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Non-Formal Economic Education, Creative Learning, and Creative Competence in Improving MSME Productivity Towards Economic Independence

N. C. SAKTI, M. MUHLISIN

ABSTRACT

Introduction. The MSME workforce plays a crucial role in sustaining business continuity and enhancing operational efficiency. In this context, non-formal economic education and creative learning methods are increasingly recognized as essential tools for improving workers' skills and creative capacities. However, the effectiveness of such educational efforts often varies depending on organizational readiness and the surrounding business environment, highlighting the need to understand how educational interventions translate into workplace performance.

The aim of the research – to examine the influence of non-formal economic education and creative learning on creative competence and operational efficiency among workers in MSMEs, and to determine whether creative competence serves as a mediating factor in improving productivity.

Materials and methods. This study employed a quantitative approach using an online survey administered to individuals working in MSMEs. From an initial pool of 378 respondents, 250 qualified participants were selected following a screening process. Data analysis was conducted using structural equation modeling (SEM) with SmartPLS 3.0 to assess the relationships among non-formal economic education, creative learning, creative competence, and workforce efficiency.

Results. Non-formal economic education ($\beta = 0.466$; $p < 0.001$) and creative learning ($\beta = 0.394$; $p < 0.001$) were found to increase creative competence, with a model explanatory power of 67.9% ($R^2 = 0.679$). However, creative competence did not affect the productivity of MSMEs ($\beta = –0.068$; $p = 0.553$), in line with the low explanatory power of productivity ($R^2 = 0.018$). There was no direct or mediating effect on productivity. These findings confirm that increased creativity does not automatically improve efficiency without the support of technology, a clear organizational structure, and a conducive work environment.

Conclusion. The study underscores the importance of designing training programs that incorporate practical, field-oriented applications to ensure that creative competencies can be effectively translated into improved work efficiency. Practical recommendations are offered for policymakers, training organizers, and MSME practitioners to strengthen the alignment between creativity enhancement efforts and operational strategies.

KEYWORDS

non-formal economic education, creative learning, creative competence, MSME productivity

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INTRODUCTION

Education, as a system that regulates lifelong learning and supports continuous teaching processes, plays a crucial role in driving social change. Education connects various aspects of human life with each other and with the wider environment, thereby creating new opportunities, enhancing capabilities, and strengthening individuals' ability to engage, collaborate, and contribute [1]. UNESCO Education Research and Foresight [2], through its Lifelong Learning initiative, emphasizes the importance of giving everyone the opportunity to develop their full learning potential throughout their lives. This is considered the foundation for individual growth, community engagement, and empowerment.

The transformation towards a knowledge- and creativity-based economy requires a change in perspective in education and workforce training. However, much of the research that has been conducted still emphasizes formal education as the primary means of improving economic skills [3]. Meanwhile, the informal sector makes a significant contribution to the development of the creative economy [4], especially in addressing issues of poverty and unemployment [5]. This relates to the function of economic education in the non-formal sector through changes in entrepreneurial values and attitudes in business or entrepreneurial activities. The non-formal sector, which largely consists of Micro, Small, Medium and Enterprises (MSME), is projected to contribute around 61% to 61.9% of Indonesia's GDP in 2025. MSMEs play a crucial role as the backbone of the economy, employing more than 97% of the national workforce and playing a crucial role in economic growth and income distribution [6]. However, based on the Coordinating Ministry for Economic Affairs report [7] as of January 30, 2025, the contribution of MSMEs to national exports is still relatively limited, at only around 15.7% of total national exports, even though their role in the domestic economy is very significant. Several studies show that many entrepreneurs in the informal sector come from MSMEs, both in developing and developed countries. According to Gurtoo [8], his findings shift the old view that identifies the informal sector only as a place to survive, towards an understanding that this sector is also a space for creativity and business innovation. Entering the informal sector is not merely to avoid regulation, but rather a rational strategy to improve their economic welfare when formal opportunities are limited [9]. Meanwhile, Webb [10] asserts that the entrepreneurial process in the informal sector is influenced by a combination of individual factors, institutional factors, and support capacity. In addition, according to Debarliev [11], it has been proven that non-formal economic education has a stronger influence on human capital assets. The voluntary learning process that occurs outside of school and emerges as private or public initiatives and social programs specifically developed to address social challenges that are usually associated with the process of social exclusion.

Non-formal education generally has a short duration and includes learning schemes designed in accordance with the culture and social context of the intended audience [12]. However, it is not limited to a narrow curriculum plan. Non-formal education is also linked to the idea of lifelong learning, which refers to any learning activity that takes place at various stages of life, with the aim of improving knowledge, skills, and abilities, whether in personal, civic, social, and/or professional aspects [13]. According Kohler et al. [14] and Ponti [15], non-formal education is expected to encourage independent learning and can be implemented remotely through e-learning.

Non-formal education, which tends to be more flexible, participatory, and context-specific, has not been extensively researched in relation to labor productivity [11; 16]. Economic education can be developed in formal, non-formal, and informal contexts; the level of development of each context is highly dependent on student development, depending on the structure of the education system, its resources, the principles that govern it, and the strategies chosen by educators [17; 18]. Meanwhile, in developing countries, formal education plays an important role as a link between formal education and the job market, especially in the informal sector and creative industries [19; 20]. It is hoped that a creative learning approach in non-formal education programs can encourage problem-solving, innovation, and adaptability [21; 22].

In addition, previous studies have only highlighted education or training directly related to labor productivity In addition, previous studies have only highlighted education or training directly related to labor productivity. In Kenya and Tanzania, informal training increased workers' income by about 16% compared to self-directed learning [23], facilitated better integration into the labor market [24], and created entrepreneurial opportunities for increased productivity [25]. However, they have not paid attention to mediation that emphasizes how the learning process can improve economic

performance. The performance observed is in the context of the creative economy, which is described through creative competencies in generating new ideas, implementing them, and transforming them into economic value, which has not been widely studied in research on creative economic learning and labor productivity [26; 27]. Furthermore, empirically, creative learning focused on non-formal education is still limited to measuring the quality of training as perceived by learners [28]. Given this, there has been no real contribution to income, productivity, and time efficiency. In fact, learning applied in non-formal education is an important catalyst for building labor productivity and innovation through project-based and collaborative learning [29].

Based on the analysis of the findings, research gaps can be identified that will form the main foundation of this study, namely: (1) research related to non-formal economic education in increasing labor productivity is still limited in the context of developing countries such as Indonesia; (2) creative competence, identified as a mediating variable, still needs in-depth study in relation to creative economic learning and labor productivity; and (3) the lack of empirical models of creative learning and non-formal education using the PLS-SEM approach, which describes causal and simultaneous relationships. Therefore, this study is urgent in terms of the role of non-formal economic education and creative learning on labor productivity, and the mediating role of creative competencies in explaining the relationship between non-formal economic education and creative learning on labor productivity. Based on these issues and objectives, it is hoped that this study can make a new contribution in supporting the SDGs sustainable development agenda, namely SDG 8 on decent work and economic growth.

LITERATURE REVIEW

Non-formal economic education

Non-formal economic education is one part of economic education. Along with the development of current business needs, there are more and more challenges for non-formal economic education to meet these needs. Various parties have contributed to improving the success of non-formal economic education. Escandón-Barbosa [30] Informal institutions function as social ecosystems in which non-formal education can flourish. Informal economic education in rural areas can strengthen the positive impact of social norms and community networks on economic activities and independent businesses. According to Fellnhofer [31], non-formal economic education can be positioned as a strategic platform for implementing a game-based entrepreneurship education approach, especially for communities that are not reached by formal education.

Meanwhile, according to Hernández-Sánchez [32], using Total Early-Stage Entrepreneurial Activity (TEA) as an objective impact indicator supports the theoretical assumption that non-formal economic education can increase labor productivity by strengthening creative and entrepreneurial competencies, particularly in the context of the creative economy and the informal sector. Furthermore, complementing previous studies that generally focused on the university context, Hasan [33] found that non-university entrepreneurship education programs can actually increase entrepreneurial activity at the national level, as studies conducted by Maritz & Brown [34] dan Maritz [35] show that entrepreneurship education is not only effective in a university environment, but also has a significant impact when applied in the context of non-formal education, which is more inclusive and applicable [36; 37]. Thus, the results of this study reinforce the idea that non-formal economic education plays a strategic role in building entrepreneurial capacity and increasing the economic productivity of the workforce through creative and experience-based learning approaches outside the formal education system [38; 39].

Non-formal economic education can be measured through indicators such as intensity and participation in programs according to Hendrawijaya [40], relevance of material to the world of work according to Melania [41], learning methods and facilitator quality according to Dunn [42]. Furthermore, according to Charungkaittikul [43], the deeper dimensions of non-formal economic education can be seen from the aspects of education management and curriculum development, knowledge development activities and student activities, learning support systems, learning success, and quality assurance. Finally, according to the ILO [19], focusing on OECD member countries, non-formal economic education can be seen from the lifelong learning approach, integrated skills financing systems, and the efficiency and effectiveness of education spending.

Creative learning

Creative learning is seen as an educational method that deliberately designs learning experiences to build the ability to innovate, solve problems in unique ways, and apply ideas to real products or practices. Contemporary thinking about creative learning emphasizes the strong relationship between creativity and the learning process, not just separate outcomes, so education needs to provide a context that is challenging, open to exploration, and supportive of participants' creative expression. This is evident in the latest conceptual review of creative learning, which summarizes theories and empirical evidence on how the learning environment can trigger individual creativity [44].

An individual's innovation ability and learning performance can be stimulated by an environment that fosters creative learning. Research such as that conducted by Ben Jemaa Cherif [45] shows that training activities that increase productivity can be seen from an adaptive and creative learning atmosphere. Research examining its relationship with non-formal economic education is still limited, especially in developing countries, and sometimes positions creativity only as an outcome variable, such as Li & Yu [46], where the effectiveness of creative learning is supported by intrinsic motivation. while research by Chacón-López [47] views creativity in relation to achievement. According to Pathrapoowanun [48], creative learning can be implemented anywhere according to the weight of the activity. However, creative learning as mediation has not been widely researched, especially in relation to non-formal economic education.

Although the theoretical mechanisms underlying the relationship between creative learning and economic outcomes are prerequisites for increasing productivity [49], which include improving creative competencies , namely the ability to generate ideas, transform ideas into products or services, and generate income from innovation [50]. Creative learning plays a role in the formation of skills [51], that include cognitive (analysis, idea development), affective (motivation, resilience), and social (cooperation, networking) aspects, all of which support the application of knowledge in the workplace and the market. Therefore, empirical studies that investigate the causal relationship between creative competency learning and economic outcomes, with mediation, are very important to fill the gap in literature.

Creative competence

These competencies include the abilities and traits that enable individuals to excel as entrepreneurs [52; 53]. Learning programs for improving creative competencies are designed to enhance knowledge, abilities, and skills in entrepreneurship, with the aim of encouraging the emergence of new entrepreneurs. Various studies show a significant link between education and interest in starting a new business, which is supported by increased competencies and a recognized understanding of entrepreneurship [54; 55]. Creative competencies in comprehensive reviews and empirical evidence can be explained by internal factors such as cognition and motivation [56]. Meanwhile, contextual-social factors are seen from the organizational climate, support, and methods [57].

According to Hennessey [58], these competencies include cognitive, affective, and social aspects that have an impact on the learning environment. Runco [59] states that creative competencies can be explained through the ability to generate original ideas and the capacity to produce ideas. Scott [60] found that through learning and training, innovative competencies and behavioral outcomes can bring about individual innovation, which can in turn bring about creative competencies. Valquaresma's [61] findings, using the development and validation of the creative self-efficacy scale, can be used as a reference in measuring confidence and creative competencies in training participants. Thus, in these findings, it can be seen as a construct that can build creative competence, such as ideation and problem framing in the cognitive dimension, then translating ideas into outputs in the implementation dimension, value creating in the market fit dimension, creative self-efficacy and motivation from the affective dimension, and finally collaboration and creative networks from the social dimension.

MSME Productivity

Improving the skills of the workforce is crucial to supporting the sustainability of small and medium-sized businesses. This means that a skilled workforce will help improve economic efficiency [62]. According to Okumu & Buyinza [63], labor productivity in MSMEs should not overlook innovation, as it plays a role in increasing the productivity of MSME workers. Of course,

organizational structure, networks, and market access are also important for productivity [64]. Strong evidence shows that productivity models include training in the sense of non-formal education [65]. In addition, HR practices such as appraisal, training, and participation indicate labor productivity in developing countries [66]. which is relevant to the findings that creative learning due to the adoption of innovation by generating ideas can increase productivity [63], and that technological capabilities can drive MSME productivity [67].

This increase in productivity can be demonstrated through the impact of organizational structure in the context of the internal labor market [68]. Furthermore, in reality, traditional education and training methods focus more on knowledge transfer than on increasing entrepreneurial productivity [69], so non-formal economic education has the strategic ability to overcome this weakness [70; 71].

The results of the study can be summarized as follows: the productivity of MSME workers can be evaluated through four main aspects, namely: (1) work effectiveness; (2) results and performance; (3) adaptability; and (4) independence and innovation. These aspects show that workers do not only focus on results, but also on the ability to adapt, innovate, and work independently without strict supervision. Increased worker productivity ultimately becomes an important basis for MSMEs to strengthen their economic independence and competitiveness in the digital age.

MATERIALS AND METHODS

This study uses the SEM-PLS method, which analyzes the relationship between latent variables of creative competency mediation, which connects the exogenous variables of non-formal economic education and creative learning to the endogenous variable of MSME labor productivity in achieving economic independence. Thus, this model is used to test the strength of direct and indirect influences that combine reflective and formative analysis. We used the following analysis to test the stages to be carried out as suggested by Hair Jr [73] from formulating model specifications adjusted to the research model used, then conducting an outer model evaluation consisting of testing the validity and reliability of the instruments, and finally conducting an inner model test consisting of testing the adjusted R2 determination coefficient, cross-validated redundancy Q2, effect size f2, and path coefficients of direct and indirect (mediation) effects.

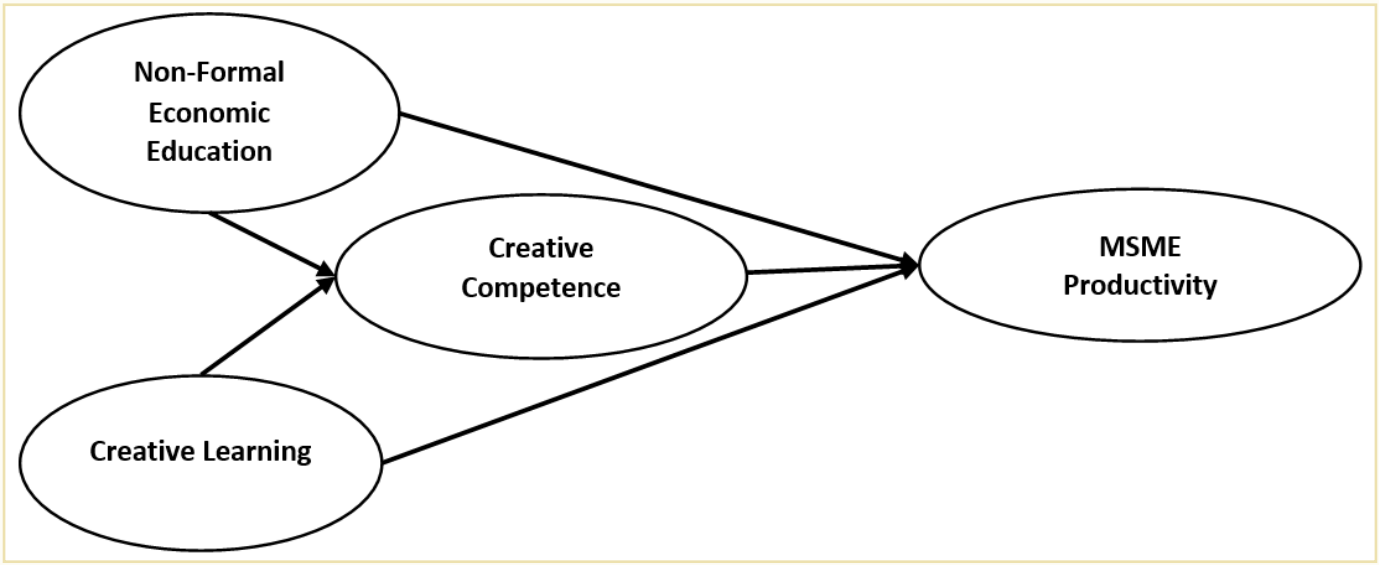

Figure 1 Research Design

Procedures and participants

This research was conducted from March to June 2025, targeting MSME actors in East Java Province, Indonesia. We limited the research participants to the creative services, culinary, and handicraft sectors in strategic areas spread across the regencies and cities of Surabaya, Sidoarjo, Bangkalan, and Pamekasan. We obtained this data from the Cooperative and MSME Office and

regional business and MSME incubation institutions under the guidance of universities. Purposive random sampling was chosen as the sampling technique used, with the selection criteria based on MSME actors who have been in business for at least 3 years, have at least 2 employees, and have been confirmed to participate in activities that can support non-formal economic education, such as creative learning workshops, entrepreneurship training, or competency improvement programs.

We invited 378 MSME actors via email and sent them an online participation agreement form before filling out the questionnaire. This document explained the purpose of the research, participant rights, the confidential nature of the data, and provided assurances that the data would only be used for academic purposes. Therefore, only participants who agreed and checked the agreement box would participate in the analysis. Of the total number of MSME actors, only 289 responded, with a response rate of 76.45%. After filtering the data by removing incomplete responses and those that did not meet the criteria, the sample used in the data analysis consisted of 250 participants. The majority of participants were women, accounting for 73.6%, while the remaining 26.4% were men. The average age of respondents was 36.5 years, with approximately 7 years of business experience.

Instrument

Non-formal economic education

We developed this instrument based on a synthesis of research results from Hendrawijaya [40], Melania [41], Dunn [42], and Charungkaittikul [43], which were modified contextually to suit the learning environment of MSME actors in Indonesia. It is measured by five main dimensions, namely: (1) curriculum development and education management; (2) participant knowledge development and activities; (3) learning support system; (4) educational success and quality assurance; and (5) intensity and participation in training programs. An example of a statement item is "I have access to non-formal training programs that support my business."

Creative learning

This instrument was developed based on the results of research by Laydes et al [49], Ohene Afriyie [50], and Sitnicki [51], which was contextually modified for MSME practitioners by emphasizing three domains, each with two indicators and statements tailored to the conditions and learning environment of MSMEs in Indonesia, namely cognitive, affective, and social. An example of a statement item is "I actively seek new ways of learning and improving my business strategies."

Creative competence

This instrument was developed from the results of research by Hennesey [58], Runco [59], Scott [60], and Valquaresma [61], which has been modified and adapted to the conditions of MSME actors in Indonesia. This instrument is measured through the following main dimensions: (1) Ideation and problem framing, with an example statement such as "I am able to see business problems from different perspectives to find new solutions"; (2) Translating ideas into outputs, with an example statement such as "I can turn ideas into concrete actions that can improve the quality of the business"; (3) Value creating, with an example statement such as "I am able to assess whether my ideas have market value"; (4) Creative self-efficacy and motivation, with statements such as "I am confident in my ability to generate creative ideas in my business"; and (5) Collaboration and creative networking, with statements such as "I often discuss new ideas with others."

MSME Productivity

This instrument was developed based on a synthesis of previous research by Hernita [62], De Grip [65], Aslam [66] and Calza [67], which covers four main dimensions that describe the productive behavior of MSMEs, namely: (1) Work Efficiency with an example statement item "I can complete my work according to the target time without reducing the quality of the results"; (2) Work Output and Performance with an example statement item "My work results show consistent improvement over time"; (3) Adaptability, with an example statement item: "I quickly adapt to changes in technology and new systems at work"; and (4) Innovation and Autonomy, with a statement item: "I take the initiative to try new ways to improve work results."

RESEARCH RESULTS

Outer model testing

In this model assessment phase, the reliability and validity of each construct are tested using composite reliability, convergent validity, and discriminant validity. According to Hair [74], composite reliability serves to evaluate the internal consistency of indicators in measuring a construct. Convergent validity indicates a positive relationship between indicators and constructs, while discriminant validity ensures that a construct is empirically different from other constructs in the model in question.

The results of the outer model assessment (Table 1) show that all constructs have met the reliability requirements, as seen from the Composite Reliability (CR) value of more than 0.70. In addition, all factor loading values on the indicators exceed 0.70, and the Average Variance Extracted (AVE) value is also greater than 0.50. Thus, it can be concluded that all constructs meet the convergent validity requirements. On the other hand, the discriminant validity assessment using the Fornell-Larcker criteria (Table 2) shows that the AVE square root value for each construct is higher than the correlation value between constructs. This indicates that the discriminant validity in the model has been fulfilled.

Table 1 Loading Factor, C-Alpha, Composite Reliability and AVE

Name	Items	Loading	C-Alpha	CR	AVE
Non-Formal Economic Education	NFEE1	0,821	0,882	0,914	0,680
	NFEE2	0,888			
	NFEE3	0,762			
	NFEE4	0,780			
	NFEE5	0,865			
Creative Learning	CL1	0,874	0,866	0,918	0,788
	CL2	0,870			
	CL3	0,919			
Creative Competence	CC1	0,793	0,898	0,925	0,711
	CC2	0,862			
	CC3	0,869			
	CC4	0,859			
	CC5	0,830			
MSME Productivity	MSME-P1	0,926	0,926	0,947	0,818
	MSME-P2	0,857			
	MSME-P3	0,922			
	MSME-P4	0,912			
Source: Proceed by Author's (2025)					

Table 2 Fornell-Larcker (discriminant validity)

	Creative Competence	Creative Learning	MSME Productivy	Non-Formal Economic Education
Creative Competence	0,843			
Creative Learning	0,785	0,888		
MSME Productivy	-0,158	-0,167	0,905	
Non-Formal Economic Education	0,797	0,838	-0,151	0,825
Source: Proceed by Author's (2025)				

Inner model testing

This model testing is conducted when the outer model has met the requirements, where this testing is carried out starting from determining the coefficient of determination (R^2), cross-validated redundancy (Q^2), effect size (f^2), and path coefficients. According to Hair [73], the accuracy of a predictive model is seen from the R^2 value, then to assess the predictive relevance in the model is seen from Q^2, and finally f^2 is used to see the contribution of exogenous to endogenous.

The results in Table 3 show that the construct of the Creative Competence variable has an adjusted R^2 value of 0.679 or 67.9%, indicating that this model is moderate in explaining its predictive model. Meanwhile, the Q^2 value shows that the following model has predictive relevance. However, this is considered large when compared to the construct in MSME Productivity, which has an adjusted R2 value of 0.018 or 1.8% with very low predictive power. This is also directly proportional to the Q2 value of 0.020 or 2%, which, although small, still has predictive relevance in explaining the model. Furthermore, the effect size (f2) value shows that Non-Formal Economic Education and Creative Learning contribute to Creative Competence by f2 = 0.145, while the influence of these variables on MSME Productivity contributes by f2 = 0.203.

Table 3 Coefficient determination adjusted (R2) and cross-validated redundancy (Q2) and effect size (f2)

	R^2 Adjusted	Q^2	f^2
Creative Competence	0,679	0,461	0,145
MSME Productivy	0,018	0,020	0,203
Source: Proceed by Author's (2025)			

Table 4 Results direct and indirect effects

	Original	SD	T Values	P Values	Confirmation
Direct Effects					
Creative Competence -> MSME Productivy	-0,068	0,114	0,593	0,553	Not Supported
Creative Learning -> Creative Competence	0,394	0,074	5,320	0,000	Supported
Creative Learning -> MSME Productivy	-0,109	0,131	0,827	0,409	Not Supported
Non-Formal Economic Education -> Creative Competence	0,466	0,071	6,537	0,000	Supported
Non-Formal Economic Education_-> MSME Productivy	-0,006	0,139	0,046	0,963	Not Supported
Indirect Effects					
Creative Learning -> Creative Competence -> MSME Productivy	-0,027	0,046	0,580	0,562	Not Supported
Non-Formal Economic Education -> Creative Competence -> MSME Productivy	-0,031	0,054	0,582	0,561	Not Supported

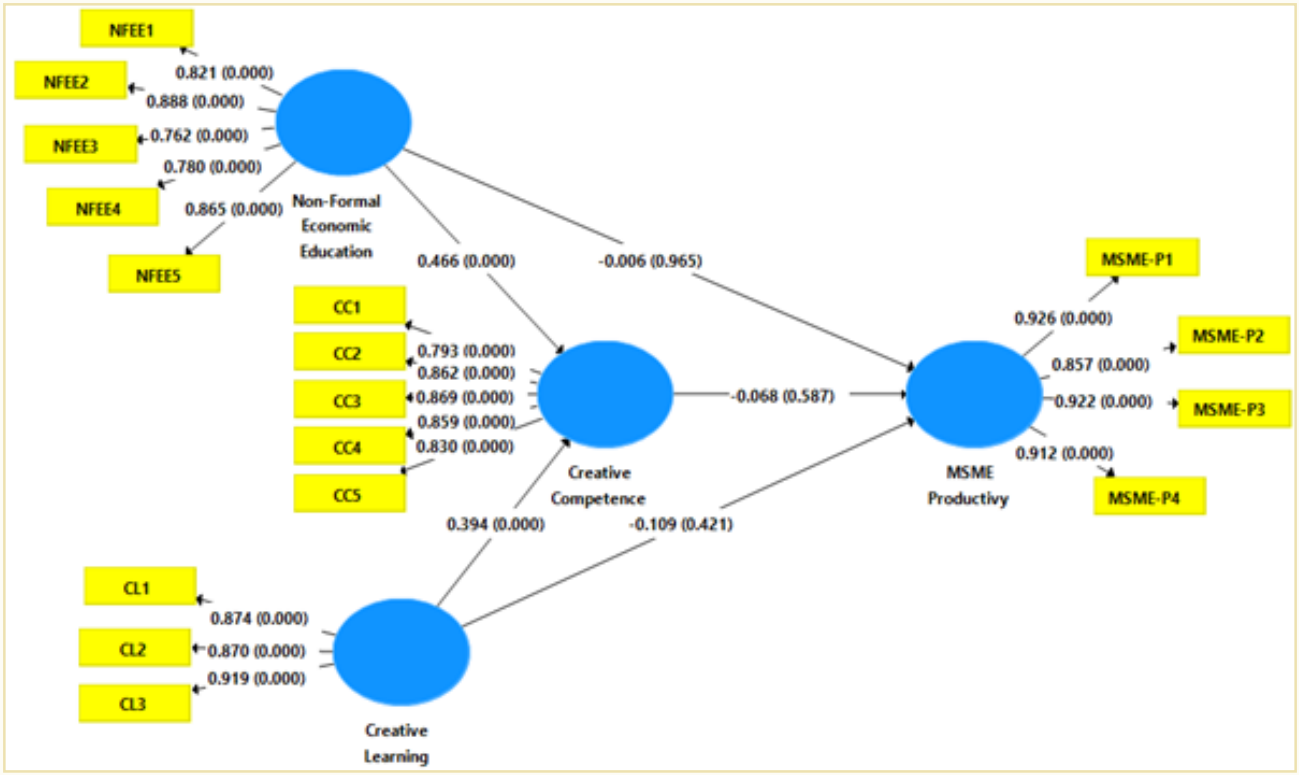

Figure 2 Results of structural model analysis

DISCUSSION

Non-formal economic education and creative competence

The results of the study indicate that non-formal economic education has a positive and significant impact on creative competence. This is confirmed by the fact that the more active MSME actors are in participating in non-formal economic education programs, the higher their creative competence.

This mechanism is based on several factors. First, programs that are generally more flexible, relevant to the context, and focused on practice strongly encourage participants to further develop their abilities to generate ideas, turn ideas into economic added value, and formulate problems and their solutions in more varied ways. These findings are consistent with Hennessey [58] and Runco [59], who explain that creative competence can be formed through learning experiences and providing opportunities for collaboration, motivation, and exploration.

Second, programs in non-formal economic education that include training, mentoring, and problem- and project-based learning provide a deep enough experience to increase confidence in generating creative ideas and implementing them in creativity and technical and social skills, as evidenced in the findings of Valquaresma [61].

The following results can be concluded that non-formal economic education has a strategic contribution to building creative competence and entrepreneurship, and these results are supported by Barba-Sánchez [39] dan Hasan [33], who emphasize that non-formal economic education has an important role in strengthening creative competence.

Creative learning and creative competence

The results of this study found that creative learning has a positive and significant effect on creative competence. This indicates that participants' innovative abilities are enhanced through collaborative and adaptively designed learning processes. Creative learning can encourage the application of ideas and collaborative skills to generate economic added value, which is in line with what was stated by Begheto [44] and Ben Jemaa Cherif [45].

Creative learning stimulates participants' cognitive dimensions, namely (idea development analysis), affective (motivation and resilience), and social (networking and collaboration). Therefore, these findings are consistent with previous studies that creative learning can improve individuals' economic readiness and innovative competence [46; 47]. This study is relevant in that creative learning is a key foundation in increasing its contribution to the skills needed for the creative economy industry and MSME.

Creative competence and MSME productivity

The results of this study explain that creative competence does not have a significant effect on MSME productivity. These findings imply that even though participants have ideas and creativity in their abilities, this cannot yet be understood as having an impact on increasing output and business results. Several factors may contribute to this, as productivity cannot be directly derived from creativity because it can also be influenced by other factors such as market access, capital, networks, technology, and organizational structure [64; 67].

Furthermore, creative competence in everyday life is said to still be at the potential skills stage and cannot yet be said to be at the applied performance stage. It was also found that limited resources and managerial constraints hinder the transformation of ideas into economic added value. Therefore, creativity must be supported in terms of the organizational ecosystem, continuous training at the proficient stage, and the ability to apply the results in order to increase business productivity [60; 63].

Creative learning and MSME productivity

The results of this study also explain that creative learning does not have a significant effect on MSME productivity. Creative learning in practice can improve innovation capabilities, but it was found that it is still low in the work process. Thus, it appears that creative learning only contributes to cognitive and psychological aspects and does not directly result in improved work performance and efficiency.

These findings are consistent with and reinforce those of Sitnicki [51] dan Laydes [49] that creativity requires time, a supportive environment, and a conducive organizational structure to increase its contribution to productivity.

Mediation of creative competence

This study explains that creative competence does not mediate non-formal economic education and creative learning on MSME productivity. These findings indicate that improvements in creative competence gained through training, creativity-focused education, or non-formal programs have not yet succeeded in effectively linking skill improvements to improved work outcomes. In other words, the process of converting skills into productivity has not yet functioned optimally in the small and medium enterprise sector.

The absence of this mediating role indicates that workers' creative competence has not yet been fully converted into efficient work behavior. Some of the causes include: limitations in workers' ability to apply creative ideas to business; lack of facilities or technology that support innovation; absence of organizational structures that are adaptable to change; and gaps between individual skills and market needs or the operational demands of small and medium enterprises.

Therefore, the results of this study emphasize the need to strengthen a more supportive business ecosystem for the application of creativity. Assistance in the form of access to technology, business assistance, entrepreneurial mentoring, responsive work structures, and an innovative organizational culture are important elements for creative competencies to have a direct impact on productivity. In addition, the integration of creativity and organizational strategy must be strengthened so that new ideas that emerge from the workforce can be facilitated, evaluated, and effectively applied in the work process.

CONCLUSION

This study indicates that non-formal economic education and creative learning have a significant impact on improving MSME productivity. Both types of learning interventions have been proven to enrich the cognitive, emotional, and social aspects of participants, thereby encouraging them to generate new ideas, solve problems, and develop innovative concepts. However, the results show that this increase in creative competence has not had a direct impact on MSME productivity. This means that even though there has been an increase in creativity, it has not necessarily led to an increase in output, work efficiency, or business performance.

Furthermore, this study also found that creative competence does not act as a link in the relationship between non-formal economic education and creative learning on productivity. In other words, creativity does not yet function as the main pathway or means of connecting training with work outcomes. This indicates a gap or missing link in the chain of learning, competence, and performance. The improvement in creative competence has not been successfully translated into productive work behavior, either due to a lack of structural support, limited access to technology, a lack of means to implement ideas, or a weak culture of innovation in the MSME environment.

These findings indicate that training and learning alone are not sufficient to increase worker productivity in MSMEs. More comprehensive assistance is needed, such as linking learning to organizational plans, work systems that encourage innovation, sustainable business mentoring, and access to technology that can apply creative ideas in production and operations. Therefore, improving creative competence will only be successful if it is supported by the creation of a business environment that supports the application of innovation.

PRACTICAL IMPLICATIONS

The findings of this study provide a number of significant practical implications for policymakers, training providers, and MSME actors. First, non-formal economic education programs must be designed to meet the demands of MSMEs, so that they do not only focus on improving conceptual skills, but also encourage practical application through MSME case studies, business simulations, and practical projects.

Second, strengthening the innovation ecosystem is crucial, as worker creativity will not translate into increased productivity if the work environment does not support the development and implementation of new ideas. MSMEs must create a more inclusive work culture, provide a platform for experimentation, and establish an innovation assessment system.

Furthermore, technological support is an important requirement for turning creativity into productivity, by providing access to digital technology, business applications, and automation that facilitate the implementation of ideas in operational processes.

The learning aspect shows that the effectiveness of creative learning will increase if accompanied by continuous business guidance, such as mentoring in marketing, production, and operational management, which helps employees turn creativity into productive actions.

Finally, considering the context of interactions in strengthening cooperation networks, collaboration between MSME actors, business communities, and educational institutions is necessary to accelerate the adoption of innovation and open up opportunities for the application of creative ideas. The training curriculum needs to integrate an action-based learning approach and adapt to developments in the digital economy, including mastery of digital skills, creativity in e-commerce, and simple production technologies, so that the creative skills acquired by participants can be immediately applied to produce productive results.

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Authors

Norida Canda Sakti
(Surabaya, Indonesia)
Associate Professor, Department of Economics Education, Faculty of Economics and Business
Universitas Negeri Surabaya
Email: noridacanda@unesa.ac.id
ORCID ID: 0000-0002-5805-2466
Scopus Author ID: 57216462199

Muhlisin
(Bangkalan, Indonesia)
Lecturer, Department of Management, Faculty of Economics and Business
Universitas KH. Bahaudin Mudhary Madura
Email: muhlisin2195@gmail.com
ORCID ID: 0009-0003-0979-3211
Scopus Author ID: 59532034200

Authors contribution

N. C. Sakti: Conceptualization, Validation, Investigation, Resources, Data curation, Writing - Original Draft, Supervision, Project administration, Funding acquisition
Muhlisin: Methodology, Software, Formal analysis, Data Curation, Writing - Review & Editing

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