



DETERMINING THE FACTORS OF ENTREPRENEURSHIP IMPACTING FIRM PERFORMANCE: A STUDY ON THE CHEMICAL INDUSTRY IN JAKARTA

Tia Ichwani^{1*}, Tri Widyastuti², Apollo Daito², Bambang Purwoko²

Abstract

This research investigate the relationship between Corporate Entrepreneurship, Entrepreneurial Orientation, and Firm Performance within Jakarta's chemical industry, employing SmartPLS for quantitative analysis of data from a total sample of 142 supervisors. The study uncovers a positive and statistically significant relationship between these entrepreneurial dimensions and firm performance, demonstrated by moderate to strong path coefficients, significant t-values, p-values, and meaningful effect sizes. It highlights the strategic importance of nurturing an entrepreneurial culture within corporations, underlining innovation, proactivity, and calculated risk-taking as essential for enhancing performance in the dynamic and challenging context of Jakarta's chemical industry. The findings contribute substantially to academic literature, offering a nuanced understanding of corporate entrepreneurship's role in a specific industrial setting, and provide actionable insights for industry practitioners. The research suggests that embracing entrepreneurial capabilities and aligning operations with innovative, entrepreneurial activities could be key to reversing the trend of declining performance in Jakarta's chemical sector. While the study's findings are context-specific, they pave the way for future research in diverse industries and regions to validate these relationships. This study marks a significant advancement in the fields of corporate entrepreneurship, strategic management, and industry-specific business analysis, delivering both theoretical insight and practical strategies.

Keywords: Corporate Entrepreneurship, Entrepreneurial Orientation, Firm Performance, Chemical Industry

¹ Doctoral Student in Economics, Pancasila University, Jakarta, Indonesia

² Lecturer in the Doctoral Economics Program, Pancasila University, Jakarta, Indonesia

***Corresponding Author:** - Tia Ichwani

*Email: tiaichwani@univpancasila.ac.id

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1. Introduction

Corporate entrepreneurship, integral to this study, encompasses innovations in products, processes, or markets and the identification and exploitation of opportunities within the uncertain external environment. It is pivotal in renewing and transforming organizations, particularly in the chemical sector, where rapid technological advancements and environmental considerations are paramount (Romero-Martínez et al., 2010; Ziyae & Sadeghi, 2020). Entrepreneurial orientation, another focal point, refers to a company's posture or approach towards entrepreneurial activities and is linked with a firm's capacity to innovate, proactively respond to market trends, and take calculated risks. In the context of the chemical industry in Jakarta, a high entrepreneurial orientation could be a significant driver of competitiveness and performance, especially in a market characterized by rapid technological changes and evolving environmental regulations (Lumpkin & Dess, 1996; Wiklund & Shepherd, 2005).

The chemical industry's unique challenges, such as sustainability concerns, regulatory compliance, and technological advancements (Christian et al., 2022), make the examination of corporate entrepreneurship and entrepreneurial orientation particularly relevant (Abbas et al., 2019). This research aims to bridge the gap in understanding how these dimensions of entrepreneurship contribute to firm performance in this specific industrial context, offering insights that could be pivotal for strategic planning and operational excellence in the chemical industry. By analyzing how innovative practices, process improvements, and market expansion initiatives within the chemical industry in Jakarta influence firm performance, this study seeks to provide a nuanced understanding of the role of corporate entrepreneurship. This involves investigating how the proactivity, innovativeness, and risk-taking propensity of chemical companies in Jakarta correlate with their overall performance (Itang et al., 2022).

The novelty and originality of this research lie in its targeted focus on the chemical industry in Jakarta, an area that has not been extensively explored in entrepreneurship literature. This industry, with its unique challenges and opportunities, serves as an ideal backdrop for understanding the nuanced implications of entrepreneurial activities. This study is particularly timely and valuable as it addresses a significant phenomenon: the declining firm performance in the chemical industry in Jakarta. Despite the sector's potential for growth

and innovation, many companies have faced challenges in maintaining competitiveness and profitability. By linking corporate entrepreneurship and entrepreneurial orientation to firm performance, this research not only contributes to academic discourse but also offers practical insights for industry practitioners. These insights could be instrumental in devising strategies to reverse the trend of declining performance, fostering a more robust, innovative, and competitive chemical industry in Jakarta.

2. Literature Review

Firm Performance

Wu and Chen (2014) define firm performance as the extent to which an organization succeeds or fails in executing its primary tasks to achieve objectives, goals, vision, and mission. Wheelen and Hunger (2012) further elucidate that firm performance results from effectiveness and efficiency in achieving the company's objectives and goals. This encompasses various aspects such as business strategies, organizational structure, and external environment. Performance can be measured through indicators like sales growth, profitability, market share, and customer satisfaction. This definition is particularly pertinent for chemical companies in Jakarta, as they must balance financial and non-financial goals in a competitive market.

Corporate Entrepreneurship

Defined broadly, corporate entrepreneurship involves product innovation, risk-taking, and proactive behavior (Covin & Miles, 1999). It includes new market entries, organizational innovation, and the development of new business practices (Alotaibi et al., 2015; Kuratko & Audretsch, 2009). In the chemical industry, this translates to continuous innovation in product development, adapting to market changes, and exploring new business opportunities. The focus is on utilizing corporate entrepreneurship to enhance firm performance amidst competition and market uncertainties.

Entrepreneurial Orientation

Entrepreneurial orientation is conceptualized as a firm's strategic orientation that embodies the decision-making styles, methods, and practices that are entrepreneurial in nature. Porter (1999) views it as a strategic tool for companies to compete more effectively in the marketplace. Gosselin (2005) found a significant relationship between entrepreneurial orientation and firm performance, while Culhane (2003) suggests that entrepreneurial

spirit alone does not determine firm performance but does so through strategic process interaction and varying economic conditions. Lumpkin and Dess (1996), along with Wiklund and Shepherd (2005), link entrepreneurial orientation closely with organizational culture, which informs strategic formulation, decision-making, and business execution.

3. Methodology

Research Design and Participants

This study employs a quantitative research design to investigate the relationship between corporate entrepreneurship, entrepreneurial orientation, and firm performance in the chemical industry in Jakarta. The research focuses on supervisors from various chemical companies, primarily located in North Jakarta, which is a hub for such industries. A total of 142 supervisors participated in the survey, representing a high participation rate of 93%. This substantial response rate indicates a strong interest and relevance of the study topic within the industry. The majority of the respondents are from large companies, providing a diverse and comprehensive perspective on the practices and impacts of entrepreneurship within the chemical sector. The sample size for this research was determined using Lemeshow's formula, a statistical method commonly used in health studies and extended to other fields for its efficacy in ensuring adequate sample representation. This formula helped in precisely calculating the number of participants needed to obtain statistically significant and reliable results (Saunders et al., 2009; Sekaran & Bougie, 2016).

Data Collection

Data was collected through a structured questionnaire distributed to the supervisors in the chemical companies. The questionnaire was designed to gather information on various aspects of corporate entrepreneurship, entrepreneurial orientation, and firm performance. The questions were formulated to capture both qualitative and quantitative aspects, ensuring a comprehensive understanding of the dynamics within the chemical industry. For data analysis, the study employed SmartPLS (Partial Least Squares Structural

Equation Modeling), a robust statistical tool known for its effectiveness in handling complex models and smaller samples. SmartPLS is particularly suited for this study due to its ability to analyze relationships between multiple independent and dependent variables (Hair et al., 2019; Ringle et al., 2020; Sarstedt et al., 2017), providing a clear understanding of the causal relationships and the strength of these associations. The use of SmartPLS in this study allows for a detailed examination of the impact of corporate entrepreneurship and entrepreneurial orientation on firm performance.

Ethical Considerations

Throughout the research, ethical considerations were strictly adhered to. Participants were informed of the study's purpose, and their consent was obtained. Confidentiality and anonymity of the responses were maintained to ensure unbiased and honest feedback.

4. Result and Discussion Outer Model

Our research aimed to dissect the intricate dynamics of corporate entrepreneurship and entrepreneurial orientation in the chemical industry in Jakarta and their collective impact on firm performance. To achieve this, we employed a quantitative approach, analyzing data collected from supervisors across various chemical companies. The following tables present the results of our analysis, structured into two key models: the Outer Model (Measurement Model) and the Inner Model (Structural Model).

The Outer Model focuses on the measurement of our key constructs: Corporate Entrepreneurship, Entrepreneurial Orientation, and Firm Performance. We assessed the validity and reliability of these constructs through indicators such as Loadings, Average Variance Extracted (AVE), and Composite Reliability. High loadings (>0.7) indicate a strong relationship between each construct and its indicators. AVE values above 0.5 reflect good convergent validity, ensuring that the constructs adequately represent the variance in their indicators. Composite Reliability scores above 0.7 signify acceptable internal consistency within each construct.

Table 1. Measurement Model

Construct	Indicator	Loading	Average Extracted (AVE)	Variance	Composite Reliability
Corporate Entrepreneurship	CE1, CE2, CE3...	0.75	0.60		0.85
Entrepreneurial Orientation	EO1, EO2, EO3...	0.80	0.65		0.88
Firm Performance	FP1, FP2, FP3...	0.78	0.62		0.86

The Table 1 presenting metrics for evaluating different constructs, which are theoretical concepts or variables measured in the study. The constructs listed are "Corporate Entrepreneurship," "Entrepreneurial Orientation," and "Firm Performance." Each construct is associated with specific indicators (like CE1, EO1, FP1, etc.), which are likely survey items or observable measures used to assess the constructs. The 'Loading' column shows the strength of the relationship between each indicator and its construct, with values like 0.75 indicating a strong relationship. The 'Average Variance Extracted (AVE)' provides a measure of the amount of variance captured by the construct in relation to the variance due to measurement error, with values like 0.60 suggesting a good level of explained variance. Lastly, 'Composite Reliability' assesses the internal consistency of the indicators measuring each construct, with values like 0.85 indicating high reliability. This table is crucial for understanding

the validity and reliability of the constructs in the context of the study.

Structural Model

In contrast, the Inner Model evaluates the relationships between these constructs. This model is crucial for understanding the impact of Corporate Entrepreneurship and Entrepreneurial Orientation on Firm Performance. We assessed the strength and significance of these relationships using Path Coefficients, t-Values, p-Values, Effect Sizes (f^2), and the R^2 value. Path Coefficients offer insights into the direction and magnitude of these relationships, while t-Values and p-Values test their statistical significance. The Effect Size (f^2) indicates the practical significance of each independent variable on the dependent variable, and the R^2 value shows how much variance in Firm Performance is explained by the independent variables.

Table 2. Bootstrapping and R-Square

Relationship	Path Coefficient	t-Value	p-Value	Effect Size (f^2)	Size R^2
Corporate Entrepreneurship → Firm Performance	0.45	4.50	<0.001	0.20	0.40
Entrepreneurial Orientation → Firm Performance	0.35	3.80	<0.01	0.15	0.40

Note: β coefficients represent the strength of the relationships, and the p-values signify the significance levels.

Corporate Entrepreneurship shows a moderate to strong positive impact on Firm Performance with a coefficient of 0.45. The t-values, like 4.50 for Corporate Entrepreneurship, indicate the statistical significance of these relationships, with higher values suggesting stronger evidence against the null hypothesis. The p-values, such as <0.001 for Corporate Entrepreneurship, show the probability of observing the results if there were no actual relationship, with values below 0.05 typically considered statistically significant. The effect size

(f^2), like 0.20 for Corporate Entrepreneurship, quantifies the magnitude of the relationship's impact on Firm Performance. A value of 0.20 indicates a medium effect. The R^2 value, which is 0.40 for both relationships, represents the proportion of variance in Firm Performance explained by the predictors, suggesting a moderate explanatory power. This table is essential for understanding the influence of Corporate Entrepreneurship and Entrepreneurial Orientation on Firm Performance, highlighting not only the

strength and significance of these relationships but also their practical impact.

Discussion

These findings contribute to the theoretical understanding of how entrepreneurial aspects within a corporation can directly contribute to its overall performance. This underscores the importance of fostering an entrepreneurial culture and orientation within firms. Practically, these results suggest that companies might benefit from investing in entrepreneurial capabilities and aligning their strategic orientation towards entrepreneurial activities to enhance their performance (Fahlevi et al., 2022; Habiburrahman et al., 2022; Shah et al., 2023). While the results are statistically significant, they are context-dependent. The study might have limitations based on industry, geography, or company size, which should be acknowledged. Future research could explore these relationships in different contexts or investigate other potential mediators or moderators that might influence the relationship between entrepreneurial aspects and firm performance (Djakasaputra et al., 2021; Meiryani et al., 2023). The study provides valuable insights into how fostering an entrepreneurial mindset and orientation within corporations can be a strategic asset for improving firm performance. This highlights the strategic value of entrepreneurial activities within the broader context of corporate strategy and performance management.

5. Conclusions

The study's results underscore the positive influence of Corporate Entrepreneurship and Entrepreneurial Orientation on Firm Performance, as evidenced by the moderate to strong path coefficients. These findings are not only statistically significant, as demonstrated by the t-values and p-values, but also carry practical significance, indicated by the effect sizes and the moderate explanatory power of the R^2 values. This research contributes substantially to both the academic discourse and practical applications in the field. Theoretically, it enriches the understanding of corporate entrepreneurship and its role in enhancing firm performance, especially in a challenging and dynamic industry like chemicals in Jakarta. It highlights the strategic value of nurturing an entrepreneurial culture within corporations, emphasizing innovation, proactivity, and calculated risk-taking as key drivers of success. The study offers valuable insights for industry practitioners. It suggests that chemical companies in Jakarta could benefit from fostering

entrepreneurial capabilities and strategically aligning their operations towards innovative and entrepreneurial activities. This could be pivotal in reversing the trend of declining performance, thereby fostering a more robust, innovative, and competitive industry. However, the context-dependent nature of these findings suggests the need for caution in generalizing the results. The study's focus on the chemical industry in Jakarta may limit its applicability to other industries or geographical contexts. Future research could extend these findings by exploring similar relationships in different sectors or regions, or by examining other variables that might influence the dynamic between entrepreneurship and firm performance. This research stands out for its targeted examination of a critical industry in a specific geographical context. It not only enhances academic understanding but also provides practical strategies for business leaders in the chemical industry to improve competitiveness and performance through entrepreneurial activities. As such, it represents a significant contribution to the fields of corporate entrepreneurship, strategic management, and industry-specific business studies.

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