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Dynamic Convergence as a Moderating Force: Entrepreneurial Orientation, Employee Performance, and the Pursuit of Firm Agility

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ABSTRACT

Firm agility has emerged as a critical organisational capability in environments characterised by competitive intensity and rapid technological disruption, yet the mechanisms through which entrepreneurial orientation (EO) generates agility and individual performance outcomes remain theoretically underspecified. This study develops and tests a moderated mediation framework wherein EO influences employee performance both directly and indirectly through firm agility as a mediating conduit, with dynamic convergence defined as the degree to which generationally diverse cohorts achieve integrative alignment in adaptive values and collaborative practices moderating the agility–performance relationship. Grounded in dynamic capabilities theory and the resource-based view, six hypotheses are tested using PLS-SEM combined with necessary condition analysis (NCA) on a dyadic manager–employee dataset of 300 matched pairs from Indonesian SMEs. Results confirm that EO exerts a dominant direct effect on firm agility and a moderate direct effect on employee performance, while firm agility partially mediates the EO–performance pathway. Dynamic convergence amplifies the agility–performance relationship and satisfies necessity thresholds alongside EO and firm agility. The study contributes by establishing dynamic convergence as a theoretically grounded boundary condition and demonstrating that firm agility constitutes the most binding necessary prerequisite for superior employee performance in emerging-market SME contexts.

Keywords: Entrepreneurial Orientation, Firm Agility, Employee Performance, Dynamic Convergence
JEL Classifications: M13, M10, M54

1. INTRODUCTION

The capacity of organisations to rearrange their resources and react promptly to environmental fluctuations conceptualised as firm agility has emerged as a predictor of sustained competitive advantage in the presence of volatility and uncertainty (Al-Musawi, 2020; Arndt and Bach, 2015). Entrepreneurial orientation (EO), defined as the firm's proneness to risk-taking, proactiveness, and innovative activities, can be conceived as a foundational antecedent to adaptive behaviours within the framework of Dynamic Capabilities Theory that argues that higher-order management processes facilitate the integration and rearrangement of competencies in turbulent environments (Miller, 2011; Teece, 1996). However, the processes through which EO translates into agility effects have remained particularly unclear in the emerging market context characterised by singular contingencies on strategic processes.

An important but not sufficiently explored avenue by which EO may be seen to influence organisational agility is employees' performance how effectively they attain their assigned goals and demonstrate adaptive work behaviour (Aguinis and Glavas, 2012; Pulakos et al., 2000). Organisations with an EO-driven approach promote an environment that is conducive to autonomy and learning, fuelling employees' adaptive behaviour that is expected to positively influence organisational agility. This avenue has not

been sufficiently empirically explored in the entrepreneurship literature, an important research gap that the present study addresses (Rosário et al., 2022).

Empirical evidence on the employee performance firm agility relationship reveals persistent and theoretically consequential inconsistency (Coutinho et al., 2018). Davidescu et al. (2020) demonstrated that adaptive employee performance consistently contributes to organisational responsiveness in Asian manufacturing contexts, affirming the centrality of human capital in building agility. In contrast, Bindl et al. (2022) found this relationship contextual rather than universal in organisations characterised by high workforce heterogeneity, improvements in individual performance did not reliably coalesce into firm agility owing to coordination fragmentation across divergent employee groups. This inconsistency signals an unmodelled boundary condition governing when employee performance successfully translates into collective responsiveness (Hutter et al., 2025).

A parallel inconsistency emerges at the EO–agility level when generational workforce composition is considered. Bilan et al. (2020) reported that EO robustly predicts firm agility in emerging-economy SMEs without accounting for generational composition, implying leadership-level strategic orientation suffices as a standalone predictor. However, Delabre et al. (2023) demonstrated that generational diversity creates substantive differences in collective adaptation firms with pronounced intergenerational divergence exhibited lower adaptive responsiveness even under equivalent strategic orientation. This contradiction reveals that models omitting generational dynamics risk producing overestimated estimates, and that studies integrating generational convergence as a moderating condition on the employee performance–agility pathway remain conspicuously absent (Coutinho et al., 2018). To resolve these twin empirical inconsistencies, this study introduces dynamic convergence the extent to which generationally diverse cohorts achieve integrative alignment in adaptive values and collaborative practices as an active moderating boundary condition on the employee performance–firm agility relationship. Five hypotheses are tested through PLS-SEM combined with necessary condition analysis (NCA) in Indonesian SME contexts, contributing to the literature by establishing dynamic convergence as the explanatory mechanism reconciling prior divergent findings.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Entrepreneurial Orientation and Firm Agility

Grounded in dynamic capabilities theory, entrepreneurial orientation (EO) reflects the strategic disposition of a firm toward proactiveness, innovativeness, and risk-taking (Covin and Slevin, 1990; Miller, 1987). Firms with elevated EO scan environmental signals and mobilise resources accordingly, enabling rapid reconfiguration of operational processes that constitutes the behavioural foundation of firm agility (Tallon and Pinsonneault, 2011; Teece, 1996). Empirical corroboration across emerging-market SME contexts supports this directional relationship (Haseeb et al., 2019). The Resource-Based View establishes that EO-driven organisations cultivate climates of autonomy and risk tolerance that elevate employee motivation and adaptive performance (Barney, 1991). Employees within entrepreneurially oriented firms demonstrate heightened task engagement and proactive work behaviours consistent with performance enhancement (Pulakos et al., 2000). Firm agility, characterised by rapid sensing and response capabilities, creates organisational conditions demanding continuous adaptive behaviour (Doz and Kosonen, 2008). Agile organisations implement dynamic routines—iterative feedback cycles, rapid task revision, and cross-functional collaboration—that sharpen role clarity and raise performance standards, collectively stimulating employee performance (Bindl et al., 2022).

- H_1: Entrepreneurial orientation exerts a significant positive direct effect on firm agility
- H_2: Entrepreneurial orientation exerts a significant positive effect on employee performance
- H_3: Firm agility exerts a significant positive effect on employee performance.

2.2. The Mediating Role of Firm Agility

While EO directly stimulates employee performance, this relationship is theorised to operate partially through firm agility as an intermediate mechanism. EO-induced agility creates organisational conditions—iterative feedback cycles, rapid task revision, and cross-functional collaboration that sharpen role clarity, elevate performance expectations, and reinforce adaptive work behaviours at the individual level (Bindl et al., 2022; Doz and Kosonen, 2008). Firm agility thus serves as the organisational conduit through which strategic entrepreneurial posture is translated into observable employee performance outcomes, consistent with mediation logic within dynamic capabilities frameworks (Teece, 2003).

- H_4: Firm agility mediates the relationship between entrepreneurial orientation and employee performance.

2.3. Dynamic Convergence as Moderator of Employee Performance–Firm Agility

Dynamic convergence captures the degree to which generationally diverse employee cohorts achieve integrative alignment in adaptive values, digital work orientations, and collaborative practices. Building on social identity theory Park (2017) and generational cohort theory (Coutinho et al., 2018; Davidescu et al., 2020), it is proposed that high dynamic convergence amplifies individual employee performance contributions through cross-generational knowledge transfer, reduced coordination friction, and shared adaptive mental models, translating into superior firm agility (Lyons, 1999). Conversely, low dynamic convergence introduces intergenerational fragmentation that prevents individual performance from coalescing into collective responsiveness (Twenge and Twenge, 2020). This moderating logic directly addresses the inconsistency between (Bindl et al., 2022) by specifying dynamic convergence as the boundary condition determining the strength of the employee performance–firm agility relationship.

- H_4: Dynamic convergence positively exerts a significant positive effect on employee performance

- H_5: Dynamic convergence positively moderates the indirect effect on firm agility through employee performance.

2.4. Research Framework

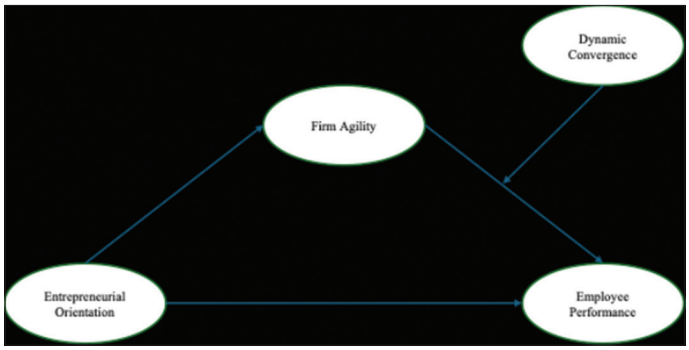
The conceptual model (Figure 1) advances a moderated mediation framework wherein entrepreneurial orientation (EO) exerts both a direct effect on firm agility and an indirect effect through employee performance, grounded in dynamic capabilities theory and the resource-based view (Barney, 1991; Teece, 1996). EO stimulates adaptive employee behaviours that in aggregate elevate firm-level agility (Pulakos et al., 2000; Tallon and Pinsonneault, 2011). Dynamic convergence moderates the employee performance–firm agility relationship, functioning as a boundary condition amplifying or attenuating the degree to which individual performance contributions coalesce into collective organisational responsiveness (Lyons, 1996), generating testable propositions across direct, mediation, and moderated mediation pathways.

3. METHODOLOGY

3.1. Research Design

This study adopts a positivist epistemological stance, employing a quantitative cross-sectional survey design consistent with prevailing methodological norms in entrepreneurship and strategic management research (Hair, 2022; Parry and Bryman, 2006). The unit of analysis is the manager–employee dyad nested within a single SME, mitigating common method bias and percept-percept inflation Podsakoff and Podsakoff, (2019) by segregating predictor and criterion variables across respondent sources (Kock, 2015). Managers assess entrepreneurial orientation and firm agility; employees independently assess employee performance and dynamic convergence, with dyadic integrity preserved through unique firm-dyad codes. The target population comprises Indonesian SMEs across manufacturing, trade, and service sectors (Bilan et al., 2020). Eligibility requires firms to employ 10-250 employees per Indonesian Ministry of Cooperatives classification, maintain at least 3 years of operation, and span a minimum of two generational cohorts—a prerequisite for operationalising dynamic convergence. A purposive sampling strategy supplemented by snowball referrals through industry associations targets 300 matched dyads (600 individual responses). This exceeds the PLS-SEM threshold of 10 observations per structural path (Hair, 2022), accommodates dyadic non-matching and non-response, and ensures sufficient power for NCA bottleneck analysis (Dul, 2016; Dul et al., 2021). Based on a conservative 60% dyadic response rate, 500 firm-level invitations are distributed.

Figure 1: Research framework



3.2. Measurement Instruments

All constructs are operationalised using established, validated reflective measurement scales, wherein indicators are conceptualised as causal manifestations of their underlying latent variables and expected to be highly intercorrelated (Hair, 2022). Items employ a seven-point Likert scale (1 = strongly disagree; 7 = strongly agree), maximising scale variance consistent with prior instrument applications in Asian SMEs. Entrepreneurial orientation is measured using Hughes et al. (2007) nine-item scale capturing innovativeness, risk-taking, and proactiveness, administered to managers. Firm agility is assessed via Tallon and Pinsonneault, (2011) eight-item instrument covering sensing, responding, and reconfiguring capabilities, also manager-rated. Employee performance is operationalised through Pulakos et al. (2000) ten-item scale encompassing task, adaptive, and contextual performance dimensions, completed by employees. Dynamic convergence, as a newly adapted construct, is derived from Lyons, (1996) generational diversity framework. An initial pool of twelve candidate indicators is subjected to expert panel review by five academics in organisational behaviour, yielding eight retained items following content validity assessment. Back-translation between English and Bahasa Indonesia ensures linguistic equivalence Brislin (1970), and a pilot test with 30 dyads confirms item clarity and preliminary reliability prior to main data collection. Control variables—firm age, firm size, and industry sector—are self-reported by managers.

3.3. Analytical Strategy: PLS-SEM and NCA

Partial least squares structural equation modelling (PLS-SEM), executed in SmartPLS 4, serves as the primary analytical tool. PLS-SEM is selected over covariance-based SEM given the newly adapted dynamic convergence construct for which normality cannot be assumed, potential non-normality of SME responses, and the objective of predictive accuracy alongside theoretical testing (Hair, 2022; Ringle and Sarstedt, 2016). Measurement model assessment evaluates internal consistency reliability (Cronbach's alpha and composite reliability ≥0.70), convergent validity (AVE ≥0.50), and discriminant validity via the Heterotrait-Monotrait ratio (HTMT < 0.85), preferred for superior sensitivity over the Fornell-Larcker criterion (Henseler, 2017). The structural model is estimated through 5,000 bootstrapping iterations with bias-corrected confidence intervals. Moderated mediation employs the product-indicator approach, computing conditional indirect effects of EO on firm agility through employee performance at ±1 standard deviation of dynamic convergence (Hayes, 2013). Effect sizes are reported as f^2, multicollinearity assessed via VIF (<5.0), and common method bias evaluated through the marker variable technique (Lindell and Brandt, 2000). Necessary condition analysis (NCA) complements PLS-SEM by establishing whether employee performance and dynamic convergence constitute necessary rather than merely sufficient conditions for firm agility (Dul, 2016; Dul et al., 2021), employing CE-FDH and CR-FDH ceiling techniques with $d \geq 0.10$ as the meaningfulness threshold, validated through a 1,000-permutation test.

4. RESULTS

4.1. Measurement Model

It can be observed that the measurement model demonstrates good psychometric properties for all four reflective constructs (Table 1). Dynamic convergence results show that Cronbach's alpha and composite reliability are 0.852 and 0.895, respectively, with an AVE of 0.631, which surpasses the set limits of 0.70 and 0.50, respectively (Hair et al., 2019). Outer loadings for all constructs range from 0.679 for DC3 to 0.853 for DC1. Although the outer loading for DC3 is marginally lower, it was retained as AVE was higher than the set limits, thus maintaining content validity (Fornell and Larcker, 1981). As expected, entrepreneurial orientation shows higher reliability with values of CA = 0.923, CR = 0.942, and AVE = 0.765, with all loadings being higher than 0.86. Similarly, firm agility shows satisfactory results with CA = 0.902, CR = 0.927, and AVE = 0.719, whereas employee performance also shows satisfactory results with CA = 0.874, CR = 0.909, and AVE = 0.668, with all loadings ranging from 0.702 to 0.871. These results confirm that each construct explains more than a majority of the variance of its respective indicators, thus establishing reliability and convergent validity for structural path estimation (Henseler, 2017).

Discriminant validity is assessed via the Heterotrait-Monotrait (HTMT) ratio, with all inter-construct values falling below the conservative 0.85 threshold (Henseler, 2012). The highest HTMT is observed between employee performance and entrepreneurial orientation (0.808), followed by entrepreneurial orientation and firm agility (0.804), with both remaining within acceptable bounds (Table 2). The interaction term (dynamic convergence × firm agility) yields uniformly negligible HTMT values (≤0.192), confirming its empirical distinctiveness from substantive constructs and validating the moderated mediation specification.

4.2. Structural Model

Table 3 showed that four hypotheses achieve statistical significance, affirming the structural pathways proposed. The entrepreneurial orientation–employee performance relationship registers $\beta = 0.367$ ($t = 5.523$, $P < 0.001$, $f^2 = 0.134$), a moderate effect confirming H_1 and reflecting the capacity of entrepreneurially oriented firms to cultivate conditions conducive to adaptive performance (Cohen, 1988). The path toward firm agility emerges as the model's most commanding estimate ($\beta = 0.734$, $t = 22.782$, $P < 0.001$, $f^2 = 1.167$)—an f^2 magnitude well beyond the large-effect threshold cementing entrepreneurial orientation as the principal antecedent of organisational responsiveness and substantiating H_2. Firm agility subsequently influences employee performance ($\beta = 0.307$, $t = 4.507$, $P < 0.001$, $f^2 = 0.096$), confirming H_3 with a small-to-moderate effect. Dynamic convergence registers an independent contribution to employee performance ($\beta = 0.205$,

Table 1: Measurement model assessment: reliability, convergent validity, and indicator loadings

Code	Item	Mean	SD	Outer loadings	CA	CR	AVE
Dynamic convergence					0.852	0.895	0.631
DC1	Our team increasingly synchronizes activities as situations evolve	5.317	1.564	0.853			
DC2	We adjust our actions so that they gradually become more coordinated	5.191	1.521	0.851			
DC3	Differences in goals or approaches decrease as we work toward shared objectives	4.875	1.690	0.679			
DC4	Over time, team decisions become more aligned	5.307	1.422	0.807			
DC5	Over time, team decisions become more mutually reinforcing	5.169	1.703	0.768			
Entrepreneurial orientation					0.923	0.942	0.765
EO1	I actively look for new and creative ways to improve products or processes	5.290	1.492	0.907			
EO2	I take initiative before problems become urgent	5.221	1.554	0.874			
EO3	I am comfortable making decisions even when outcomes are uncertain	5.122	1.590	0.863			
EO4	I work actively to outperform peers/competitors	5.350	1.514	0.865			
EO5	I prefer to carry out tasks in my own way	5.218	1.588	0.865			
Firm agility					**0.902**	**0.927**	**0.719**
FA1	My organization quickly recognizes changes in the external environment	5.281	1.612	0.871			
FA2	My organization can shift resources rapidly when priorities change	5.218	1.583	0.818			
FA3	My organization responds rapidly to unexpected events	5.069	1.672	0.859			
FA4	We implement corrective actions immediately when performance issues arise	5.162	1.532	0.847			
FA5	Processes are reviewed regularly to enable improvements	5.205	1.640	0.843			
Employee performance					**0.874**	**0.909**	**0.668**
FP1	I complete my work to meet required quality standards	5.215	1.601	0.845			
FP2	I willingly help colleagues when they need support	5.297	1.566	0.848			
FP3	I contribute to creating a positive working environment	5.284	1.571	0.850			
FP4	I actively seek out opportunities to learn new skills	5.333	1.562	0.832			
FP5	I put in the effort expected for my role	5.050	1.848	0.702			

Table 2: HTMT ratio criterion for discriminant validity

Construct's	Dynamic convergence	Employee performance	Entrepreneurial orientation	Firm agility	Dynamic convergence × firm agility
Dynamic convergence					
Employee performance	0.763				
Entrepreneurial orientation	0.794	0.808			
Firm agility	0.792	0.789	0.804		
Dynamic convergence × firm agility	0.190	0.099	0.096	0.192	

t = 3.403, P = 0.001, f^2 = 0.046), corroborating H4. Variance inflation factors across all paths remain below 3.0 (Hair, 2022).

4.3. Mediation

The indirect path from entrepreneurial orientation to employee performance, transmitted through firm agility, yields β = 0.225 (t = 4.514, P < 0.001, 95% CI [0.125, 0.321]). Table 4 showed the confidence interval excludes zero, confirming that firm agility carries a statistically meaningful portion of entrepreneurial orientation's influence on employee performance and substantiating H_6. This result positions firm agility as an organisational conduit through which entrepreneurial posture translates into individual-level performance gains (Hayes, 2013).

4.4. Moderation

The interaction term dynamic convergence × firm agility registers β = 0.091 (t = 2.605, P = 0.009, f^2 = 0.024, 95% CI [0.166, 0.434]), with the confidence interval excluding zero. The small yet meaningful effect size indicates that dynamic convergence amplifies the degree to which firm agility translates into employee performance gains, validating H_5 and substantiating dynamic convergence as an active boundary condition governing the agility–performance relationship (Hair, 2022) (Table 5).

4.5. Predictive Power

The model demonstrates moderate-to-substantial explanatory power across both endogenous constructs. Employee performance attains R^2 = 0.615 (adjusted = 0.610), indicating the predictor set accounts for approximately 61% of its variance, while firm agility yields R^2 = 0.539 (adjusted = 0.537). Q^2 predict values of 0.533 and 0.562 exceed the 0.35 threshold, confirming strong out-of-sample predictive relevance (Shmueli et al., 2016). Table 6 told the RMSE and MAE remain within acceptable bounds for both constructs, corroborating the model's predictive precision.

Model fit indices confirm adequate structural model fit across both specifications. Table 7 global model fit showed the estimated model yields SRMR = 0.062, falling below the 0.08 threshold and indicating acceptable residual discrepancy between observed and implied correlation matrices (Henseler et al., 2016). The NFI of 0.903 surpasses the 0.90 benchmark, reflecting satisfactory normed fit. d_ULS and d_G values remain within acceptable bounds, while chi-square figures are treated as supplementary given PLS-SEM's distribution-free orientation (Hair, 2022).

4.6. Necessary Condition Analysis

NCA effect sizes in the Table 8 showed confirm the necessity of all three constructs, with values surpassing the d ≥ 0.10 meaningfulness threshold (Dul et al., 2021). Firm agility registers the largest constraint (CE-FDH = 0.239; CR-FDH = 0.218), positioning it as the most binding necessary condition for employee performance. Dynamic convergence follows (CE-FDH = 0.183; CR-FDH = 0.160), while entrepreneurial orientation yields a smaller yet meaningful effect (CE-FDH = 0.097; CR-FDH = 0.086), confirming its necessary—if modest—contribution to enabling superior performance outcomes.

The bottleneck analysis reveals that predictor constructs become necessary for employee performance only beyond the 30th percentile, with no necessity requirements detected at lower levels. Firm agility emerges as the earliest necessary condition, with CE-FDH and CR-FDH ceiling lines activating from the 40th percentile onward, underscoring its foundational role in performance attainment. Table 9 NCA bottleneck analysis showed Dynamic convergence and entrepreneurial orientation enter as necessary conditions at progressively higher performance levels, with full necessity across all three predictors materialising only from the 80th percentile upward (Figures 2-4). These patterns confirm that superior employee performance demands simultaneous adequacy across all constructs, corroborating their theoretical indispensability (Dul et al., 2021).

5. DISCUSSION

5.1. Entrepreneurial Orientation as the Primary Driver of Firm Agility

The finding that entrepreneurial orientation exerts its most commanding influence on firm agility—emerging as the dominant structural path in the model affirms the theoretical propositions advanced within dynamic capabilities theory.

Table 3: Structural model results: Path coefficients, effect sizes, and hypothesis testing

Hip	Path	ß	STDEV	T stati	f^2	VIF	95% confident interval (CI)	P-values	Decision
H_1	Entrepreneurial orientation –> Employee performance	0.367	0.067	5.523	0.134	2.614	(0.092, 0.329)	0.000	Accepted
H_2	Entrepreneurial orientation –> Firm agility	0.734	0.032	22.782	1.167	1.000	(0.016, 0.154)	0.000	Accepted
H_3	Firm agility –> Employee performance	0.307	0.068	4.507	0.096	2.544	(0.234, 0.494)	0.000	Accepted
H_4	Dynamic convergence –> Employee performance	0.205	0.060	3.403	0.046	2.341	(0.670, 0.795)	0.001	Accepted

Table 4: Bootstrapping results for mediated path: Firm agility as mediator

Hypothesis	Mediation path	ß	T statistics	95% (CI)	P-values	Decision
H_6	Entrepreneurial orientation –> Employee performance	0.225	4.514	(0.125, 0.321)	0.000	Accepted

Table 5: Bootstrapping results for moderation testing

Hip	Path	ß	STDEV	T stati	f^2	VIF	95% confident interval (CI)	P-values	Decision
H_5	Dynamic convergence × Firm agility –> Employee performance	0.091	0.035	2.605	0.024	1.051	(0.166, 0.434)	0.009	Accepted

Figure 2: LV scores - dynamic convergence

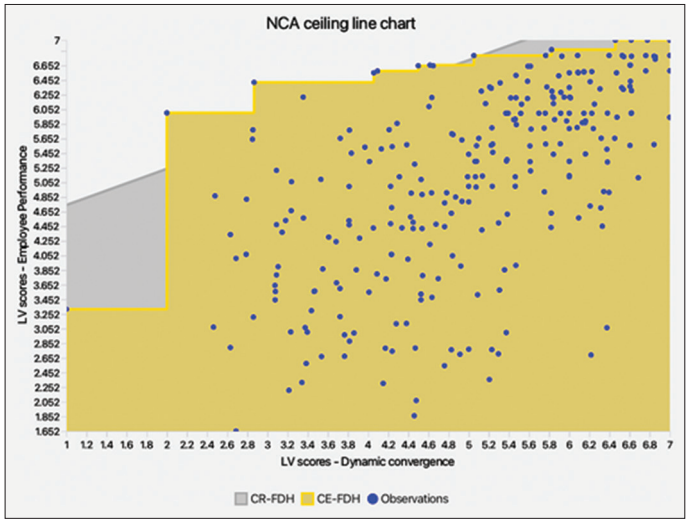
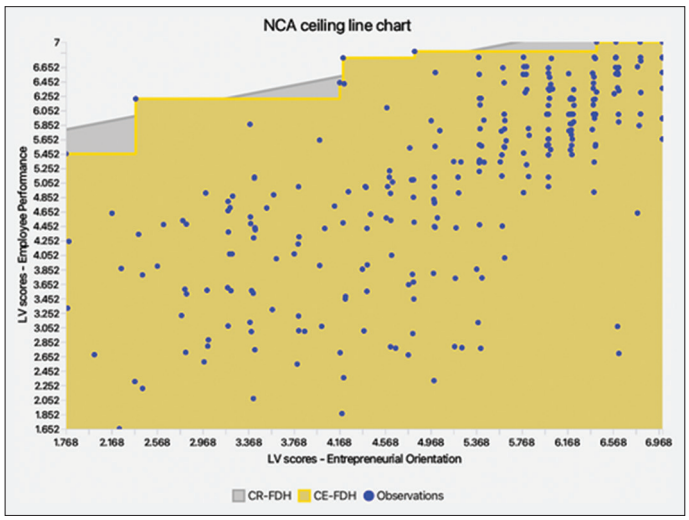


Figure 3: LV scores - entrepreneurial orientation



Firms whose strategic posture is characterised by proactiveness, innovativeness, and risk tolerance cultivate the higher-order sensing and reconfiguring competencies that constitute the behavioural substrate of organisational agility (Miller, 1988; Teece, 1996). This result is consistent with and extends (Bilan et al., 2020) findings in emerging-economy SMEs, reinforcing the cross-contextual robustness of this relationship within Indonesian manufacturing, trade, and service sectors. The magnitude of the effect substantially exceeding conventional large-effect benchmarks suggests that entrepreneurial posture is not merely a contributing factor but a foundational determinant of agility, lending credence to the theoretical argument that strategic orientation precedes and enables capability formation (Slevin and Covin, 1997; Tallon and Pinsonneault, 2011). From a Dynamic Capabilities perspective, this positions EO as the strategic architecture through which resource reconfiguration becomes operationally plausible under conditions of environmental turbulence and competitive intensity. Critically, the effect size observed here surpasses that reported in comparable emerging-market studies, suggesting that the Indonesian SME context may amplify the EO–agility relationship given institutional voids that reward adaptive, entrepreneurially oriented responses over rigid procedural adherence.

Figure 4: LV scores - firm agility

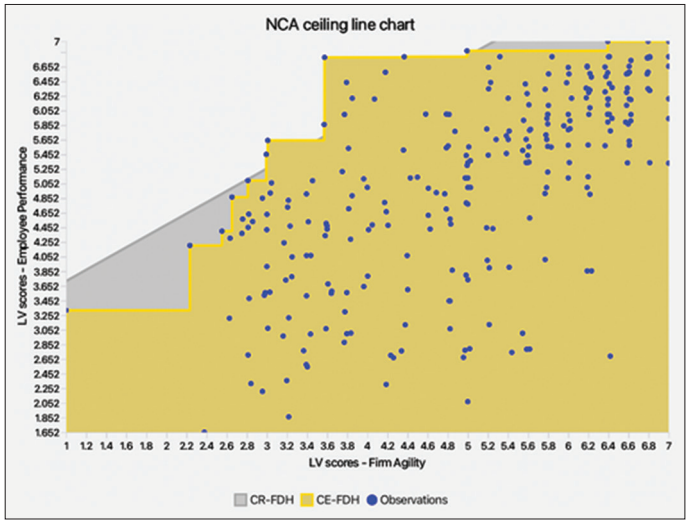


Table 6: Explanatory power and predictive relevance of the structural model

Construct's	R^2	Category	Q^2 predict	Category
Employee performance	0.615	Moderate-substantial	0.533	Strong
Firm agility	0.539	Moderate	0.562	Strong

Table 7: Global model fit indices: Saturated versus estimated model comparison

Indicator	Saturated	Estimated	Threshold	Status
SRMR	0.046	0.062	<0.08	☑
NFI	0.909	0.903	>0.90	☑
d_ULS	0.446	0.810	—	Acceptable
d_G	0.226	0.250	—	Acceptable
Chi-square	395.555	420.608	Supplementary	—

5.2. Entrepreneurial Orientation and Employee Performance

The confirmation that entrepreneurial orientation positively influences employee performance extends the Resource-Based View's human capital logic into the micro-level behavioural domain. Entrepreneurially oriented organisations cultivate climates of autonomy, experimentation, and calculated risk acceptance that serve as motivational scaffolding, elevating individual task engagement, contextual contributions, and adaptive work behaviours (Barney, 1991; Pulakos et al., 2000). This finding aligns with Riviere et al. (2025)observation that strategic orientation shapes performance-enabling conditions at the individual level, while complementing Aguinis and Solarino (2019) argument that performance management architectures embedded in proactive organisational cultures yield measurable individual-level outcomes. The moderate effect size observed is theoretically coherent: EO shapes the broader climate rather than directly prescribing individual task behaviour, suggesting that contextual mediation—operationalised here through firm agility plays a necessary intermediate role. This nuance distinguishes the present contribution

Table 8: NCA bottleneck analysis: Necessary levels of predictor constructs for employee performance

EP level (%)	EP score	DC (CE-FDH)	DC (CR-FDH)	EO (CE-FDH)	EO (CR-FDH)	FA (CE-FDH)	FA (CR-FDH)
0-30	1.652-3.257	NN	NN	NN	NN	NN	NN
40	3.791	2.000	NN	NN	NN	2.233	1.094
50	4.326	2.000	NN	NN	NN	2.553	1.789
60	4.861	2.000	1.237	NN	NN	2.652	2.484
70	5.396	2.000	2.316	NN	NN	2.993	3.178
80	5.930	2.000	3.396	2.380	2.233	3.574	3.873
90	6.465	4.056	4.476	4.199	3.981	3.574	4.568
100	7.000	6.458	5.555	6.422	5.729	6.393	5.263

Table 9: NCA effect sizes: Necessity of predictor constructs for employee performance (CE-FDH and CR-FDH)

Indicator	CE-FDH	CR-FDH
LV scores - Dynamic convergence	0.183	0.160
LV scores - Entrepreneurial orientation	0.097	0.086
LV scores - Firm agility	0.239	0.218

from prior studies that treat EO as a unidirectional performance driver without specifying the organisational mechanisms through which strategic disposition becomes observable individual conduct. Moreover, the persistence of a direct EO–employee performance path alongside the mediated pathway confirms that entrepreneurial orientation operates through dual channels simultaneously, a pattern that single-path models would fail to capture.

5.3. Firm Agility as a Mediating Conduit

The confirmation of firm agility as a mediator of the entrepreneurial orientation–employee performance relationship addresses one of the study's central theoretical contributions. This mediation pathway substantiates the proposition that EO does not solely operate on employee performance through direct motivational channels; rather, it constructs organisational structures iterative feedback cycles, cross-functional collaboration mechanisms, and rapid task revision protocols that subsequently sharpen role clarity, heighten performance expectations, and reinforce adaptive work behaviours at the individual level (Bindl et al., 2022; Doz and Kosonen, 2008). This finding is consistent with mediation logic in Dynamic Capabilities frameworks, wherein higher-order strategic dispositions produce intermediate capability configurations that ultimately manifest as individual-level outcomes (Teece, 1996). The partial mediation pattern where EO retains a direct effect on employee performance alongside the indirect path through firm agility implies that entrepreneurial orientation operates through dual channels: a motivational pathway that directly shapes employee orientation and a structural pathway mediated by agility-induced routines. This dual-channel logic enriches the entrepreneurship literature by specifying the organisational architecture through which strategic intent reaches individual performance, and it suggests that agility is not epiphenomenal to the EO–performance relationship but constitutes an active, performance-generating mechanism in its own right.

5.4. Firm Agility and Employee Performance

Beyond its mediating role, firm agility exerts an independent positive effect on employee performance, corroborating the theoretical argument that agile organisational structures actively enable individual performance rather than merely reflecting it. Agile organisations, by institutionalising iterative feedback, rapid reconfiguration, and cross-functional knowledge flows, continuously recalibrate performance expectations and equip employees with the adaptive resources required to meet them (Bindl et al., 2022; Doz and Kosonen, 2008). This finding resonates with (Ployhart, 2021) multilevel theorisation of human capital, wherein firm-level capability configurations cascade into individual-level performance outcomes through structural and relational mechanisms. The small-to-moderate effect size is theoretically appropriate: Firm agility establishes the structural conditions for performance rather than directly determining task-level behaviour, a distinction that underscores the importance of individual-level constructs particularly dynamic convergence in accounting for residual variance. This finding also clarifies a previously underspecified pathway in the entrepreneurship and agility literature, where agility has predominantly been treated as an outcome variable rather than as an antecedent of individual performance.

5.5. Dynamic Convergence: Moderator and Independent Predictor

The dual role of dynamic convergence as both an independent predictor and a moderating boundary condition constitutes a theoretically substantive contribution. As an independent predictor, dynamic convergence reflecting the degree to which generationally diverse cohorts achieve integrative alignment in adaptive values and collaborative practices—positively influences employee performance. This aligns with social identity theory's prediction that intragroup alignment reduces coordination costs and amplifies collective adaptive capacity (Tajfel and Turner, 1986), while extending generational cohort research by demonstrating that intergenerational value convergence, rather than generational diversity per se, is the performance-relevant dimension (Weigel et al., 2021).

The moderation finding—that dynamic convergence amplifies the extent to which firm agility translates into individual employee performance gains—directly resolves the empirical inconsistency between (Bindl et al., 2022; Davidescu et al., 2020) identified in the introduction. Jiang et al.'s finding that adaptive performance reliably contributes to organisational responsiveness is more accurately characterised as a high-convergence condition: Where generational cohorts share adaptive values, individual contributions flow coherently into collective agility. Sonnentag et al.'s contrasting finding that this relationship attenuates under workforce heterogeneity reflects a low-convergence state in which intergenerational fragmentation prevents individual performance from coalescing into organisational responsiveness. Dynamic

convergence thus functions as the boundary condition that reconciles these divergent findings, not by invalidating either, but by specifying the generational alignment conditions under which the agility performance pathway activates or attenuates. This advance is methodologically meaningful as well: prior moderation studies invoking generational dynamics treated diversity as a demographic category, whereas dynamic convergence captures the relational and motivational integration process that demographic categories cannot operationalise.

5.6. Necessity versus Sufficiency: Insights from NCA

The necessity analysis extends the study's contribution beyond sufficiency-based PLS-SEM findings by establishing that firm agility, dynamic convergence, and entrepreneurial orientation are not merely sufficient conditions for employee performance they are necessary ones. The distinction is theoretically consequential: A construct can exhibit statistical sufficiency without being necessary, and conflating the two risks producing managerial prescriptions that misallocate attention toward performance-enhancing but non-essential inputs (Dul, 2016; Dul et al., 2021).

Firm agility emerges as the earliest-activating and most binding necessary condition, constraining employee performance from intermediate performance thresholds onward. This temporal precedence is consistent with mediation and direct path findings: Agility not only contributes through sufficiency logic but constitutes the foundational structure without which performance cannot rise beyond moderate levels regardless of other inputs. Dynamic convergence activates necessity at intermediate performance thresholds, reinforcing its moderating role the absence of intergenerational alignment increasingly constrains performance as performance aspirations escalate. Entrepreneurial orientation, while yielding the smallest necessity effect, nonetheless crosses the theoretical meaningfulness threshold, confirming that strategic proactiveness is a non-negotiable organisational input for achieving superior outcomes (Smith and Jambulingam, 2018). The convergence of both CE-FDH and CR-FDH techniques in corroborating these patterns strengthens the robustness of the necessity claims (Dul, 2016).

5.7. Theoretical and Practical Contributions

This current research contributes to the literature along three major dimensions. First, Dynamic Capabilities Theory is extended to clearly specify the dual routes by which entrepreneurial orientation impacts employee performance: Directly via motivational effects and indirectly via agility as a mediator. Second, dynamic convergence is offered as a theoretically grounded moderating effect that synthesizes social identity theory, generational cohort theory, and strategic management to clarify the agility-performance relationship. Finally, the integration of necessary condition analysis allows for the derivation of necessity conditions that remain invisible to sufficiency-based approaches to model performance attainment in Indonesian SMEs.

Practitioners can derive several implications from the current findings. First, that the most impactful leverage point for SMEs seeking to improve their adaptive responsiveness is to build proactive strategic cultures. Second, that the obligatory nature of firm agility requires that agility infrastructure be formally institutionalized rather than informally adopted. Finally, that the moderating effect underlines the importance of intergenerational workforce management to overcome coordination frictions that hinder the conversion of agility benefits to individual performance improvements.

5.8. Limitations and Future Directions

The cross-section approach does not allow for causal analysis and does not permit the investigation of the evolution of the concept of dynamic convergence over time in SMEs. The longitudinal approach would significantly contribute to the research. Even though the Indonesian SMEs are relevant to the theory, the limitation would be the generalizability to other emerging market contexts that have different institutional contexts. Comparative studies that include the Malaysian, Vietnamese, or the broader South Asian SME contexts would include the boundary conditions of the necessity and moderation effects. Another potential avenue would be the investigation of the concept of dynamic convergence in the knowledge-intensive industry segment. This would include technology-based SMEs, professional services, or the creative industry. In these contexts, the intergenerational diversity would likely produce different patterns of generational alignment. Furthermore, the relationship between agility and performance would likely be mediated through different factors than those related to the demographic compositional contexts. Apart from the contextual considerations, the concept of dynamic convergence would need further refinement. The current research defines the concept of dynamic convergence within the generational diversity framework. However, the concept of convergence could be applied to other forms of workforce diversity, such as functional diversity, cultural distance in cross-border SME partnerships, or cognitive diversity in the form of educational diversity. Further research could explore the generalizability of the necessity and moderation effects to these contexts. Furthermore, the conditions that would cause high levels of dynamic convergence to be detrimental to the SME could be explored. This would include the potential for the homogenization of adaptive values to reduce the creative tension that drives innovation in entrepreneurially oriented SMEs. This would produce a non-linear moderation effect that is not currently possible within the current research model.

Finally, the dyadic approach to research design employed in this study, where managerial and employee response data are segregated by respondent pairs, represents a methodological improvement over single-source designs that are more commonly found in Indonesian SME research. Future studies should aim to advance this design approach by including objective performance data in conjunction with perceptual data, thus reducing reliance on self-reported adaptive behavior as a sole criterion variable. By incorporating longitudinal dyadic data with objective firm performance data, it becomes possible to test both necessity conditions at the individual and organizational levels simultaneously, thus creating a multilevel necessity model of the dynamic convergence construct in line with Ployhart and Moliterno's (2011) human capital emergence concept. Such methodological advancements in this area could place the concept of dynamic convergence within a multilevel theoretical

space, allowing a more nuanced evaluation of when generational alignment represents a firm-level competitive advantage as opposed to a dyadic interpersonal effect.

6. CONCLUSION

This study advances the understanding of how entrepreneurial orientation generates firm agility and employee performance outcomes within Indonesian SMEs through a theoretically grounded moderated mediation framework. Three substantive contributions emerge. First, firm agility is established as an active mediating conduit through which entrepreneurial orientation translates strategic posture into individual performance—extending dynamic capabilities theory beyond agility as an organisational outcome toward agility as a performance-enabling mechanism. Second, dynamic convergence is introduced as a boundary condition governing the agility–performance relationship, reconciling prior empirical inconsistencies by specifying the generational alignment conditions under which individual performance contributions coalesce into collective organisational responsiveness. Third, the integration of NCA alongside PLS-SEM distinguishes necessary from sufficient conditions, revealing that firm agility constitutes the most binding structural prerequisite for performance attainment, followed by dynamic convergence and entrepreneurial orientation—a necessity hierarchy that sufficiency-based analyses cannot detect.

Collectively, these findings carry direct implications for SME practitioners: Agility infrastructure must be institutionalised rather than assumed, intergenerational alignment demands active managerial investment, and entrepreneurial posture remains a non-negotiable organisational input for sustaining competitive responsiveness. Future research extending this framework into longitudinal, multilevel, and cross-national designs will further delineate the generative conditions under which dynamic convergence amplifies organisational capability formation across diverse emerging-market contexts.

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