

# THE ROLE OF FRUGAL INNOVATION, CULTURAL INTELLIGENCE, ALTERNATIVE FINANCING, AND REGULATORY AGILITY IN ENHANCING BUSINESS ADAPTABILITY IN CREATIVE INDUSTRY

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**Abstract.** This study examines the influence of frugal innovation, cultural intelligence, alternative financing, and regulatory agility on business adaptability in Indonesia's creative industry. Using a quantitative approach and data collected from 250 creative entrepreneurs, the analysis was conducted through Partial Least Squares Structural Equation Modeling (PLS-SEM). The results reveal that all four variables have a positive and significant impact on business adaptability, with regulatory agility emerging as the most dominant factor (coefficient = 0.273). Frugal innovation enhances resource efficiency, cultural intelligence improves cross-cultural responsiveness, and alternative financing offers greater financial flexibility. Meanwhile, regulatory agility—which includes streamlined licensing processes and flexible policy implementation—plays a key role in fostering an adaptive business ecosystem. These findings highlight the need for a collaborative strategy that combines internal business capabilities with external regulatory support to strengthen resilience and foster sustainable growth. The study contributes theoretically to the literature on adaptive management and provides practical recommendations for entrepreneurs and policymakers in strengthening the creative economy sector.

**Keywords:** frugal innovation, cultural intelligence, alternative financing, regulatory agility, business adaptability, creative industry

**Abstrak.** Penelitian ini mengkaji pengaruh inovasi frugal, kecerdasan budaya, pembiayaan alternatif, dan kelincahan regulasi terhadap daya adaptasi bisnis dalam industri kreatif di Indonesia. Menggunakan pendekatan kuantitatif dengan data dari 250 pelaku usaha kreatif, analisis dilakukan melalui metode Partial Least Squares Structural Equation Modeling (PLS-SEM). Hasil menunjukkan bahwa keempat variabel secara positif dan signifikan memengaruhi daya adaptasi bisnis, dengan kelincahan regulasi sebagai faktor dominan (koefisien 0,273). Inovasi frugal mendorong efisiensi penggunaan sumber daya, kecerdasan budaya meningkatkan sensitivitas lintas budaya, dan pembiayaan alternatif memberikan fleksibilitas dalam akses modal. Sementara itu, kelincahan regulasi, yang mencakup penyederhanaan proses perizinan dan fleksibilitas kebijakan, terbukti paling berkontribusi dalam menciptakan ekosistem usaha yang adaptif. Temuan ini menekankan perlunya strategi kolaboratif yang menggabungkan kapabilitas internal pelaku usaha dan dukungan regulasi eksternal untuk meningkatkan daya tahan dan pertumbuhan bisnis kreatif. Penelitian ini memberikan kontribusi teoretis bagi literatur manajemen adaptif serta menawarkan rekomendasi praktis bagi wirausahawan dan pembuat kebijakan dalam memperkuat sektor ekonomi kreatif.

**Kata Kunci:** inovasi frugal, kecerdasan budaya, pembiayaan alternatif, kelincahan regulasi, daya adaptasi bisnis, industri kreatif

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## INTRODUCTION

In recent years, the creative industry has emerged as a critical driver of economic development and cultural enrichment worldwide. Comprising sectors such as design, fashion, digital media, advertising, music, and visual arts, the creative industry plays a vital role in generating employment, fostering innovation, and promoting cultural identity. According to the United Nations Conference on Trade and Development (Ledi, 2024), the global market for creative goods and services has experienced sustained growth, even amid economic uncertainties. This growth is fueled by technological advancement, rising demand for unique cultural content, and the proliferation of digital platforms. However, the dynamic and competitive nature of the creative industry also necessitates that businesses be highly adaptable to shifting market conditions, consumer preferences, and technological disruptions (Escudero-Cipriani et al., 2024; Kesebi, 2019).

Adaptability in business refers to the ability to respond swiftly and effectively to changes in the external environment. For enterprises in the creative sector, adaptability is not just a competitive advantage but a prerequisite for survival. Market volatility, global crises such as the COVID-19 pandemic, and rapid digital transformation have underscored the importance of resilience and innovation in the face of uncertainty (Jayabalan & Dorasamy, 2024). However, traditional approaches to innovation and business strategy often fall short in the context of resource-constrained environments typical of many creative enterprises, especially in emerging economies. Thus, there is a growing need to explore alternative mechanisms that enable creative businesses to remain flexible, resilient, and growth-oriented (Ovharhe, 2025; Radjou et al., 2012).

Frugal innovation has emerged as a promising approach to fostering adaptability in resource-limited settings. It involves the development of cost-effective, simple, and sustainable solutions by leveraging limited resources innovatively (Jayabalan et al., 2021). Unlike conventional innovation that often depends on large-scale R&D investments, frugal innovation emphasizes the efficient use of available resources to meet consumer needs. In the creative industry, this approach can empower entrepreneurs to produce high-value offerings without incurring significant costs, enabling them to pivot and experiment more freely. Moreover, frugal innovation aligns with the ethos of sustainability and inclusivity, values that are

increasingly central to contemporary creative practices (Abbas & Liu, 2022).

Beyond innovation, the role of cultural intelligence (CQ) is also crucial in enhancing business adaptability in the creative sector. Cultural intelligence refers to an individual's or organization's ability to function effectively in diverse cultural settings (López-Sánchez & Santos-Vijande, 2022). In a globalized and culturally interconnected market, creative businesses often operate across different cultural boundaries, whether through international collaboration, export, or engagement with diverse local audiences. High CQ enables businesses to tailor their products, communication, and strategies in ways that resonate with various cultural contexts, thereby enhancing their adaptability and market relevance. Cultural intelligence also fosters inclusivity and empathy, which are essential traits in designing user-centered creative products and services (Mata et al., 2024).

Equally significant are the financial and regulatory frameworks that support or constrain adaptability. Many creative enterprises, particularly start-ups and small businesses, face challenges in accessing traditional forms of capital. This has led to the rise of alternative financing mechanisms, such as crowdfunding, peer-to-peer lending, and impact investing, which provide more flexible and inclusive sources of funding (Abbas & Liu, 2022). These platforms not only enable access to capital but also foster community engagement and market validation. Moreover, regulatory agility – the capacity of regulatory systems to adapt to changing technologies and business models – is increasingly recognized as a key enabler of innovation and entrepreneurial flexibility. In the creative industry, where business models frequently evolve and often do not fit into traditional regulatory categories, agile regulations can facilitate growth, experimentation, and timely response to change.

Despite the recognized importance of innovation, cultural insight, financial support, and responsive regulation, there is a lack of integrative research exploring how these factors collectively influence business adaptability in the creative industry. Existing studies often examine these dimensions in isolation, failing to capture the synergistic impact they may have when combined. Furthermore, much of the literature focuses on large enterprises or technologically intensive sectors, leaving a gap in understanding how small and medium-sized creative enterprises navigate complexity and change. This research aims to fill this gap by examining the interconnected roles of frugal innovation, cultural intelligence, alternative financing, and regulatory agility in shaping business adaptability within the creative sector. By doing so, it provides a holistic framework for enhancing resilience and competitiveness in a rapidly evolving industry. The objective of this study is to investigate the extent to which frugal innovation, cultural intelligence,

## METHOD

This study adopts a quantitative research approach using a survey-based cross-sectional design to examine the relationship between frugal innovation, cultural intelligence, alternative financing, regulatory agility, and business adaptability in the creative industry in Jabodetabek area in Indonesia. A structured questionnaire was developed to gather primary data from creative entrepreneurs, managers, and key decision-makers across various sub-sectors of the creative industry, including design, digital content, fashion, performing arts, and crafts with Google Form as survey tool. The time frame for the data collection is about 2 months, from November until December. The questionnaire included closed-ended questions measured on a Likert scale (1–5), covering constructs such as frugal innovation practices, levels of cultural intelligence, access to alternative financing, regulatory perceptions, and indicators of business adaptability. The items were adapted from established measurement scales to ensure content validity, including sources like (Radjou & Prabhu, 2015) for frugal innovation and (Earley & Ang, 2003) for cultural intelligence.

The target population for this study consists of registered small and medium-sized creative enterprises (SMEs) operating in selected creative industry hubs in Jabodetabek Area. A purposive sampling technique was employed to ensure representation from diverse sectors within the creative economy and inclusion of businesses that have operated for at least two years to ensure they have had some exposure to market fluctuations and adaptation challenges. A total of 300 questionnaires were distributed electronically and in person, of which 250 valid responses were obtained and analyzed, yielding a response rate of 83.3%. Before full deployment, the instrument was pre-tested on a sample of 30 respondents to assess clarity, reliability, and internal consistency using Cronbach's alpha, with all constructs exceeding the acceptable threshold of 0.70.

For data analysis, Structural Equation Modeling (SEM) using Partial Least Squares (PLS) was applied to test both measurement and structural models. PLS-SEM was selected due to its robustness in handling complex models with multiple latent variables and its suitability for exploratory studies with relatively small sample sizes. The analysis was conducted using SmartPLS software. First, the measurement model was assessed for reliability, convergent validity, and discriminant validity. Subsequently, the structural model was evaluated to test the hypothesized relationships between the independent variables (frugal innovation, cultural intelligence, alternative financing, and regulatory agility) and the dependent variable (business adaptability). The results were interpreted based on path coefficients,  $R^2$  values, and the significance levels of the relationships, using bootstrapping procedures to ensure statistical

robustness.

## RESULTS

### Measurement Model Evaluation

To assess the validity and reliability of the constructs, the measurement model was evaluated using outer loadings, composite reliability (CR), average variance extracted (AVE), and discriminant validity (via Fornell-Larcker criterion and HTMT ratio). Table 1 shows that all constructs met the threshold criteria with outer loadings >0.7, CR >0.7, and AVE >0.5, indicating strong internal consistency and convergent validity.

**Table 1.** Construct Reliability and Validity

Construct	Composite Reliability	Cronbach's Alpha	AVE
Frugal Innovation (FI)	0.902	0.864	0.648
Cultural Intelligence (CQ)	0.918	0.888	0.691
Alternative Financing (AF)	0.886	0.846	0.662
Regulatory Agility (RA)	0.914	0.874	0.679
Business Adaptability (BA)	0.928	0.901	0.716

Source: Data Analysis

Discriminant validity was assessed using the Fornell-Larcker criterion, which confirmed that the square root of the AVE for each construct was greater than its correlation with other constructs.

### Structural Model Evaluation

The structural model was tested using bootstrapping with 5,000 samples to assess the significance of path coefficients. The coefficient of determination ( $R^2$ ) for Business Adaptability was 0.582, indicating that 58.2% of the variance in business adaptability is explained by frugal innovation, cultural intelligence, alternative financing, and regulatory

agility. The effect size ( $f^2$ ) and predictive relevance ( $Q^2$ ) were also examined to ensure the model's robustness.

**Table 2.** Path Coefficients and Significance (Bootstrapping, 5,000 subsamples)

Hypothesis	Path Coefficient ( $\beta$ )	t-Statistic	p-Value	Supported
H1: FI $\rightarrow$ BA	0.273	4.281	0.000	Yes
H2: CQ $\rightarrow$ BA	0.238	3.997	0.000	Yes
H3: AF $\rightarrow$ BA	0.189	3.115	0.002	Yes
H4: RA $\rightarrow$ BA	0.301	5.214	0.000	Yes

Source: Data Analysis

All hypothesized paths were positive and statistically significant ( $p < 0.05$ ), indicating that each independent variable contributes meaningfully to business adaptability in the creative industry.

**Table 3.** Coefficient of Determination ( $R^2$ )

Dependent Variable	$R^2$
Business Adaptability	0.582

Source: Data Analysis

**Table 4.** Effect Sizes ( $f^2$ )

Relationship	$f^2$	Effect Size
FI $\rightarrow$ BA	0.089	Small
CQ $\rightarrow$ BA	0.073	Small
AF $\rightarrow$ BA	0.047	Small
RA $\rightarrow$ BA	0.112	Medium

Source: Data Analysis

**Table 5.** Predictive Relevance ( $Q^2$ )

Dependent Variable	$Q^2$
Business Adaptability	0.396

Source: Data Analysis

The  $Q^2$  value  $> 0$ , indicating good predictive relevance of the model. Among the predictors, regulatory agility had the highest influence ( $\beta = 0.301$ ), followed by frugal innovation ( $\beta = 0.273$ ), cultural intelligence ( $\beta = 0.238$ ), and alternative financing ( $\beta = 0.189$ ). These findings reinforce the multidimensional nature of adaptability in the creative sector.

## DISCUSSION

The findings of this study provide valuable insights into the multifaceted determinants of business adaptability in the creative industry. By empirically analyzing the roles of frugal innovation, cultural intelligence, alternative financing, and regulatory agility, this research contributes to a more holistic understanding of how creative enterprises respond to uncertainty, market changes, and resource limitations. The results demonstrate that all four constructs have significant and positive effects on business adaptability, with regulatory agility having the highest impact, followed by frugal innovation, cultural intelligence, and alternative financing.

First and foremost, the significant role of regulatory agility ( $\beta = 0.301$ ,  $p < 0.001$ ) highlights the growing importance of adaptive regulatory environments in supporting innovative and flexible business practices in creative industries. In sectors characterized by rapid technological shifts and evolving consumer demands, rigid or outdated regulations can hinder experimentation and discourage entrepreneurial activity. The result aligns with the López-Sánchez & Santos-Vijande (2022) assertion that agile governance enables policy frameworks to evolve in step with innovation, fostering an environment conducive to dynamic business strategies. In the context of creative enterprises—many of which operate in hybrid digital-physical spaces or adopt novel business models such as subscription services or participatory art platforms—supportive and responsive regulations empower firms to operate more flexibly. Regulatory agility not only reduces bureaucratic bottlenecks but also encourages compliance and collaboration between industry actors and policymakers. The findings suggest that for the creative economy to thrive, regulators must embrace a proactive, consultative approach to policy-making that anticipates future needs rather than merely responding to past developments.

The second most influential factor, frugal innovation ( $\beta = 0.273$ ,  $p < 0.001$ ), underscores the significance of resource-efficient innovation strategies in fostering adaptability. This result supports the theory proposed by Radjou & Prabhu (2015), who argue that frugal innovation enables firms to do more with less by leveraging limited resources, constraints, and improvisation. In creative industries, where many entrepreneurs work with tight budgets and irregular cash flows, frugal innovation allows for experimentation and iteration without incurring high financial risks. For example, using open-source design tools, repurposing materials, or adopting modular creative processes allows firms to rapidly prototype and refine offerings in response to shifting consumer tastes. Furthermore, the strong relationship between frugal innovation and adaptability also reflects the broader relevance of sustainability and inclusivity—two values increasingly important in contemporary creative practices. By

embracing frugality not as a limitation but as a source of creativity, businesses can maintain competitiveness and relevance in volatile environments.

The influence of cultural intelligence (CQ) ( $\beta = 0.238$ ,  $p < 0.001$ ) reaffirms the critical role of cultural awareness and responsiveness in enhancing organizational adaptability. In the global and culturally diverse market in which creative enterprises operate, being able to understand, interpret, and respond to multiple cultural contexts is a strategic advantage. This finding is consistent with the work of Earley & Ang (2003), who contend that CQ enables individuals and organizations to function effectively in cross-cultural settings. For creative businesses, high levels of cultural intelligence translate into more nuanced product development, improved communication with stakeholders, and greater ability to navigate multicultural markets. Moreover, creative outputs are often deeply tied to cultural expression; thus, cultural sensitivity can significantly affect a firm's legitimacy and resonance with its audience. The results suggest that investing in cross-cultural training, promoting inclusive leadership, and embedding diverse perspectives in creative processes can enhance adaptability by aligning offerings more closely with market expectations and social dynamics.

Alternative financing ( $\beta = 0.189$ ,  $p = 0.002$ ) also emerged as a statistically significant contributor to business adaptability, albeit with the smallest effect size among the four variables. This supports the growing recognition of financial flexibility as a determinant of strategic responsiveness, particularly in industries where traditional bank lending is often inaccessible. The proliferation of crowdfunding platforms, peer-to-peer lending, and impact investment funds has opened up new avenues for creative enterprises to secure funding on more favorable terms (Mata et al., 2024). These financing mechanisms do not only provide capital; they also validate ideas, build community engagement, and serve as early market tests. The relatively lower impact of alternative financing in this study may be due to ongoing limitations in digital infrastructure, financial literacy, or regulatory support surrounding non-traditional funding models in the local context. Nonetheless, the findings indicate that access to diverse and innovative financing sources enhances entrepreneurs' ability to pivot, scale, or recover in response to environmental challenges.

The collective explanatory power of the model ( $R^2 = 0.582$ ) suggests that these four constructs explain a substantial portion of the variance in business adaptability. This reinforces the argument that adaptability in the creative industry is not driven by a single factor but emerges from the dynamic interplay between innovation capacity, cultural intelligence, financial flexibility, and institutional support. Notably, these findings challenge the often siloed treatment of innovation, finance, and policy in previous research. Instead, they support a

systems-thinking approach to understanding how creative enterprises adapt. This integrated perspective is especially relevant in the post-pandemic era, where creative firms face ongoing disruptions in consumer behavior, production methods, and distribution channels.

From a theoretical perspective, this study extends the conceptual framework of business adaptability by integrating constructs that reflect both internal capabilities (e.g., frugal innovation and cultural intelligence) and external enablers (e.g., alternative financing and regulatory agility). It also responds to calls in the literature for more context-sensitive models of entrepreneurship and innovation, particularly in emerging markets where resource constraints and institutional fragility are common. The results validate the need for adaptive strategies that are economically efficient, culturally grounded, financially inclusive, and policy-responsive.

## **CONCLUSION**

This study concludes that frugal innovation, cultural intelligence, alternative financing, and regulatory agility all play significant and complementary roles in enhancing business adaptability within the creative industry. The findings reveal that regulatory agility is the most influential factor, underscoring the importance of responsive and enabling policy environments that support innovation and flexibility. Frugal innovation and cultural intelligence contribute meaningfully by equipping creative enterprises with internal capabilities to navigate resource constraints and cultural complexity, while alternative financing provides vital financial flexibility to sustain and scale operations in dynamic environments. Collectively, these factors explain a substantial portion of the variance in business adaptability, emphasizing the need for an integrated, multidimensional strategy that balances internal resourcefulness with external support systems. This research provides both theoretical enrichment and practical insights, particularly for entrepreneurs, policymakers, and financial stakeholders seeking to strengthen the resilience and competitiveness of the creative economy in the face of ongoing uncertainty and change. Specifically, policymakers are encouraged to simplify licensing procedures and streamline regulatory frameworks to foster a more agile and supportive environment for creative entrepreneurs. Entrepreneurs can leverage frugal innovation and cultural intelligence to improve efficiency and market responsiveness, while financial institutions are expected to offer more inclusive and flexible financing schemes tailored to the needs of creative industry players.

## RECOMMENDATIONS

Practically, the findings offer actionable recommendations for stakeholders in the creative industry. For entrepreneurs and business leaders, the study emphasizes the importance of cultivating a mindset of improvisation and frugality, investing in cultural competence, and diversifying funding sources. For policymakers, the research highlights the need to develop agile regulatory frameworks that support experimentation and reduce compliance burdens for creative SMEs. For financial institutions and investors, the study points to the potential of alternative financing platforms in fostering business agility and innovation. Additionally, incubators and accelerators in the creative space can incorporate training on frugal innovation, cultural intelligence, and financing strategies as part of their capacity-building programs.

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