

**THE ROLE OF MODERATION VOLATILITY, UNCERTAINTY, COMPLEXITY, AMBIGUITY ON THE RELATIONSHIP OF COMPANY COMPETENCE ON FIRM PERFORMANCE**

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**ABSTRACT**

The business world's current condition, which covers volatility, uncertainty, complexity, and ambiguity, is believed to cause a decline in the firm's Performance. Strong corporate competence is needed to continue developing and remaining sustainable. They used Structural Equation Modeling (SEM) with respondents of as many as 50 company employees. Company Competence (CC) has proven to have a positive and significant effect ( $\beta=0.702$ ,  $P<0.001$ ) on Firm's Performance (FP). The Moderating Role of VUCA Conditions (Volatility, Uncertainty, Complexity, Ambiguity) is proven to strengthen the relationship between the Company's Competence (CC) and the Firm's Performance (FP). Companies with high competence will produce high Performance, even though business conditions are increasingly high volatility, uncertainty, complexity, and ambiguity. The practical implications of this research are how important it is to improve the Company's competence amid volatility, uncertainty, complexity, and ambiguity in the business world to continue creating a growing and sustainable firm performance.

**Keywords:** Company Competence, Firm Performance, VUCA Conditions.

**1. INTRODUCTION**

Company competence deals with VUCA conditions, such as volatility, uncertainty, complexity, and ambiguity. It can improve company performance, make the Company professionally healthy, and contribute to the creation of corporate sustainability. Marketing, Technological, and Organizational competencies are needed to improve Company Performance. Digital transformation brings significant challenges to managing competencies. Using digital technology requires new and existing competencies to improve business efficiency and introduce digital innovation. However, the combination of competencies for digital transformation is challenging, as the scale of organizational change requires. The conflict between the new and existing operating logic will result in employee stress and rejection, Pihlajamaa *et al.*(2021). Carrying out the growth of Initiative Competence takes the character of the Company Competence of Human Resources to face market turmoil, Neamt (2021).

**2. LITERATURE REVIEW**

The Company's competence in the form of product innovation and marketing innovation has a significant and positive effect on the Firm performance dimension, Gupta (2021). According to Kitenga *et al.* (2020), a Company's competence (CC) has a direct and significant effect on the Firm Performance (FP).

3. The effect of the Company's Cash Conversion Cycle on the Company's cost of equity is a significant moderating effect of product market conditions and information asymmetry. Positive relationships become weaker or more robust with greater competition and uncertainty of demand (information asymmetry), Lee et al.(2023). According to Ma et al.(2021), The competitive advantage for large companies comes from their suppliers' investment in innovative products and processes, driven by a positive relationship climate. The fundamental obstacle lies in the conditions that generally characterize the relationship of buyers and suppliers, the degree of asymmetric dependence between business partners. Asymmetries like these cause damage to relationships, increase the likelihood of conflict and negatively impact the parties' Performance. Considering that such dependency asymmetries tend to persist, large buyers face the challenge of promoting a relationship environment that incentivizes suppliers to invest in innovation—supplier behavior by reducing the effects of risk perception and ambiguity arising from dependency asymmetry situations. There is a moderating effect of buyer information sharing in shaping the perceived uncertainty of suppliers.

### 3. CONCEPTUAL FRAMEWORK AND RESEARCH HYPOTHESIS

The Conceptual Framework of the Research Model can be seen in Figure 1.

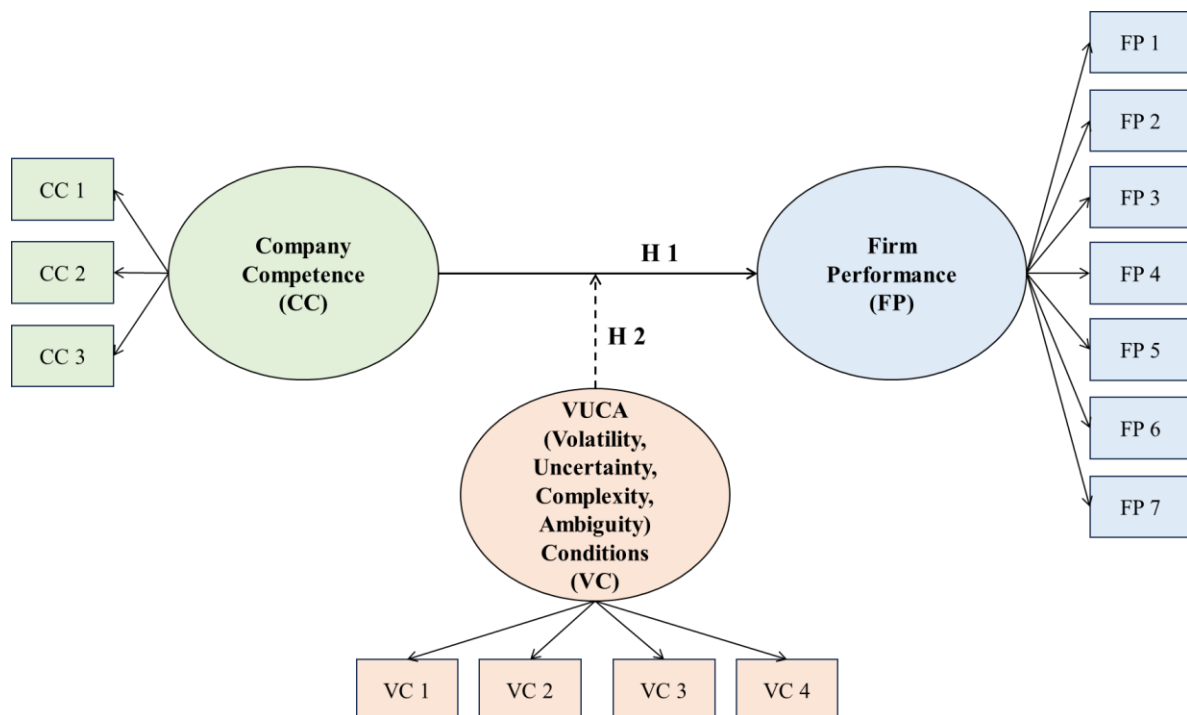


Figure 1. Conceptual Framework and Research Hypothesis

Description of Notation:

Company's Competence (CC)

CC1: Marketing Competence: We can set up new distribution channels, communicate with our customers, and manage our sales force.

CC2: Technological Competence: We can maintain the effectiveness and efficiency of facilities and apply adequate technology to produce our products and services.

CC3: Organizational Competence: We quickly decide on essential issues and integrate workflows from multiple departments with effective organizational design.

Firm Performance (FP)

FP1: ROE Our Company is better than competing companies similar to ours.

FP2: ROI (Return on investment) Our Company is better than competing companies similar to our business.

FP3: Our Company's Cash Ratio is better than that of competitors similar to our business.

FP4: The Debt Collection Period in our Company is better than that of competing companies similar to our business.

FP5: Inventory Turnover in our Company is better than competing companies similar to our business.

FP6: Total Asset Turnover in our Company is better than that of competing companies similar to our business.

FP7: Inventory Turnover in our Company is better than that of competing companies similar to our business.

VUCA Condition (VC)

VC1: Volatility: In our type of business, price preferences and Product Quality and Quantity experience Volatility from time to time.

VC2: Uncertainty: Technology changes rapidly amid conditions full of business uncertainty.

VC3: Complexity: Licensing from regulators is too convoluted and very complex, requiring funds and time to complete.

VC4: Ambiguity: Understanding existing regulations causes differences in meaning (Ambiguous), so it can cause problems in its implementation.

Hypothesis 1 (H1): Company's Competence (CC) positively and significantly affects Firm Performance (FP).

Hypothesis 2 (H2): There is a moderating role of VUCA (VC) conditions on the relationship of the Company's Competence (CC) with affects Firm Performance (FP).

#### 4. STRUCTURAL EQUATION MODELING (SEM)

Structural Equation Modeling (SEM) can be seen in Figure 2.

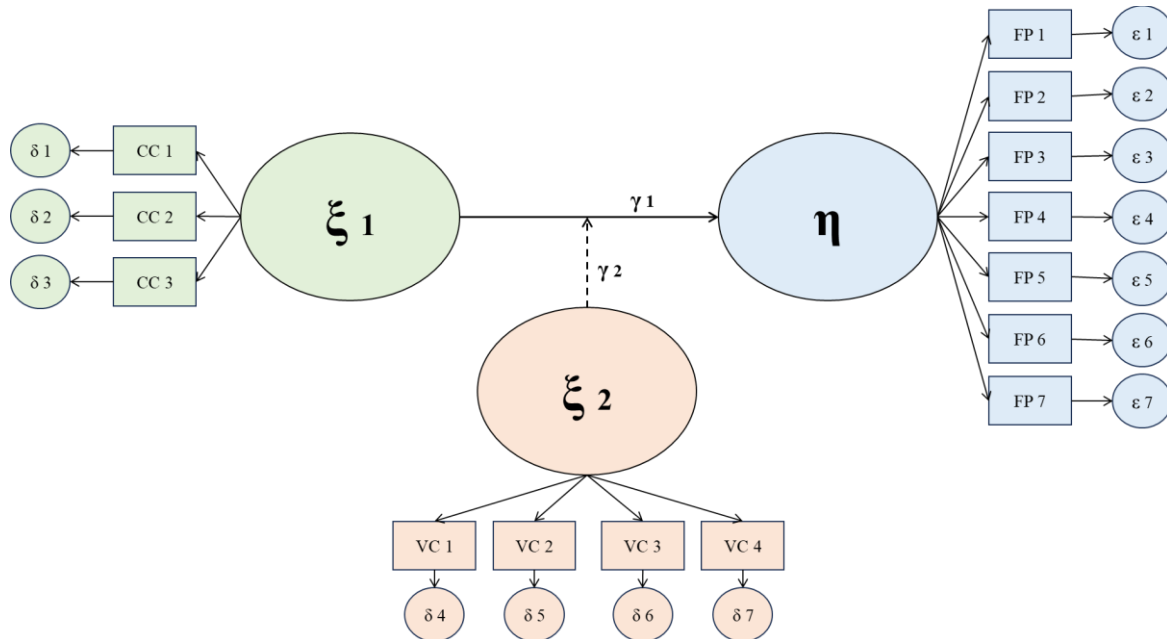


Figure 2. Structural Equation Modeling (SEM)

Notations used in Structural Equation Modeling (SEM):

ξ1: Exogenous Latent Variables (Company's Competence).

ξ2: Moderation Variables (VUCA (VC) conditions).

η: Endogenous Latent Variables (Firm Performance).

δ: Measurement error on the Exogenous latent variable.

ε: Measurement error on the manifest variable for latent variable Endogene.

γ: Coefficient of influence of exogenous variables.

Outer Model Equation:

Company's Competence (CC) or (ξ1):

$$CC_1 = \lambda_{CC1}\xi_1 + \delta_1$$

$$CC_2 = \lambda_{CC2}\xi_1 + \delta_2$$

$$CC_3 = \lambda_{CC3}\xi_1 + \delta_3$$

VUCA conditions (VC) or (ξ2):

$$VC_1 = \lambda_{VC1}\xi_2 + \delta_4$$

$$VC_2 = \lambda_{VC2}\xi_2 + \delta_5$$

$$VC_3 = \lambda_{VC3}\xi_2 + \delta_6$$

$$VC_4 = \lambda_{VC4}\xi_2 + \delta_7$$

Firm Performance (FP) or ( $\eta$ ):

$$FP_1 = \lambda_{FP1}\eta + \varepsilon_1$$

$$FP_2 = \lambda_{FP2}\eta + \varepsilon_2$$

$$FP_3 = \lambda_{FP3}\eta + \varepsilon_3$$

$$FP_4 = \lambda_{FP4}\eta + \varepsilon_4$$

$$FP_5 = \lambda_{FP5}\eta + \varepsilon_5$$

$$FP_6 = \lambda_{FP6}\eta + \varepsilon_6$$

$$FP_6 = \lambda_{FP6}\eta + \varepsilon_6$$

Inner Model Equation:

$$\text{Firm Performance (FP) or } (\eta) = \gamma_1\xi_1 + \gamma_2\xi_1 * \xi_2 + \delta_8$$

## 5. METHODS

This study analyzes two hypotheses proposed, namely Hypothesis 1 (H1), the effect of Corporate Competence (CC) on Company Performance (FP), and Hypothesis 2 (H2): The Role of VUCA Condition Moderation (VC) on the relationship between Corporate Competence (CC) and Company Performance (FP). The sample used was Fifty (50) employees of the Mining Company.

It is using Structural Equation Modeling. Interpretation of the comprehensive analysis results is in harmony with the nature of multivariate analysis, which already considers the relationship between variables. Structural equation models (SEM), the least-squares, and using factor-based methods. There is a ten-model fit and quality index (Kock, 2010), as follows (refer to Table 1):

**Table 1. Model fit and quality index**

No	Model Fit & Quality Index	Criteria Fit
1	Average Path Coefficient (APC)	$p < 0.001$
2	Average R-squared (ARS)	$p < 0.001$
3	Average Adjusted R-squared (AARS)	$p < 0.001$
4	Average block Variance Inflation Factor (AVIF)	Acceptable if $\leq 5$
		Ideally $\leq 3.3$
5	Average Full Collinearity VIF (AFVIF)	Acceptable if $\leq 5$
		Ideally $\leq 3.3$
6	Tenenhaus GoF (GoF)	Small $\geq 0.1$
		Medium $\geq 0.25$
		Large $\geq 0.36$
7	Simpson's paradox ratio (SPR)	Acceptable if $\geq 0.7$
		Ideally = 1
8	R-squared contribution ratio (RSCR)	Acceptable if $\geq 0.9$

		Ideally = 1
9	Statistical suppression ratio (SSR)	Acceptable if $\geq 0.7$
10	Nonlinear- bivariate causality- direction ratio (NLBCDR)	Acceptable if $\geq 0.7$

**6. RESULTS AND DISCUSSION**

**Table 2. Composite reliability coefficients, Cronbach's alpha coefficients, and Average variances extracted (AVE)**

Latent Variables	Composite reliability coefficients	Cronbach's alpha coefficients	Average variances extracted (AVE)
Company's Competence (CC)	0.887	0.808	0.563
VUCA conditions (VC)	0.917	0.859	0.789
Firm Performance (FP)	0.973	0.966	0.836

**Table 3. Analysis Results Model fit and quality index**

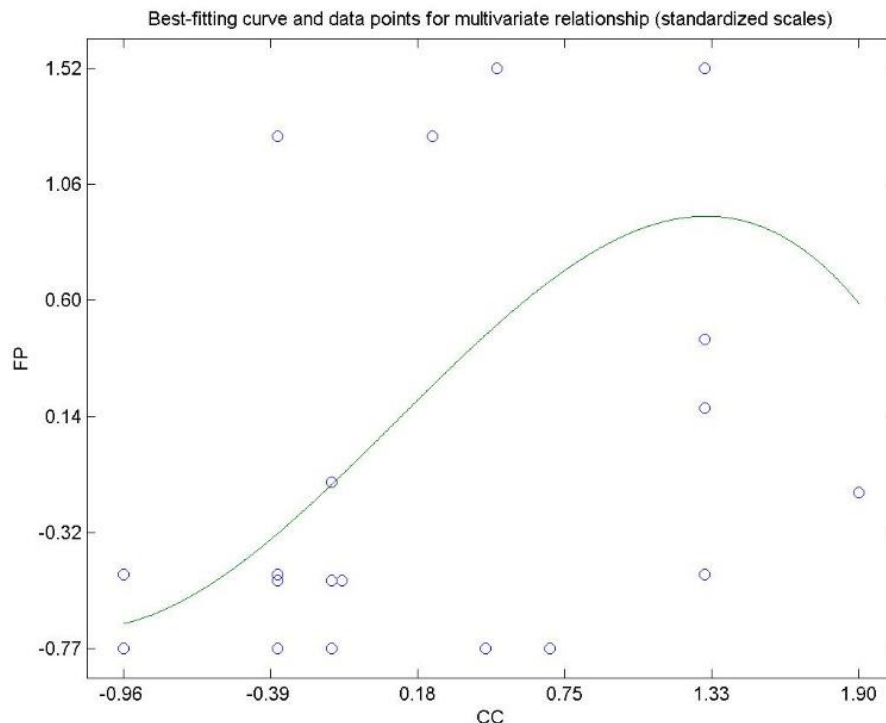
No	Model fit and quality Index	Criteria Fit	Analysis results	Remarks
1	Average Path Coefficient (APC)	$p < 0.001$	0.415 $p < 0.001$	Good Significant
2	Average R-squared (ARS)	$p < 0.001$	0.588 $p < 0.001$	Good Significant
3	Average Adjusted R-squared (AARS)	$p < 0.001$	0.570 $p < 0.001$	Good Significant
4	Average block Variance Inflation Factor (AVIF)	Acceptable if $\leq 5$		
		Ideally $\leq 3.3$	1.233	Ideally
5	Average Full Collinearity VIF (AFVIF)	Acceptable if $\leq 5$		
		Ideally $\leq 3.3$	1.826	Ideally
6	Tenenhaus GoF (GoF)	Small $\geq 0.1$		
		Medium $\geq 0.25$		
		Large $\geq 0.36$	0.654	Large
7	Simpson's paradox ratio	Acceptable if $\geq 0.7$		

	(SPR)	Ideally = 1	1	Ideally
8	R-squared contribution ratio (RSCR)	Acceptable if $\geq 0.9$		
		Ideally = 1	1	Ideally
9	Statistical suppression ratio (SSR)	Acceptable if $\geq 0.7$	1	Accepted
10	Nonlinear- bivariate causality- direction ratio (NLBCDR)	Acceptable if $\geq 0.7$	1	Accepted

**Table 4. R-squared coefficients, Adjusted R-squared coefficients, Q-squared coefficients**

Latent Variables	R-squared coefficients	Adjusted R-squared coefficients	Q-squared coefficients
Firm Performance (FP)	0.588	0.570	0.607

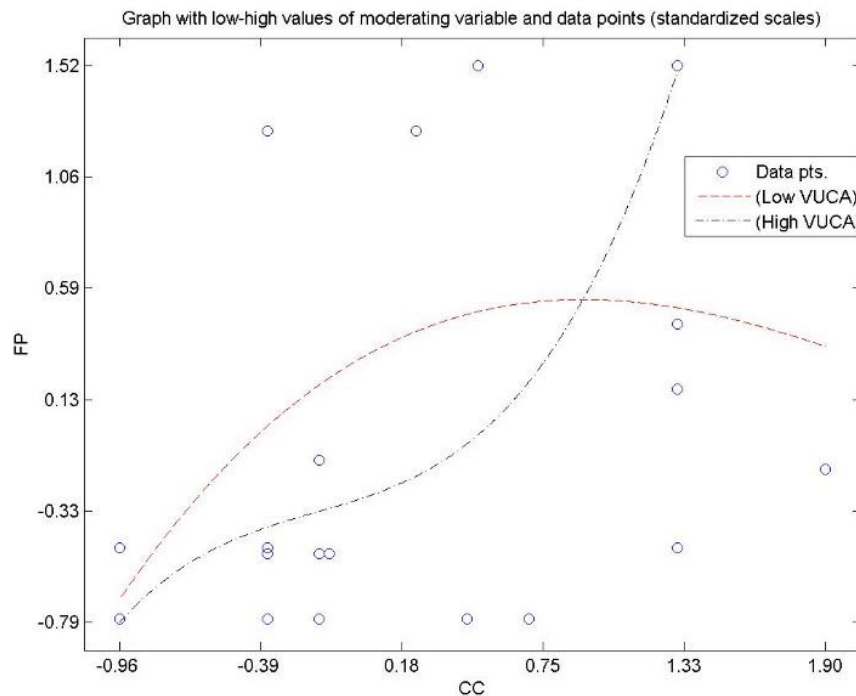
**Results of Hypothesis Analysis (H1)**



**Figure 3.** The best-fitting curve for a multivariate relationship between Company's Competence (CC) and Firm Performance (FP)

Influence Company's Competence (CC) towards Firm Performance (FP) is Positive ( $\beta = 0.70$ ) and Significant ( $p < 0.001$ ). This result can prove empirically and statistically that the more significant the Company's Competence (CC) given will lead to more excellent Firm Performance (FP).

**Results of Hypothesis Analysis (H2)**



**Figure 4. Graph with low-high values of moderating variables and data points (standardized scales)**

In Figure 4, it can be seen that the role of moderation of VUCA Conditions (VC) is related to the relationship between Company Competence (CC) and Firm Performance (FP). In Low VUCA Conditions (Low VUCA), the higher the Company's Competence (CC), it only results in the achievement of Firm Performance (FP), which is not so high in contrast to high VUCA Conditions (High VUCA); the higher the Company's Competence (CC), the higher the achievement of Firm Performance (FP).

**7. CONCLUSION**

Corporate Competence (CC) and the role of moderation of VUCA conditions in this research model can explain the influence on Company Performance (FP) by 59%, and other variables outside this study explain the remaining 41%. Company Competence (CC) needs to be improved based on the results of this study, which proves empirically and theoretically that it causes an increase in Company Performance (FP). The condition of VUCA (VC) does not need



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to be too worried as long as the Company's Competence (CC) continues to improve.

## **REFERENCES**

- Gupta, A. K. (2021). Innovation dimensions and firm performance synergy in the emerging market: A perspective from Dynamic Capability Theory & Signaling Theory. *Technology in Society*, 64. <https://doi.org/10.1016/j.techsoc.2020.101512>
- Kitenga, G., Kilika, J. M., & Muchemi, A. W. (2020). Dynamic Capabilities and Performance: The Mediating Role of Firm Competence. *Journal of Economics and Business*, 3(1), 450–474. <https://doi.org/10.31014/aior.1992.03.01.211>
- Kock, N. (2010). Regressing WarpPLS in e-collaboration studies: An overview of five main analysis steps. *International Journal of E-Collaboration*, 6(4), 1–11. <https://doi.org/10.4018/jec.2010100101>
- Lee, J., Kim, H. T., & Pae, S. (2023). Does the cash conversion cycle affect the cost of equity capital? *Applied Economics Letters*, 30(4). <https://doi.org/10.1080/13504851.2021.1996525>
- Ma, S., Hofer, A. R., & Aloysius, J. (2021). Supplier dependence asymmetry and investment in innovation: The role of psychological uncertainty. *Journal of Purchasing and Supply Management*, 27(2). <https://doi.org/10.1016/j.pursup.2021.100674>
- Neamt, S. (2021). Review Investigation in Discovering the Human-Related Role to Shape a Company Competence. *Journal of Civil Engineering Frontiers*, 2(02). <https://doi.org/10.38094/jocef20233>
- Pihlajamaa, M., Malmelin, N., & Wallin, A. (2021). Competence combination for digital transformation: a study of manufacturing companies in Finland. *Technology Analysis and Strategic Management*. <https://doi.org/10.1080/09537325.2021.2004111>