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ENTREPRENEURIAL CREATIVITY AND BUSINESS INNOVATION PERFORMANCE: THE ROLE OF COMPETITIVENESS MECHANISM PROTECTION AND COMPETITIVE INTENSITY⁴

The increasingly complex demand is a problem for a business because high creativity is not guaranteed for entrepreneurs to excel at innovation. The purpose of this study was to explore the important role of entrepreneurial creativity in improving business innovation performance through the mechanism of protecting competitiveness and moderating the intensity of the MSME business sector in Central Java, Indonesia. This study sampled 213 entrepreneurs operating in the micro, small, and medium enterprise sectors. The quantitative data from these respondents were analyzed using the SEM-PLS path analysis technique. The findings of the five hypotheses show that the role of entrepreneurial creativity, directly and indirectly mediated by the mechanism of protecting competitiveness, can potentially increase the performance of business innovation. However, on the contrary, the high intensity of competition has implications for weakening business innovation performance. The study's implications make a practical contribution to MSMEs. In the spirit of creativity, entrepreneurs must continue to consider external factors, from changing consumer preferences government policies, and competitive dynamics that conquer their competitive advantages.

Keywords: Entrepreneurial creativity; Business innovation performance; Competitiveness mechanism protection; Competitive intensity

JEL: M31; M21; L26

1. Introduction

The high performance of business innovation for entrepreneurs is still an interesting topic that needs further exploration. It is interesting to develop so that business actors can take

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advantage of tangible and intangible resources that still require mechanisms to maintain competitiveness. The interest in this topic stems from the potential for business actors to leverage both tangible and intangible resources, necessitating mechanisms to sustain competitiveness. Despite the growing body of research, there is a significant gap in understanding how entrepreneurial creativity interacts with competitiveness protection mechanisms and competition intensity to influence business innovation performance. From the perspective of resource-based theory, imperfect imitation is foundational to competitive advantage; however, entrepreneurs lacking these resources face acquisition challenges. Furthermore, the relevance of this research is emphasized by the increasing market heterogeneity and the need for innovative solutions to maintain competitive advantages. The critical questions are: (1) What guarantees do entrepreneurs need to improve their business innovation performance and (2) How strong or weak the intensity of competition affect entrepreneurial creativity in business innovation performance? By addressing these questions, this study seeks to provide a comprehensive framework that can guide entrepreneurs in enhancing their innovation capabilities while navigating competitive pressures. By addressing these questions, this study seeks to provide a comprehensive framework that can guide entrepreneurs in enhancing their innovation capabilities while navigating competitive pressures. Therefore, the urgency of this research is to close the gap in the existing literature by developing a model that integrates entrepreneurial creativity with competitiveness protection mechanisms and evaluates the moderating role of competition intensity.

This study was based on the increasingly dynamic MSME competition. The use of technology in entrepreneurial creativity (Mantulenko et al., 2020; Yaroshenko et al., 2020) and potential mental confidence (Camargo et al., 2020) are characteristics needed by an entrepreneur. The technology invention and diffusion of innovation have a problem regarding protection. When creativity is not balanced by protecting competitiveness, entrepreneurial resources become a problem for many market orientations. Also, the advantage of market positions is a loophole for competitors to ignore the morality value. According to Rekarti et al. (2018), other factors are competitors' skipping companies to have high market performance through acquisitions, imitations, substitutions, or major innovations. Entrepreneurship is achieved by risk-taking and finding insight into uncertain or complex environments. Three resource dimensions are needed, including transforming historical originality into uniqueness, known causal relationships into causal ambiguity, and socially simple into complex transformation. According to Jay Barney's resource-based view (RBV) theory, reviewed by Peteraf (1993) and Sigalas (2015), bridging these proportions requires an inimitable resource dimension. Competitors cannot emulate creativity because of the social uniqueness and complexity that demand product or service innovation differences. Therefore, competitiveness mechanism protection legality optimizes business innovation performance.

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positions is a loophole for competitors to ignore the morality value. According to Rekarti et al. (2018), other factors are competitors' skipping companies to have high market performance through acquisitions, imitations, substitutions, or major innovations. Entrepreneurship is achieved by risk-taking and finding insight into uncertain or complex environments. Three resource dimensions are needed, including transforming historical originality into uniqueness, known causal relationships into causal ambiguity, and socially simple into complex transformation. According to Jay Barney's resource-based view (RBV) theory, reviewed by Peteraf (1993) and Sigalas (2015), bridging these proportions requires an inimitable resource dimension. Competitors cannot emulate creativity because of the social uniqueness and complexity that demands product or service innovation differences. Therefore, competitiveness mechanism protection legality optimizes business innovation performance.

Given these challenges, this study proposes that strengthening entrepreneurial creativity through robust competitiveness protection mechanisms can mitigate these issues and enhance business innovation performance. Secundo et al. (2020) defined creativity as developing competency creation for industry players through training and policy, having a significant relationship with improving competitiveness. HR studies showed increasing individual creativity and organizational or corporate innovation (Colakoglu et al., 2019). Ahlin et al. (2014), Baron and Tang (2011) positively influenced entrepreneurs related to creativity, impacting the company's innovation. According to Ballor & Claar (2019), creativity and innovation related to history's reality had no direct relationship to different historical aspects of entrepreneurial creativity (Schumpeter, 2017) or innovation (Kirzner, 1999).

Entrepreneurship, disruptive innovation, and creative destruction are related because varied economic backgrounds indicate that entrepreneurship could be destructive (Johnson et al., 2020). However, competitive intensity could reduce the impact of spreading interactivity innovation (Anning-Dorson, 2016). Transformational leadership and the strong performance of competitive moderation intensity have a positive interaction (Yang, Yang, 2019). The competitive intensity of start-ups also has disrupted innovation activities towards the company's performance (Hou et al., 2019).

Resource-based theory was used to develop this model, where the company's resources were sourced both internally and externally. Resources are real and intangible assets that companies use to spawn and implement strategies (Barney et al., 2001). They are divided into valuable, rare, inimitable, and organized resources. Creativity is also known as intellectual capital, and it is an intangible resource that cannot be imitated and replaced (Kor, Mahoney, 2004). Additionally, resource-isolating mechanisms in competitive economic environments contribute to building quality strategies (Ndegwa et al., 2019).

Due to the dominance of the community economy and the presence of small and medium firms in Central Java, this study was undertaken there. Local culture and wisdom rule creative MSME firms. (2) The uneven distribution of technology in remote places is the right indicator of innovative competitiveness. This study used location selection resources to protect creative local communities. Thus, competition mechanisms like intellectual property rights and government business protection oversight promote knowledge and company innovation performance optimization.

Previous studies, such as Dewi (2018); Jalilvand et al. (2019); Mulyana and Hendar (2020). Self-efficacy development of entrepreneurs was analysed by Camargo et al. (2020). Entrepreneurial education was examined by Epure (2019) while few studies discussed the important role of protecting competitiveness mechanisms in innovation performance. However, there is limited research on the role of competitiveness protection mechanisms in safeguarding intellectual capital and enhancing innovation performance. This study discusses the importance of competitiveness mechanism protection to bridge the gap between entrepreneurial creativity and business innovation performance. By considering external factors such as competitor professionalism, businesses can enhance their innovation performance. This study offers practical insights for MSME managers and owners on leveraging competencies as vital company assets to improve business performance and sustain competitive advantage. This study is expected to contribute knowledge in expanding the view of the Resource Base View Theory about the importance of protecting the mechanisms of power competition from tangible and intangible creative assets. In addition, to achieve an increase in business innovation performance, the spirit of creativity must consider external factors such as the professionalism of competitors to choose partners to work with competitors to pursue common goals. The common goal of a business innovation based on creativity on intelligence has practical implications for managers or owners to understand competencies considered the most important company assets and, at the same time, appreciate how these assets can be used to improve business performance. This small and medium enterprise sector study provides important attributes in carrying out organizational culture and competence as a source of sustainable competitive advantage.

In summary, this study aims to examine the impact of creativity on business innovation performance and assess the effect of competitive intensity on entrepreneurial creativity and business innovation performance. The findings show that strict competitiveness protection mechanisms significantly contribute to the efficient and effective performance of MSME innovations. Therefore, this study provides a strategic approach for MSMEs to achieve excellence amidst competitive disruption and complexity.

2. Theoretical Background and Hypothesis Development

Creativity, defined as a person's competency to outperform competitors, is crucial for sustainable competitive advantage (Peteraf, Barney, 2013). Barney (1991a) posits that a company's sustainable competitive advantage relies on resources that are valuable, rare, inimitable, and non-substitutable, as per the resource-based view (RBV) theory. Companies must analyze these attributes in their resources to achieve strategic objectives such as maintaining valuable capabilities and responding to environmental changes (Seifzadeh, Rowe, 2019). Despite extensive research, a significant gap remains in understanding how entrepreneurial creativity interacts with competitiveness protection mechanisms and competition intensity to influence business innovation performance. Previous studies have linked creativity to higher innovation performance and competitive advantages (Ahlin et al., 2014; Baron, Tang, 2011; Colakoglu et al., 2019) but often overlook the necessary protection mechanisms and the role of competition intensity. This study aims to address this gap by developing a model that integrates entrepreneurial creativity with competitiveness protection

mechanisms and evaluates the moderating role of competition intensity. Grounded in RBV theory, this approach emphasizes protecting valuable, rare, inimitable, and non-substitutable resources to enhance business innovation performance. Understanding how competition intensity affects this relationship can provide deeper insights into external competitive pressures, thus extending the RBV framework to offer a comprehensive understanding of sustainable competitive advantage and business innovation performance.

2.1. Entrepreneurial Creativity, Competitiveness Mechanism Protection, Competitive Intensity and Business Innovation Performance

Businesses encounter challenges in generating new and heterogeneous markets measurable by employee performance, and employees are expected to do more than play their primary roles to gain a competitive edge. Creativity and innovation can boost competitiveness and company performance (Ferreira, Coelho, 2020). Social capital helps entrepreneurs filter business information and innovate to suit market needs (Setini et al., 2020). Additionally, intellectual capital from human resources within organizations can enhance company innovation performance by enabling creative problem-solving (Popescu, 2020). Empirical studies have demonstrated that entrepreneurial creativity significantly drives business innovation performance. For example, Colakoglu et al. (2019) found that in Turkey, entrepreneurial creativity leads to the development of unique products and services, enhancing competitive advantage. Ahlin et al. (2014) conducted their research in Slovenia and showed that entrepreneurial creativity fosters an innovative culture within organizations, resulting in improved business performance. The Resource-Based View (RBV) theory supports these findings by positing that heterogeneous, valuable, rare, inimitable, and irreplaceable resources sustain competitive advantage (Barney, 1991b). Entrepreneurial creativity fits this framework as it embodies these resource characteristics, creating a sustainable competitive edge. However, there remains a significant gap in the literature regarding how competitive protection mechanisms and competition intensity moderate the relationship between entrepreneurial creativity and business innovation performance. This study aims to address this gap by developing a model that integrates entrepreneurial creativity with competitiveness protection mechanisms and evaluates the moderating role of competition intensity. Therefore, the following hypothesis is proposed entrepreneurial creativity positively triggers business innovation performance.

Job security impacts occupational risk and the desire to try new things (Cabral et al., 2021). Intangible intellectual assets like ideas are essential for entrepreneurship (Bahrami et al., 2016). Resource-based theory states that heterogeneous, valuable, uncommon, inimitable, and irreplaceable resources give a competitive advantage (Barney, 1991a). Entrepreneurs must react rapidly and alter based on employee knowledge, experience, and talents (Wang et al., 2021). An isolating mechanism that can produce results from effective and efficient resource management methods is needed as creative markets rise (Rugman, Verbeke, 2002). The importance of isolation mechanisms in creativity is because, without the same entrepreneurial knowledge and insight, rival companies cannot successfully imitate other companies' diversification strategies. Empirical studies support the notion that entrepreneurial creativity leads to the development of such mechanisms. For instance, Colombelli et al. (2020) demonstrated that creative entrepreneurs are more likely to

implement robust protection strategies, safeguarding their innovations from competitive threats. Additionally, empirical research in China by Ma et al. (2022) indicates that firms with higher levels of entrepreneurial creativity are better at protecting their competitive advantages through legal and strategic means. Thus, entrepreneurial creativity not only fosters innovation but also necessitates advanced protection mechanisms to maintain a competitive edge. This highlights a significant gap in the literature regarding the interplay between entrepreneurial creativity and competitiveness mechanism protection, which this study aims to address. So, the higher the level of entrepreneurial creativity, the higher the level of protection mechanisms needed by individuals.

Business actors must protect the competitiveness mechanism to gain an edge. Joint innovation and policy instruments to steer business operations are needed to gain economic and competitive advantage (Costantini, Mazzanti, 2012). In complicated competition, patents, copyrights, legal agreements, document management, lead time, and confidentiality protect information against imitation (Gama, 2019). Commercial innovations attract competitors who copy them. Thus, precise protection strategies can limit asset and innovation knowledge recognition. Intellectual property (IP) and knowledge protection, especially intellectual property rights (IPR), can reduce the risk of recognizing innovative knowledge (Davis, 2004; Hertzfeld et al., 2006). This protection is a condition for increasing business innovation performance for company development (Cho, Kim, 2017; Cuervo-Cazurra, 2020). Empirical research supports the relationship between competitiveness mechanism protection and business innovation performance. For example, studies have shown in China that robust IP protection correlates with higher innovation outputs in firms (Cao et al., 2023). Additionally, research in the United States by Grimaldi et al. (2021), demonstrated that firms with strong IP protection mechanisms experience greater innovation success. Furthermore, empirical findings in China by Ma et al. (2022) indicate that firms with higher levels of entrepreneurial creativity are better at protecting their competitive advantages through legal and strategic means, which in turn boosts their innovation performance. According to the Resource-Based View (RBV) theory, protecting valuable, rare, inimitable, and non-substitutable resources is crucial for maintaining a competitive advantage (Barney, 1991a). Thus, competitiveness mechanism protection not only safeguards these critical resources but also enhances business innovation performance. However, there remains a gap in the literature regarding the specific ways in which these protection mechanisms can be optimized to further drive innovation. Therefore, the following hypothesis is proposed competitiveness mechanism protection positively influences business innovation performance.

Innovation, based on fresh knowledge, helps a company improve its business performance. Knowledge is the most valuable intangible resource and takes a unique, creative approach to acquire. Knowledge without innovation is insufficient, according to the RBV theory of creativity. Creatively applying this knowledge is crucial (Cooper, 2000). Innovation from proactive asset management has dramatically increased performance (Soumyaja, Sowmya, 2020). A sustained competitive advantage requires more than knowledge capital. Intellectual property protection and information interchange between distributed invention and innovation performance require knowledge restructuring (Tang et al., 2023). The RBV theory emphasizes that the creative process depends on the flow of information of various types and the capacity for discovering new knowledge. However, knowledge discovery must have a competitive mechanism to protect resources through imitation in product innovation (Xia,

Liu, 2018). Legal protection for resources is contained in government regulations that oversee the corporate environment to improve the quality of information disclosure by exploring innovation (Fang et al., 2021).

Empirical research from previous studies supports both the moderating and mediating roles of entrepreneurial creativity in influencing business innovation performance. For instance, a study by Amoroso and Link (2021) demonstrated that entrepreneurial creativity, when combined with robust protection mechanisms, leads to significant improvements in innovation performance by safeguarding unique innovations from competitive threats. Similarly, research by Liu (2020) in China indicates that firms with higher levels of entrepreneurial creativity are better at protecting their competitive advantages through legal and strategic means, which in turn boosts their innovation performance. Furthermore, a study by Zhang et al. (2021) emphasized that entrepreneurial creativity plays a crucial role in recognizing and exploiting new market opportunities, especially under high competition intensity, thus moderating the relationship between creativity and innovation performance. However, there remains a gap in the literature regarding how exactly these mechanisms work and how they can be optimized. This study aims to address this gap by developing a model that integrates entrepreneurial creativity with competitiveness protection mechanisms and evaluates the moderating role of competition intensity. Thus, we propose the relationship between Entrepreneurial Creativity, Competitiveness Mechanism Protection, and Innovation Business performance in the following hypothesis below:

H1: Entrepreneurial Creativity positively influences Business Innovation Performance.

H2: Entrepreneurial Creativity positively influences Competitiveness Mechanism Protection

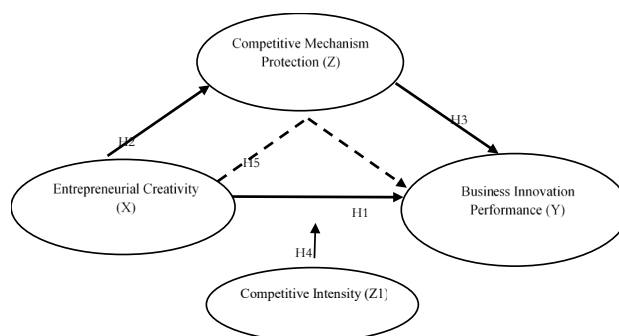
H3: Competitiveness Mechanism Protection Positively Influences Business Innovation Performance

H4: Entrepreneurial Creativity positively influences Business Innovation Performance moderated by Competitive Intensity

H5: Entrepreneurial Creativity Positively Influences Business Innovation Performance Mediated by Competitiveness Mechanism Protection

The conceptual framework was built to develop this study as shown in Figure 1.

Figure 1. Conceptual Framework



3. Research Methodology

3.1. Data Collection and Sample

The Central Java MSME owners are the primary subject of the data gathered for this study. Using the Google form, the questionnaire distribution was done in stages. According to the rule of thumbs by Hair et al. (2014), the study sample should be at least 45 for five independent variables to produce a strong statistical power. Depending on the study design, various scenarios can incorporate purposive sampling (Campbell, 2020). In a market where young people make up most actors, the creative industry still controls the expansion of the commercial sector. In addition to the age of business actors, the geographic location of the cultural industry can foster creative innovation (Tomczak, Stachowiak, 2015). Young respondents among the 213 respondents with senior high school diplomas offer insightful comments for data analysis. A total of 213 respondents were gathered, more than the minimum requirement of 200 required by Loehlin (2004) to prevent bias in all SEM estimates. Furthermore, Table 2 shows the survey respondents' statistics. Education and business type divided respondents into two groups. Education included recent high school (39.9%) and last master's (22%). Creative industries (51.1%) were the most common, followed by services (22.5%) and trade (24%), with 1-5-year businesses earning less than Rp. 5.000.000 a month. Data processing revealed the following respondent characteristics, shown below in Table 1:

Table 1. Respondent Characteristic

Respondent Characteristics	Amount	Percentage
Business Type		
Creative Industries	109	51.1
Trade	24	11.2
Services	48	22.5
Manufacturing (Raw Material Processing)	12	5.63
Other	20	9.38
Total	213	100
Last Education		
Senior High School	85	39.9
Bachelor's degree	69	32.3
Magister	47	22.0
Other	12	5.63
Total	213	100
Business Length		
<1 Year	43	32.2
1-5 Years	82	41.7
5-10 Years	66	8.7
>10 Years	22	17.4
Total	213	100
Average Operating Income Per Month		
< IDR 5,000,000. -	95	44.6
IDR 5,000,001. – IDR 25,000,000. -	75	35.2
IDR 25.000.001. – IDR 50,000,000. -	37	17.3
>IDR 50,000,000. -	6	2.81
Total	213	100

Sources: Collected Data (2024).

The purposive sampling method was used to build a multi-perspective, emancipatory, participatory and deconstructive interpretation of the research (Suri, 2011). The profiles of selected respondents are presented below in Table 1. We collected data through questionnaires and distributed them online. From the questionnaire, we asked questions, and then potential respondents voluntarily filled out a list of questions and sent them directly to us. From a total of 300 who filled out the questionnaire (online), we selected 213 entrepreneurs as selected respondents with complete data to complete the research – distribution of the survey via a questionnaire using Google form from January to Maret 2024. A total of 213 respondents were sampled, and then we processed it using a structural equation model (SEM) because the selection of research topics is related to marketing science (Henseler et al., 2009). Partial Least Squares Structural Equation Modeling (PLS-SEM) is deemed appropriate for this study because it allows for the confirmation of theoretical constructs and their relationships within the complex framework of entrepreneurial creativity, competitiveness mechanism protection, and business innovation performance. PLS-SEM is particularly suited for exploratory research and theory development, which aligns with our objective to test and validate the causal relationships among multiple latent variables in MSMEs in Central Java. The method accommodates the reflective measurement models and handles the small-to-medium sample size effectively (Hair, 2019). Furthermore, it provides robust estimates even with non-normal data distributions and complex model structures, making it ideal for our study's multifaceted research framework. The conceptual research model was designed by formulating a measurement and structural model to perform factor analysis in the Smart-PLS-3.2.6 software.

The main instruments used in the data collection were original English questionnaires and Indonesian translations, which were well-examined to retain the intended meaning. The questionnaires' quality was tested using trial, validity, and reliability tests, and the samples were obtained from all fields from MSME studies in Central Java. The study objects were selected in Central Java first because economic domination still focuses on preserving derivative businesses and the local wisdom of creative industry MSME businesses. Second, the uneven spread of technology in remote areas is the right thing to study. Indonesia has five MSME business sectors, that is creative or manufacturing industries (51.1%), trade (11.2%), services (22.5%), raw material processing (5.63%) and others (9.38%) that produce goods or services and market products online using social media applications and directly to consumers.

This study employs empirical data and makes suggestions to help marketing researchers manage endogeneity in PLS-SEM analysis efficiently (Chin et al., 2008; Hult et al., 2018). Structural Equation Modelling (SEM) SEM is not viewed as a purely statistical technique but as an analytical process that involves model conceptualization, parameter identification and estimation, evaluating the adequacy of data models, and potential model specification (Mueller, Hancock, 2018). According to Hair Jr et al. (2017), SEM in the service sector significantly increases research's conceptual, empirical, and methodological understandings. The PLS-SEM method was used to develop this study, which is based on the Resource Base View Theory, and it is better suitable for uncovering theory testing (Sarstedt et al., 2014).

3.2. Measurement

The purposive sampling technique was utilized because it better fits the research goals, improving accuracy and data reliability (Campbell, 2020). MSME entrepreneurs' ingenuity can measure business innovation success in five multi-product business categories. The questionnaire has numerous parts. The first section asks respondents about their age, gender, income, and business type. The second discusses entrepreneurial creativity, company innovation, competitiveness protection, and MSMEs' competition intensity. The data obtained were processed using the Structural Equational Model method. Due to time constraints, cross-sectional data was collected. Thus, the quantitative method is suitable for field data collection and experimentally testing hypotheses to determine causal linkages (Cassell et al., 2017). This questionnaire was based on the preceding one. An explanatory technique detailed in many indicators examines the conceptual model's relationship between independent and dependent variables. A deductive approach tests a theory as it develops. Items with cross-loading values over 0.6 were evaluated in exploratory factor analysis (Henseler et al., 2009). Four operational variables were used to create the study instrument. Independent variables include entrepreneurial inventiveness, competitive intensity, and competitiveness protection. However, corporate innovation performance is contingent. The questionnaire in this study had 18 indicators. Entrepreneurial creativity has 4 indicators: social networks, alerts to opportunities, prior knowledge and experience and optimism for openness (Panjaitan et al., 2023; Raine, Pandya, 2019). Meanwhile, the dependent variable of business innovation performance indicates continuous new products, new target markets, market size and profits, and marketing financial growth (Jajja et al., 2017). Competitiveness Mechanism Protection includes legal brand service protection, a unique combination of business experience, government involvement in piracy surveillance, hard-to-replicate and core competencies, and inimitable creativity talent (Hunt, Morgan, 1995; Malhotra, Hunt, 2018). We quantify competitive intensity using indicators of competitors with whom we share a goal, professionalism in working relationships, and collaboration. The casual study examined how individual characteristics affected this study. Each dimension uses a Likert Point-5 scale (1 = strongly disagree, 5 = strongly agree). Here we present the variables used as measurement instruments in Table 2.

Table 2. Variable Measurement Instruments

Variable/ Dimension	Dimension	Sources
Entrepreneurial Creativity (X)	Social Networks (X1) Alerts to Opportunities (X2) Prior Knowledge and Experience (X3) Optimism Openness (X4)	Ko and Butler (2007); Raine and Pandya (2019)
Business Innovation Performance (Y)	Continuous New Product (Y1) Create New Target Market (Y2) Market size and profits (Y3) Marketing and financial growth (Y4)	Jajja et al. (2017)
Competitiveness Mechanism Protection (Z)	Legal brand service protection (Z.1) A unique combination of business experience (Z.2) Government involvement in piracy surveillance (Z.3) Distinctive competencies and core competencies that are difficult to replicate. (Z.4) Uniq Creativity talent that is inimitable.(Z.5)	Hunt and Morgan (1995); Lee (2007); Malhotra and Hunt (2018)
Competitive Intensity (Z1)	Competitor, with whom we pursue a common goal (Z1.1) Professionalism in working relationships (Z1.2) Collaboration with competitors (Z1.3)	Iyer and Paswan (2019); Jaworski and Kohli (1993)

4. Discussion

4.1. Discriminant Validity

Table 3 below illustrates the indicator's more significant correlation than other constructs, confirming discriminant validity for all research variables. Comparatively, each table indicator variable had the highest cross-loading value. In this study, the indicators utilized to prepare each variable had excellent discriminant validity. The following results of the discriminant validity analysis are presented in Table 3.

Table 3. Discriminant Validity

Fornell-Larcker Criteria	BIP	CI	CMP	ME	EC
BIP	0.833				
CI	0.822	0.841			
CMP	0.678	0.648	0.836		
Moderating Effect	-0.771	-0.777	-0.484	1.000	
EC	0.798	0.811	0.569	-0.793	0.815

Notes: EO = BIP = Business Innovation Performance; CI = Competitive Intensity; CMP = Competitive Mechanism Protection; ME = Moderating Effect; EC = Entrepreneurial Creativity

Source: Data Processed (2024).

4.2. Convergent Validity

The indicators of entrepreneurial originality (X), company innovation performance (Y), competitiveness mechanism protection (Z), and competitive intensity (Z1) have a loading factor over 0.5, indicating validity. The weight of X2 and X3 indicates entrepreneurial inventiveness compared to X4 and X1. Y1 is the most potent business innovation performance metric. Variable X2 mediates competitiveness mechanism protection. Competitive intensity is the moderation variable with the highest indicator on Z1, Z3, and Z2. The following are the results of Composite Reliability (CR), Cronbach's Alpha (CA) and Average Variance Extracted (AVE) measurements as shown in Table 4.

Table 4, indicates a Composite Reliability (CR) value greater than 0.7, with a CRI ≥ 0.70 (Rajalahti, Kvalheim, 2011). Entrepreneurial inventiveness (X) of 0.888, company innovation performance (Y) of 0.901, competitiveness mechanism protection (X2) of 0.903, and competitive intensity (Z1) of 0.879 made the data trustworthy. The instrument's validity was confirmed by the average measured extracted variance (AVE) of 0.664 entrepreneurial creativity, 0.694 business innovation performance, 0.699 competitiveness mechanism protection, and 0.708 competitive intensity, all above 0.50.

Table 4 also shows the influence of the R square value on entrepreneurial creativity, competitiveness mechanism protection, competitive intensity, and business innovation performance by 0.775. This implies that the other three variables explain business innovation performance by 0.775, and those not included in this model explain the remaining 0.225. R square influences competitiveness mechanism protection on business innovation performance by 0.323, Therefore, business innovation performance is explained by the competitive mechanism protection by 32.3 per cent while other variables outside this model explain the remaining 67.7 per cent. Next shown in Table 3, the test for predictive relevance

Q2 indicates the relevance of the predicted value was 0.847. This study model had a good, estimated value. The interpretation of the accuracy explained entrepreneurial creativity diversity, competitiveness mechanism protection, and competitive intensity moderation variables of 84.7 per cent to business innovation performance.

Table 4. Composite Reliability, Cronbach's Alpha, and AVE

Construct		Loading		Cronbach's Alpha (α)	CR	AVE
Entrepreneurial Creativity (X)	X1	0.762		0.831	0.888	0.664
	X2	0.854				
	X3	0.854				
	X4	0.786				
Competitiveness Mechanism protection (X2)	X2.1	0.857		0.859	0.903	0.699
	X2.2	0.828				
	X2.3	0.831				
	X2.4	0.826				
Business Innovation Performance (Y),	Y1	0.860		0.854	0.901	0.694
	Y2	0.807				
	Y3	0.838				
	Y4	0.826				
Competitive Intensity (Z)	Z1	0.884		0.794	0.879	0.708
	Z2	0.812				
	Z3	0.826				
R-square (R2) – BIP				0.775		
R-squared (R2) – CMP				0.323		
Adjusted R Square – BIP				0.771		
Adjusted R Square – CMP				0.320		
Predictive Relevance (Q2)				0.848		

Description: BIP = Business Innovation Performance; CMP = Competitive Mechanism Protection
Sources: Data processed (2024).

The explanation of effect size in Table 5 below, shows that the relationship between entrepreneurial creativity and competitiveness mechanism protection to business innovation performance both directly and moderated competitive intensity had a medium effect. Meanwhile, the relationship between entrepreneurial creativity and business innovation performance had a considerable effect size. The effect size of factors (f^2) is studied to investigate variations in R2. Cohen (2013), states that the acceptable effect size (f^2) values for significant, medium, and minor effect sizes are, respectively, 0.35, 0.15, and 0.02. All the effect sizes of exogenous constructions on endogenous constructs are within the range of acceptable values, as shown by the (f^2) values in Table 5. Here is the table of 4 effect sizes we present below:

Table 5. Effect Size

Construct	f^2 values	Significance
EC $\rightarrow$ BIP	0.067	Medium effect size
EC $\rightarrow$ CMP	0.478	Considerable effect size
CMP $\rightarrow$ BIP	0.148	Medium effect size
EC * CI $\rightarrow$ BIP	0.087	Medium effect size
CI $\rightarrow$ BIP	0.086	Medium effect size

Desc: BIP = Business Innovation Performance; CI = Competitive Intensity; CMP Competitive Mechanism Protection; ME = Moderating Effect; EC = Entrepreneurial Creativity
Sources: Cohen (1992).

4.3. Hypothesis Testing

The t-value was calculated to test the hypothesis therefore If A p-value < 0.05, the hypothesis was accepted. Below in Table 6, we present the results of the hypothesis test:

Table 6. The Standard Coefficient of Pathways of the Study Model

Description	Original Sample	P-Values	T-Statistic	Decision
H1: Entrepreneurial Creativity (X) → Business Innovation Performance (Y)	0.236	0.002	3.047	Supported
H2: Entrepreneurial Creativity (X) → Competitiveness Mechanism Protection (X2)	0.569	0.000	7.698	Supported
H3: Competitiveness Mechanism Protection (X2) → Business Innovation Performance (Y)	0.242	0.000	4.437	Supported
H4: Entrepreneurial Creativity (X) * Competitive Intensity (Z) → Business Innovation Performance (Y)	-0.074	0.000	3.558	Supported
H5: Entrepreneurial Creativity (X) → Competitiveness Mechanism Protection (X2) → Business Innovation Performance (Y)	0.138	0.001	3.416	Supported

Source: data processed, 2024.

5. Discussion

Table 6 shows SEM-PLS results analysis where H1 (Entrepreneurial Creativity (X) while → Business Innovation Performance (Y), ($\beta = 0.236$, $p = 0.002$). This implies that entrepreneurial creativity significantly boosts company innovation. Creative talents change how people perceive challenges, benefiting the work team's innovative support and results. Networking, engagement, and learning influence the development and implementation of innovative service ideas. Creative emergence is studied by exploring beyond cognitive process elements affecting individuals and others' work environments, such as employees' social structure and collaborative network linkages. The entrepreneurial spirit of business actors who join the team shows how entrepreneurial creativity improves company innovation performance. Therefore, organizational structures, procedures, and other mechanisms will foster creativity. Four main organizational design principles can synthesize ideas into a new understanding of innovation. This relationship between entrepreneurial creativity and business innovation performance can be interpreted in various contexts. In rapidly evolving technological landscapes, fostering entrepreneurial creativity is crucial for maintaining competitive advantage. In developed economies, such as the United States or Europe, organizations can leverage these findings by creating environments that encourage innovative thinking and cross-functional collaboration (Gundry et al., 2014; Sigala, Kyriakidou, 2015). Entrepreneurial creativity drives both product and service innovation. In emerging markets, focusing on entrepreneurial creativity can maximize the innovative potential of limited resources (Gundry et al., 2014). The mechanisms that foster creativity, such as organizational structures and collaborative networks, can be tailored to different cultural and economic contexts. For example, in regions like Silicon Valley, these findings can optimize ecosystems by enhancing collaborative networks and innovation-driven policies (Gundry et al., 2014). In developing regions, adapting these principles can help entrepreneurs

overcome market challenges and drive sustainable growth. Thus, the findings from this study provide a framework that can be applied globally, helping organizations enhance their innovation performance through entrepreneurial creativity.

H2 (Entrepreneurial Creativity (X) $\rightarrow$ Competitiveness Mechanism Protection (X), $\beta = 0.569$, $p = 0.000$) shows that entrepreneurial creativity positively affects competitive mechanism protection. Innovation is hindered by dysfunctional competition caused by deteriorating competitiveness mechanism protection. Companies had to choose the correct strategy to overcome these problems and compete better. Innovating enterprises need leadership, customer focus, and marketing to overcome dysfunctional competition and innovate products and services (Liu & Atuahene-Gima, 2018). Entrepreneurs will keep innovating. More people who are proactive about entrepreneurial inventiveness will increase the demand for a healthy, dynamic competition system. Thus, this mindset decreases company innovation risk. Dynamic capabilities reflect the organization's ability to achieve creativity and innovative forms of superior competition (Ferreira, Coelho, Moutinho, 2020). In the small-medium enterprise context in Mainland, China has demonstrated that entrepreneurial creativity, supported by robust intellectual property protection, leads to sustained innovation and market dominance (Chen, 2022). Another finding, in the pharmaceutical industry, strong patent protections enable firms to invest in innovative drug development, knowing their intellectual property is secure, which fosters continuous innovation (Cockburn, Long, 2015). In developing markets, such as India, initiatives to boost entrepreneurial creativity and innovation have led to significant advancements in technology and manufacturing sectors (Chaudhuri, 2019). Additionally, in countries with emerging economies, enhancing entrepreneurial creativity can help local businesses thrive despite resource constraints, improving competitiveness and fostering economic growth (Boughzala, Szostak, 2023). For example, in Kenya, the growth of the fintech industry has been driven by entrepreneurial creativity combined with supportive regulations that protect innovation (Kingiri, Fu, 2020). Thus, the findings provide a robust framework for enhancing competitiveness through entrepreneurial creativity across diverse contexts, promoting sustainable innovation and economic development.

H3 (Competitiveness Mechanism Protection (X2) $\rightarrow$ Business Innovation Performance (Y), $\beta = 0.242$, $p = 0.000$) indicated that competitive mechanism protection positively and significantly affected business innovation performance. Innovation relied on joint ideas involving transparency, product alignment, and internal and external service strategies. Openness enabled product and technology strategy by making strategic information available, but protecting collaborative ideas was challenging. Patents, trademarks, copyrights, and design rights provided innovation businesses with limited rights to commercialize innovations or designs, encouraging investment in new technology and ensuring anonymity in complex competitions (Zobel et al., 2017). In China, Li et al. (2019) found that green technological innovation significantly enhanced enterprise competitiveness, with product differentiation mediating this relationship. In Europe, Stefan and Bengtsson (2017) discovered that informal appropriation mechanisms contributed to innovation novelty at various stages of the innovation process. These findings underscored the importance of protecting competitive mechanisms to enhance business innovation performance. Beyond Central Java, companies worldwide could adopt similar protection strategies to maintain a competitive edge and promote sustainable innovation. For instance, tech companies in the

U.S. could utilize patents and trade secrets to safeguard product innovations, while SMEs in Europe could employ informal mechanisms to foster innovation while protecting strategic information. This approach helped businesses retain their competitive advantage and improve overall innovation performance, ensuring that innovative ideas were effectively protected and commercialized.

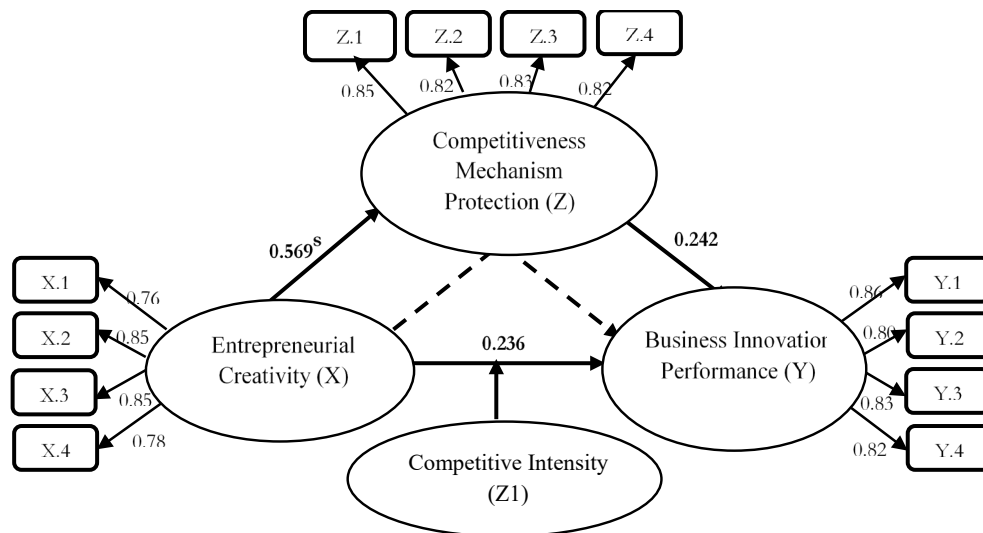
H4 (Entrepreneurial Creativity (X)*Competitive Intensity (Z) → Business Innovation Performance (Y), $\beta = -0.074$, $p = 0.000$) denoted that competitive intensity negatively affected business innovation performance. Skills and knowledge inspired entrepreneurship, but the knowledge integration method hurt product innovation and performance (Tsai & Hsu, 2012). Zhang et al. (2022), found that competitive intensity mitigated innovation, showing that as economic competition intensified, personal networks became more important than institutional networks. High resource extraction competition lowers a company's product performance efficiency (Yang, Yang, 2019). Due to intense competition, marketing-oriented organizations struggled to improve performance (Bachmann et al., 2021). The increasingly high and uncontrolled competitive intensity led to demands for creativity, necessitating unique selling points and rapid responses to consumer tastes. However, excessive rivalry stifled new product ideas as competitors quickly replicated resources. Empirical findings from China showed that entrepreneurial psychological capital and creative innovation behaviours significantly improved enterprise performance, with competitive intensity influencing this relationship (Gao, Wu, 2020). Similarly, research in the airline industry demonstrated that competitive intensity positively affected knowledge sharing and motivation, which in turn influenced entrepreneurial orientation (Liu et al., 2021). These insights could be applied beyond Indonesia. In the U.S., companies could leverage patents and strategic partnerships to maintain a competitive edge in high-intensity markets, ensuring that innovation led to sustained business performance. In Europe, firms could adopt informal appropriation mechanisms to foster innovation while protecting strategic information, adapting their approach based on competitive intensity (Stefan & Bengtsson, 2017). Businesses worldwide should focus on developing unique selling propositions and agile responses to market changes, helping them retain a competitive advantage and improve overall innovation performance, ensuring that innovative ideas were effectively protected and commercialized.

H5 (Entrepreneurial Creativity (X) → Competitiveness Mechanism Protection (X2) → Business Innovation Performance (Y), $\beta = 0.138$, $p = 0.001$) showed that entrepreneurial creativity positively impacted competitive mechanism protection. Entrepreneurs relied on creativity and innovation to generate new ideas, which helped organizations increase productivity, profitability, market share, and access to new markets. Companies developed creative skills to boost performance and sustainability, as superior competition required innovation to create and manage new products effectively. Thus, a comprehensive approach was needed to cover all innovation management factors. The competitive environment, along with organizational and managerial innovation, drove global company performance, while technology, research, and development shaped organizational structure and culture (Dereli, 2015). Empirical findings from Vietnam showed that entrepreneurial leadership, when mediated by team creativity, dynamic capabilities, and competitive advantage, significantly enhanced SMEs' performance (Nguyen et al., 2021).

Additionally, research in the United Arab Emirates demonstrated that market and entrepreneurial orientation mediated the positive relationship between internationalization and innovation performance in SMEs (Genc et al., 2019). Similarly, a study in Portugal found that dynamic capabilities, creativity, and innovation capabilities significantly impacted competitive advantage and firm performance, with entrepreneurial orientation as a moderator (Ferreira, 2020). Another study showed that entrepreneurial creativity facilitated bricolage, which in turn influenced innovation performance, highlighting the role of intermediate mechanisms in enhancing business outcomes (An et al., 2018). Therefore, these findings could be applied beyond Indonesia. For instance, companies in Japan could have implemented structured innovation programs that promoted employee creativity while ensuring robust intellectual property protection to safeguard their innovations. In Australia, businesses could have focused on building dynamic capabilities and investing in research and development to continuously adapt to market changes and stay ahead of competitors. In highly competitive industries such as technology and pharmaceuticals, global firms could have enhanced their innovation strategies by integrating cross-functional teams and fostering collaboration with external partners to accelerate the innovation process while maintaining competitive protection. This holistic approach ensured that businesses not only innovated effectively but also protected and commercialized their innovations successfully in various competitive environments.

Here we present a picture of the full structural model between variables presented in Figure 2.

Figure 2. Full Structural Model of Business Innovation Performance



Source: Roymon Panjaitan (2024).

6. Conclusions

The challenge of protecting the mechanisms of excellence derived from entrepreneurial creativity remains underutilized. Innovation must be radical, but it also requires protection from the business owner. This study underscores the importance of government involvement in creating anti-piracy policies. The five hypotheses state that entrepreneurial creativity can directly provide leverage for business innovation performance and competitiveness mechanism protection. Furthermore, higher competitiveness mechanism protection has been proven to encourage business innovation performance. Meanwhile, the moderating role of competitive intensity has not been able to strengthen the relationship between entrepreneurial creativity and business innovation performance. However, competitiveness mechanism protection has been proven to encourage business innovation performance from entrepreneurial creativity. The findings provide substantial evidence that competitive mechanisms protect MSMEs' entrepreneurial inventiveness. This study contributes to knowledge in expanding the Resource Base View Theory by expanding knowledge on entrepreneurial creativity in resource construction (Shum, Lin, 2010) and resource reinforcement on the effect of entrepreneurial creativity (Chang, Chen, 2020). High entrepreneurial creativity and business innovation performance enhances competitiveness mechanism protection through increased entrepreneurial inventiveness of MSMEs. Competitive intensity is crucial for continuous innovation.

Practically, this study provides several recommendations for MSME owners or managers. First, managers should invest in leadership training to develop managerial skills that can build trust and collaboration among team members. Second, it is important to strengthen awareness about the importance of innovation not only among business actors but also within government and private companies. Third, MSMEs need to develop strong intellectual property protection strategies to maintain their competitive advantage. Fourth, MSME owners should actively engage in business communities to gain insights and support in facing innovation and competition challenges. Fifth, adopting new technologies and integrating sustainable practices can help MSMEs stay competitive in a dynamic market. Additionally, collaboration with research institutions and universities can provide additional benefits in accessing the latest knowledge and technologies.

This research has limitations, namely that there is a negative direction from entrepreneurial creativity to improve business innovation performance. Where the moderating role of competitive intensity is not able to strengthen this relationship, another limitation is that this research can only be generalized to some types of MSMEs, so the following research will focus on more than one type of business. A high level of competition weakens creative potential and cannot trigger entrepreneurship to improve business innovation performance. Therefore, there was a need for management schemes to continue developing creative strategies for innovation expansion competition. This study applies cross-sectional research data, and the coverage of respondents is still carried out in local communities. Therefore, future studies should be developed in a longitudinal study and focus on turbulence environment or transparency in selecting moderation models in relationship with the mediation function using the dominant service logic about value co-creation, developmental marketing, inspiring interactional, and resource integration should be developed.

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