness.

H4: Community involvement and development significantly influence SME performance

Community engagement and development show a low relevance to MSME performance, with an influence of only 18.6%, rendering the impact insignificant. This may stem from the perception that community engagement programs do not significantly enhance MSME performance. While corporate social responsibility (CSR) initiatives increasingly broaden in scope, their effectiveness is often not felt by the community [38]. In West Java, CSR implementation predominantly focuses on donations rather than economic empowerment. The most reflective aspect of community engagement and development is income and prosperity

creation, while the key indicator at the operational level is assistance with business licensing. To address these gaps, local governments should design CSR programs aimed at empowering MSMEs economically, such as through partnerships to facilitate business licensing and legal compliance. Collaborating with industrial companies, governments can enable these companies to offer advisory services to MSMEs, helping them secure legal status and access formal funding. For industrial firms, integrating sustainability into CSR strategies by actively supporting MSME development could enhance their impact. Regular evaluations of CSR programs should be conducted to ensure their alignment with MSME performance improvement. MSMEs, in turn, must proactively engage in available CSR programs, leveraging community networks built through these initiatives to foster collaborations that enhance their business outcomes. Active participation could make the benefits of CSR initiatives more tangible and impactful.

H5: Partnership programs influence SME performance, with community involvement and development acting as a mediating variable

This study found that community engagement and development as a mediating variable had an insignificant impact on the relationship between partnership programs and MSME performance, with an influence of only 14.2%, which is too low to provide meaningful significance. In contrast, the direct relationship between partnership programs and MSME performance confirmed previous research, showing a significant impact of 46.1%. Community engagement and development appear to reduce the significance of this relationship, as such initiatives often focus on enhancing corporate image and fulfilling social responsibility rather than directly benefiting MSME performance. Many CSR activities in West Java are donation-based rather than economically empowering, and the lack of preparedness among communities for sustained engagement further limits the impact. To enhance the mediating effect of community engagement, companies could focus on assisting MSMEs with legal compliance, such as business licensing, which facilitates access to financial resources, markets, and government support. This aligns with Sustainable Development Goal (SDG) 8.3.1(a), which emphasizes MSME access to financial services. Compliance with regulations is also crucial for MSME success, ensuring operational sustainability and long-term growth. By aligning CSR activities with economic empowerment goals, both corporations and MSMEs can achieve greater mutual benefits.

The study aimed to design a partnership program based on the most influential variables to enhance MSME performance in West Java. To ensure the practical implementation of the analysis, specific managerial implications were proposed, including a structured partnership program between MSMEs and industrial companies in West Java. The proposed design utilized the Interpretative Structural Modelling (ISM) method, a strategic planning technique that provides a comprehensive understanding of system conditions and the relevance of attributes to establish a hierarchy of importance. This approach enables the development of an effective framework to guide the collaboration, ensuring its alignment with the identified priorities and enhancing the overall impact on MSME performance. In Stage 1, the partnership program is determined based on the results of structural model analysis. The findings reveal that the most influential variable for the partnership program is sustainable value creation (48%), with employee responsiveness in problem-solving being a key indicator, while the most relevant partnership indicator is the improvement of technology usage between the industrial companies and MSMEs. Therefore, the designed partnership program should focus on leveraging technology and enhancing sustainable value creation to address MSMEs' challenges, incorporating key elements such as constraints, stakeholders, benchmarks, necessary activities, and involved institutions through expert interviews and literature review. Stage 2 of the Interpretative Structural Modelling (ISM) process involves several steps, beginning with the creation of the Structural Self-Interaction Matrix (SSIM) based on interviews and questionnaires, which identifies the relationships between sub criteria. Next, a Reachability Matrix (RM) is created by converting the SSIM symbols into binary values, followed by calculating the driver power and dependence values. Afterward, the Conical Matrix is used to rank sub criteria based on their driven power, leading to the development of the ISM model, where sub criteria with the highest driven power are placed at the highest level. The MICMAC method then classifies elements based on their driven power and dependence, categorizing them into quadrants: independent, linkage, dependence, and autonomous. This classification helps determine key stakeholders and actions needed to design a partnership program that improves MSMEs' sustainable value creation and technology utilization.

The classification of elements in the ISM-MICMAC analysis is grouped into four quadrants. Autonomous elements include stakeholders like community groups, challenges such as low internet and technology access, and programs like communication management plans. Dependent elements rely heavily on others, such as MSME stakeholders, barriers like insufficient digital tools, and metrics like increased credit value (in rupiah). Linkage elements exhibit strong interconnections, including industrial companies, challenges like lack of motivation and competency, and programs like risk and quality management plans. Independent elements have high driving power, with key stakeholders being provincial and municipal governments and agencies like planning boards and cooperatives, emphasizing the need for sustainable partnerships and comprehensive monitoring systems as shown on Table 6.

IV. CONCLUSION

This study concludes that digital competence and sustainable value creation significantly influence partnership programs, with sustainable value creation showing a higher impact at 48%, compared to 38% for digital competence. Partnership programs significantly affect MSME performance, contributing 46.1% directly to improvements. However, when mediated by community engagement and development, the influence of partnership programs on MSME performance diminishes to 14.2%. Community engagement and development alone have an insignificant impact on MSME performance, contributing only 18.5%,

suggesting the need for direct programmatic interventions to address MSME challenges effectively.

Given the findings, partnership programs should prioritize enhancing sustainable value creation through technology utilization to resolve MSME issues. The primary actors in designing and implementing these programs are provincial and city governments, represented by the Regional Development Planning, with oversight by the Department of Industry and Trade, the Department of Cooperatives and Small Enterprises, and relevant associations. These programs should focus on leveraging sustainable practices and fostering collaboration to drive significant improvements in MSME performance and community development outcomes.

The study emphasizes that corporate social responsibility (CSR) programs in West Java should prioritize empowering MSMEs through economic initiatives beyond mere donations, focusing on business licensing and legal compliance to strengthen market positioning and access to formal financing. Industrial companies must integrate sustainability into community engagement and development efforts, ensuring periodic evaluation of CSR programs to enhance their impact on MSME performance. MSMEs are encouraged to actively leverage CSR programs to foster collaboration with other businesses and improve their operations. CSR-based partnership programs should align with Indonesia's Sustainable Development Goals (SDGs), particularly in expanding MSMEs' access to financial services. Additionally, the government should facilitate policies promoting sustainable value creation within MSME operations, including training and organizational problem-solving. MSMEs should adopt dynamic technological processes to harness new technologies and boost productivity, with industrial companies contributing by offering functional machinery to MSMEs, benefiting both parties. These measures aim to accelerate technology adoption and enhance MSME competitiveness in the digital transformation era.

TABLE 1
Variables and Item Measurements

Variable	Dimension	Symbol	Indicator	Reference
MSMEs performance		KU1	My company/where I work is able to increase revenue	[7] [19] [20] [21]
		KU2	My company/where I work is able to increase the number of customers	
		KU3	My company/where I work is able to increase productivity	
		KU4	My company/where I work is able to increase employee knowledge	
Partnership Program		PK1	The partnership programme between my company/the company I work for and industrial companies can improve the marketing areas of both parties on a sustainable basis.	[22] [23] [7] [14]
		PK2	The partnership programme between my company/the company I work for and industrial companies can improve human resources on both sides in a sustainable manner	
		PK3	The partnership programme between my company/the company I work for and industrial companies can improve access to capital on both sides on a sustainable basis	
		PK4	The partnership programme between my company/the company I work for and industrial companies can improve organisational management on both sides on a sustainable basis.	
		PK5	The partnership programme between my company/the company I work for and industrial companies can improve the use of technology on both sides on a sustainable basis.	
Community involvement and development	Job creation and skills development (PPK2)	CS1	There are industrial companies that have a work contract with your company/business (not a temporary contract)	SNI:ISO 26000
		CS2	There are industrial companies that outsource to your company/business to run the operations of the industrial company	
		CS3	There are industrial companies that help cooperate with other organizations such as the government, institutions, universities, research laboratories or other companies with your company in the context of skills development programs in your company/business	
		CS4	There are industrial companies that help your company/business in opening up employment opportunities	
	Technology development and access (PPK3)	CS5	There are industrial companies that assist in the development of knowledge and technology in your company/business	
		CS6	There are companies that transfer technology to your company/business so that it can contribute to the development of your company/business	
	Income and prosperity creation (PPK1)	CS7	There are industrial companies that prioritize local products and services from your company/business as their supply chain	
		CS8	There are industrial companies that help your company/business in assisting with licensing or other legal frameworks	
Sustainable Value Creation	Product (SVC3)	SV1	My company/place of work is able to create sustainable value in product quality	[14] [24] [16] [25]
		SV2	My company/place of work is able to create sustainable value according to national standards	
	Process (SVC4)	SV3	My company/place of work is able to create sustainable value in production process stability	
		SV4	My company/place of work is able to create sustainable value in production time efficiency	
	Tools and technology	SV5	My company/place of work is able to create sustainable value in environmentally friendly production processes	
		SV6	My company/place of work is able to create sustainable value through product innovation	

	(SVC1)	SV7	My company/place of work is able to create sustainable value by minimizing accidents	
		SV8	My company/place of work is able to create sustainable value through automation	
	Organization (SVC2)	SV9	My company/place of work is able to create sustainable value through a structured organization	
		SV10	My company/place of work is able to create sustainable value through the involvement of all stakeholders in problem solving and decision making	
		SV11	My company/place of work is able to create sustainable value through employees who are responsive to problem solving	
	Human resources (SVC5)	SV12	My company/place of work is able to create sustainable value through the role and employees	
Digital Competency		KD1	My company/place of work is able to use internet network to build community access with partners	[7] [13] [24] [25]
		KD2	My company/place of work is able to use social media to build community access with partners	
		KD3	My company/place of work is able to use web design to build community access with partners	
		KD4	My company/place of work is able to use business applications to integrate business processes	
		KD5	My company/place of work is able to use inventory management to integrate business processes	
		KD6	My company/place of work is able to use e-commerce to build community access with partners	
		KD7	My company/place of work is able to use team and time management to integrate business processes	
		KD8	My company/place of work is able to use project management to integrate business processes	

TABLE 2
Measurement results of indicator reliability and internal consistency

Variabel	Indicator	Outer Loader	Cronbach's Alpha	Composite Reliability	AVE	Remark
Performance MSMEs	KU1	0,793	0,856	0,902	0,698	Reliable
	KU2	0,839				Reliable
	KU3	0,890				Reliable
	KU4	0,818				Reliable
Community involvement and development	PPK1	0,936	0,885	0,928	0,812	Reliable
	PPK2	0,848				Reliable
	PPK3	0,918				Reliable
Partnership Program	PK1	0,845	0,859	0,899	0,642	Reliable
	PK2	0,822				Reliable
	PK3	0,732				Reliable
	PK4	0,754				Reliable
	PK5	0,847				Reliable
Competency Digital	KD1	0,678*	0,867	0,900	0,600	Reliable
	KD2	0,821				Reliable
	KD3	0,748				Reliable
	KD4	0,796				Reliable
	KD5	0,750				Reliable
	KD6	0,845				Reliable
Sustainable Value Creation	SVC1	0,838	0,898	0,925	0,713	Reliable
	SVC2	0,895				Reliable
	SVC3	0,763				Reliable
	SVC4	0,846				Reliable

SVC5	0,873	Reliable

TABLE 3
Cross Loading Measurement Results

	Performance MSMEs	Digital Competency	Community involvement and development	Partnership Program	Sustainable Value Creation	Max	Remark
KD1	0,342	**0,678**	0,320	0,450	0,458	**0,678**	Valid
KD2	0,334	**0,821**	0,236	0,421	0,492	**0,821**	Valid
KD3	0,620	**0,748**	0,350	0,403	0,430	**0,748**	Valid
KD4	0,545	**0,796**	0,433	0,575	0,427	**0,796**	Valid
KD5	0,478	**0,750**	0,457	0,623	0,623	**0,750**	Valid
KD6	0,337	**0,845**	0,434	0,589	0,426	**0,845**	Valid
KU1	**0,793**	0,343	0,365	0,403	0,581	**0,793**	Valid
KU2	**0,839**	0,664	0,480	0,534	0,591	**0,839**	Valid
KU3	**0,890**	0,540	0,440	0,523	0,702	**0,890**	Valid
KU4	**0,818**	0,333	0,496	0,536	0,677	**0,818**	Valid
PK1	0,586	0,495	0,632	**0,845**	0,561	**0,845**	Valid
PK2	0,507	0,490	0,646	**0,822**	0,514	**0,822**	Valid
PK3	0,416	0,599	0,535	**0,732**	0,581	**0,732**	Valid
PK4	0,371	0,539	0,582	**0,754**	0,633	**0,754**	Valid
PK5	0,523	0,595	0,661	**0,847**	0,583	**0,847**	Valid
PPK1	0,555	0,469	**0,936**	0,776	0,764	**0,936**	Valid
PPK2	0,361	0,339	**0,848**	0,555	0,534	**0,848**	Valid
PPK3	0,511	0,506	**0,918**	0,706	0,615	**0,918**	Valid
SVC1	0,506	0,545	0,640	0,594	**0,838**	**0,838**	Valid
SVC2	0,689	0,590	0,584	0,655	**0,895**	**0,895**	Valid
SVC3	0,730	0,422	0,590	0,566	**0,763**	**0,763**	Valid
SVC4	0,563	0,491	0,647	0,595	**0,846**	**0,846**	Valid
SVC5	0,745	0,556	0,575	0,606	**0,873**	**0,873**	Valid

TABLE 4
Fornell-Larcker Value Measurement Results

	Performance MSMEs	Digital Competency	Community involvement and development	Partnership Program	Sustainable Value Creation	Remark
Performance MSMEs	**0,836**					Valid
Digital Competency	0,570	**0,775**				Valid
Community involvement and development	0,538	0,494	**0,901**			Valid
Partnership Program	0,603	0,677	0,764	**0,801**		Valid
Sustainable Value Creation	0,766	0,619	0,718	0,715	**0,844**	Valid
Max	**0,836**	**0,775**	**0,901**	**0,801**	**0,844**	

TABLE 5
Significance and Relevance Testing Data on Variable Relationships

	Path coefficient	T Statistic	P Values	Result
Digital Competence -> Partnership Program	0,380	5,399	0,000	Relevance significance
Community Engagement and Development -> MSME Performance	0,186	1,324	0,186	Relevance not significance
Partnership Program -> MSME Performance	0,461	3,532	0,000	Relevance significance
Partnership Program -> Community Engagement and Development	0,764	18,409	0,000	Relevance significance
Sustainable Value Creation -> Partnership Program	0,480	7,107	0,000	Relevance significance
Partnership Program -> Community Engagement and Development -> MSME Performance	0,142	1,341	0,181	Relevance not significance

TABLE 6
Research Hypothesis Analysis Results

Research Hypothesis	Result
H1: Digital competence significantly affects the partnership program	Accepted
H2: Sustainable value creation significantly affects the partnership program	Accepted
H3: Partnership program significantly affects community involvement and development	Accepted
H4: Community involvement and development significantly affects SME performance	Rejected
H5: Partnership program significantly affects SME performance when mediated by community involvement and development	Rejected

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