FACTOR STRUCTURE DEVELOPMENT OF ENTREPRENEURIAL NETWORKING AGILITY USING EFA AND CFA

Agoes Junaedy[1], Thomas Stefanus Kaihatu[2], Damelina Basauli Tambunan[3]
ajunaedy01@student.ciputra.ac.id[1], thomas.kaihatu@ciputra.ac.id[2], damelina@ciputra.ac.id[3]
Universitas Ciputra Surabaya

ABSTRAK

Penelitian sebelumnya belum secara memadai menjelaskan bagaimana wirausahawan memobilisasi dan memonetisasi sumber daya relasional secara dinamis dalam kondisi lingkungan yang turbulen, sehingga menimbulkan kesenjangan dalam konseptualisasi dan pengukuran agilitas jejaring kewirausahaan. Studi ini mengembangkan dan memvalidasi Entrepreneurial Networking Agility (ENA) sebagai kapabilitas multidimensional yang menangkap bagaimana wirausahawan secara aktif memanfaatkan hubungan bisnis dalam lingkungan yang volatil. Berlandaskan resource-advantage theory, ENA memandang jejaring bukan sebagai aset statis, melainkan sebagai sumber daya strategis yang nilainya ditentukan oleh ketepatan akses, kemampuan monetisasi, dan fleksibilitas dalam merespons permintaan pembeli. Dengan menggunakan data survei primer dari wirausahawan yang beroperasi dalam konteks dinamis, penelitian ini menerapkan pendekatan analisis faktor dua tahap. Exploratory Factor Analysis (EFA) digunakan untuk mengidentifikasi struktur laten ENA, diikuti oleh Confirmatory Factor Analysis (CFA) untuk memvalidasi model pengukuran. Hasil penelitian mengonfirmasi ENA sebagai konstruk yang koheren dan terdiri atas Relational Accessibility (RA), Conversion Monetized Capability (CMP), dan Buyer-Request Flexibility (BRF), dengan tingkat reliabilitas dan validitas konvergen yang memadai. Temuan ini memperkaya literatur kewirausahaan dengan menjelaskan bagaimana sumber daya relasional menciptakan keunggulan melalui penggunaan yang lincah, serta menyediakan dasar pengukuran yang tervalidasi bagi penelitian selanjutnya terkait implikasi strategis dan kinerja.

Kata Kunci: Entrepreneurial Networking Agility, Relational Accessibility, Conversion Monetized Capability, Buyer Request Flexibility, Resource-Advantage Theory.

ABSTRACT

Prior research has not sufficiently explained how entrepreneurs dynamically mobilize and monetize relational resources under turbulent conditions, creating a gap in the conceptualization and measurement of entrepreneurial networking agility. This study develops and validates Entrepreneurial Networking Agility (ENA) as a multidimensional capability that captures how entrepreneurs actively leverage business relationships in volatile environments. Grounded in resource-advantage theory, ENA conceptualizes networks as strategic resources whose value depends on timely access, monetization, and flexible responses to buyer demands. Using primary survey data from entrepreneurs operating in dynamic contexts, this study employs a two-stage factor-analytic approach. Exploratory Factor Analysis (EFA) is applied to identify the latent structure of ENA, followed by Confirmatory Factor Analysis (CFA) to validate the measurement model. The results confirm ENA as a coherent construct composed of Relational Accessibility (RA), Conversion Monetized Capability (CMP), and Buyer Request Flexibility (BRF), with satisfactory reliability and convergent validity. These findings advance entrepreneurship research by clarifying how relational resources generate advantage through agile deployment rather than mere possession and provide a validated measurement foundation for future studies examining strategic and performance outcomes.

Keywords: *Entrepreneurial Networking Agility, Relational Accessibility, Conversion Monetized Capability, Buyer Request Flexibility, Resource-Advantage Theory.*

INTRODUCTION

The entrepreneurial environment has become more turbulent as globalization and technological turbulence intensify competitive unpredictability. Digital transformation further amplifies complexity by reshaping processes, business models, and competitive interaction in ways that increase uncertainty for firms (Vial, 2019). Resource-constrained

firms face this volatility more sharply because they must respond to market shifts with speed despite limited slack and bargaining power (Adomako et al., 2022). Research on agility shows that firms perform better under uncertainty when they can react quickly, reallocate effort, and reduce rigidity in routines (Gnizy, 2025; Sherehiy et al., 2007). This reality has pushed strategy research to emphasize adaptive higher-order capabilities rather than static resource ownership as the basis for sustained advantage in turbulence (Teece, 2007). Accordingly, entrepreneurial success increasingly depends on how effectively firms renew and reconfigure what they have and what they can access as conditions shift (Hagen et al., 2024).

Entrepreneurs often rely on relationships with customers, suppliers, mentors, and peers to obtain information and resources that help them cope with uncertainty and constraints (Stam et al., 2014).

Meta-analytic evidence shows that entrepreneurs' social capital relates positively to small-firm performance, but the magnitude varies across contexts and measurement choices (Lyu & Ji, 2020; Ozgen & Baron, 2007). These ties matter because entrepreneurs use social sources to access timely information that supports opportunity recognition. As ventures develop, entrepreneurs also reshape their relational portfolios to match changing resource needs, so relationships evolve through deliberate action rather than remaining fixed (Chang et al., 2024; Tehseen et al., 2024). Therefore, competitive benefits arise not from "having connections" alone, but from actively mobilizing and steering entrepreneurial relationships to translate access into action and results.

Entrepreneurial relationships require speed and adaptability because the value of relational resources erodes when responses lag behind market change, making static network snapshots insufficient to explain how entrepreneurs dynamically mobilize resources and decisions over time (Grillitsch & Schubert, 2021). Dynamic capability logic clarifies this gap by arguing that performance in turbulence depends on sensing change and reconfiguring resources and routines in a timely manner (Bechtel et al., 2023). Building on that logic, Entrepreneurial Networking Agility (ENA) focuses on the entrepreneur's ability to rapidly activate, adjust, and redeploy entrepreneurial relationships as conditions and opportunities shift. In this sense, ENA is not synonymous with an entrepreneurial network itself; ENA emphasizes agile execution that turns relational access into coordinated action and outcomes. Consistent with this orientation, emerging entrepreneurial practice indicates that agility in managing entrepreneurial relationships involves timely access to relevant partners, the ability to derive economic value from relational exchanges, and flexible responses to changing buyer demands, motivating the need to formally develop and empirically examine entrepreneurial network agility as a distinct construct.

ENA does not replace social capital perspectives because those perspectives mainly explain the performance value of entrepreneurs' relational assets, not the agility of deploying them under shifting demands (Zhao et al., 2023). ENA also differs from networking capability models because it adds an explicit agility lens, prioritizing rapid relational activation, adjustment, and redeployment when timing determines opportunity capture (Arasti et al., 2022; Bhatti et al., 2025). ENA further diverges from market orientation because market orientation emphasizes generating and disseminating market intelligence, whereas ENA emphasizes the relational mechanism used to mobilize partners and execute responses quickly (Cheng et al., 2025; Schulze et al., 2022). ENA also goes beyond operational flexibility because flexibility research typically treats responsiveness as a production or process attribute, while ENA embeds buyer-request responsiveness inside a relational access-and-conversion process (Shi et al., 2025; Yu et al., 2023). Positioning ENA as an integrative, higher-order capability therefore clarifies a gap left by adjacent constructs

by capturing how entrepreneurs reconfigure relational resources into monetized outcomes under turbulence.

ENA is introduced as a newly developed multidimensional capability, and literature has not yet established a validated measurement basis that rigorously demonstrates its latent structure and psychometric properties. Scale development research shows that new constructs require careful domain sampling, item purification, and validation to avoid ambiguity and weak comparability across studies. Existing studies often operationalize networking, capability, and flexibility separately, which leaves uncertainty about whether ENA empirically emerges as an integrated construct represented by RA, CMP, and BRF. This gap makes exploratory factor analysis essential to identify the underlying factor structure of ENA from observed indicators using established factor-analytic guidance. Subsequently, confirmatory factor analysis is needed to test the measurement model statistically and verify construct validity before any structural inference is made. Accordingly, this study aims to develop a valid and reliable ENA measurement instrument through EFA and CFA, so ENA can be examined consistently as a new multidimensional construct in entrepreneurial settings.

Literature Review

ENA refers to an entrepreneur's capability to mobilize and utilize business relationships in a timely and adaptive manner as competitive conditions and resource requirements change. Rather than treating networks as static relational assets, ENA emphasizes how entrepreneurs actively use relationships to support opportunity pursuit, resource access, and value creation under conditions of market uncertainty. This perspective highlights networking as an ongoing process shaped by strategic action and competitive pressures. ENA therefore focuses on the use of relationships over time, rather than their mere existence or structural configuration.

The conceptual foundation of ENA is rooted in resource-advantage theory, which views competition as an evolutionary process driven by firms' unequal access to and deployment of heterogeneous resources (Bicen & Hunt, 2012; Hunt & Derozier, 2004; Hunt & Morgan, 1996; Varadarajan, 2023). Within this framework, relational resources constitute a critical class of intangible assets that can generate comparative advantages when employed effectively. Resource-advantage theory emphasizes that competitive outcomes depend not only on possessing valuable resources but also on how firms deploy those resources to create superior market offerings (Hansen et al., 2023; Mastarida et al., 2025; Setiawan & Sukresna, 2024; Varadarajan, 2023). This logic positions entrepreneurial relationships as strategic resources whose value is contingent on their utilization within competitive contexts.

Resource-advantage theory is particularly relevant for explaining entrepreneurial networking behavior because it explicitly recognizes that resource value is context-dependent and subject to competitive dynamics (Varadarajan, 2023). As market conditions evolve, the usefulness of relational resources can increase or diminish depending on how quickly and appropriately entrepreneurs respond (Grimmer et al., 2015; Mosakowski, 2017; Situmorang et al., 2024). From the theory perspective, relational advantages are not permanent; they must be continuously leveraged and realigned to sustain competitive positions. This implies that entrepreneurs who can more effectively adjust their relational actions to shifting resource demands are better positioned to achieve superior performance.

Synthesizing these arguments, ENA captures a form of entrepreneurial capability grounded in the Resource-Advantage view of competition, where relational resources contribute to advantage only when mobilized in alignment with changing competitive conditions. ENA shifts attention from static assessments of network size or strength toward the strategic use of relationships as instruments of competition. In applied terms, this perspective suggests that entrepreneurial effectiveness depends on how entrepreneurs

activate, adapt, and redirect relational exchanges as opportunities and constraints evolve. Accordingly, ENA provides a theoretically coherent lens for examining how entrepreneurial relationships function as dynamic inputs to competitive advantage within the Resource-Advantage framework.

METHODS

This study adopts a quantitative design and uses primary data collected through a structured questionnaire survey administered to business owners (Hinkin, 1998). The survey targeted firms engaged in international trade in Surabaya City, Indonesia, to capture responses from decision-makers who directly manage external business relationships and market demands. The study applied simple random sampling to select respondents from the defined population frame, resulting in 47 usable responses for instrument validation. All questionnaire items were measured using a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree) to provide adequate response variability for factor-analytic procedures (Dawes, 2008). Because sample adequacy in factor analysis depends on factors such as communalities and model error rather than fixed rules, this dataset was treated specifically as a construct-validation sample within the Indonesian context.

Given that the focal construct remains emerging and its dimensional structure has not been firmly established, the study employed a two-stage factor-analytic validation procedure.

First, Exploratory Factor Analysis (EFA) was used to empirically uncover the latent grouping of items and refine the instrument by examining factor loadings and cross-loadings (Fabrigar et al., 1999). Second, Confirmatory Factor Analysis (CFA) was conducted to statistically verify the measurement model derived from EFA and to evaluate overall model fit before drawing substantive conclusions (Anderson & Gerbing, 1988). This sequential EFA–CFA approach follows established guidance that separates measurement validation from subsequent inference, thereby reducing the risk of overfitting and improving replicability. Accordingly, the study aims to produce a valid and reliable measurement instrument that captures the construct's structure as it empirically manifests in Indonesia and supports consistent use in future entrepreneurship research.

RESULT AND DISCUSSION

Exploratory Factor Analysis (EFA)

The suitability of the data for EFA was assessed using the Kaiser–Meyer–Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity, which evaluate sample adequacy and the strength of intercorrelations among indicators. As reported in Table 1, the KMO value is 0.823, indicating a high level of sampling adequacy and exceeding the commonly recommended threshold of 0.70 for factor analysis (Hair et al., 2018). This result suggests that the data contain sufficient shared variance to support the identification of a stable underlying factor structure. Furthermore, Bartlett's Test of Sphericity yields an Approximate Chi-Square value of 367.997 with 105 degrees of freedom and a significance level of 0.000 ($p<0.001$), indicating that the correlation matrix is not an identity matrix and that statistically significant correlations exist among the variables. Collectively, these findings confirm that the dataset satisfies the necessary statistical assumptions and is appropriate for proceeding with factor extraction in the EFA.

Table 1. Eigenvalues and total variance explained

Test	Result
Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy	0.823
Bartlett's Test of Sphericity -	367.997

Approx. Chi-Square	
df	105
Sig.	0.000

Table 2 presents the eigenvalues and total variance explained to determine the number of factors retained in the exploratory factor analysis. Based on the eigenvalue-greater-than-one criterion proposed by Kaiser (1960), three components were identified and retained for further analysis. Using Principal Component Analysis (PCA) as the extraction method, the initial solution indicates that the three factors collectively explain 64.156% of the total variance. This result suggests that the extracted factor structure captures a substantial proportion of the variance shared among the observed indicators. After applying varimax rotation, the first, second, and third factors account for 25.047%, 20.274%, and 18.835% of the variance, respectively, while the cumulative variance remains unchanged at 64.156%. Overall, the cumulative variance exceeds the commonly accepted threshold of 60%, supporting the adequacy of the retained factor solution for subsequent analysis.

Table 2. Eigenvalues and total variance explained

Component	Initial Eigenvalue			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	Total	% of Variance	Cumulative %	Varians (%)	Total
1	6.598	43.986	43.986	6.598	43.986	43.986	3.757	25.047	25.047
2	1.617	10.779	54.765	1.617	10.779	54.765	3.041	20.274	45.322
3	1.409	9.391	64.156	1.409	9.391	64.156	2.825	18.835	64.156
4	0.962	6.411	70.567	—	—	—	—	—	—
5	0.865	5.767	76.334	—	—	—	—	—	—
6	0.717	4.783	81.117	—	—	—	—	—	—
7	0.576	3.842	84.959	—	—	—	—	—	—
8	0.506	3.376	88.335	—	—	—	—	—	—
9	0.365	2.437	90.772	—	—	—	—	—	—
10	0.326	2.175	92.947	—	—	—	—	—	—
11	0.306	2.038	94.985	—	—	—	—	—	—
12	0.262	1.744	96.729	—	—	—	—	—	—
13	0.199	1.327	98.056	—	—	—	—	—	—
14	0.157	1.048	99.104	—	—	—	—	—	—
15	0.134	0.896	100.000	—	—	—	—	—	—

The scree plot presented in Figure 1 illustrates a sharp decline in eigenvalues from the first to the second component, followed by a continued decrease up to the third component. Beyond this point, the curve exhibits a relatively flat pattern across the remaining components, indicating diminishing marginal contributions to explained variance. This pattern reveals a clear elbow at the third component, suggesting that additional factors beyond this point contribute limited explanatory value. Components from the fourth onward display eigenvalues below the threshold of 1.0, indicating that they do not meet the criterion for retention as meaningful factors. This result is consistent with the Kaiser criterion, which recommends retaining only components with eigenvalues greater than one in exploratory factor analysis. Accordingly, the scree plot supports the retention of three empirically stable dimensions underlying the ENA construct.

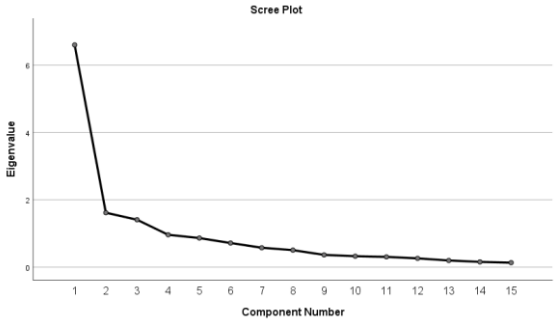

Figure 1. Scree Plot

The results of the Rotated Component Matrix in Table 3 indicate that the indicators of ENA are clearly distributed across three underlying factors based on their highest factor loadings after Varimax rotation. Factor 1, identified as the Relational Accessibility (RA) dimension, is composed of Item 1, Item 2, Item 5, Item 9, and Item 15, with dominant loadings of 0.813, 0.763, 0.729, 0.829, and 0.560, respectively. These loadings are consistently higher than those on the other factors, suggesting that the indicators collectively represent a coherent dimension capturing the accessibility and strength of relational ties within entrepreneurial networks. In parallel, Factor 2 is interpreted as the Conversion Monetized Capability (CMP) dimension and consists of Item 3, Item 4, Item 6, Item 7, and Item 8, with dominant factor loadings ranging from 0.548 to 0.811, reflecting the capability to convert network relationships into monetizable outcomes.

Furthermore, Factor 3 is identified as the Buyer Request Flexibility (BRF) dimension and is formed by Item 10, Item 11, Item 12, Item 13, and Item 14, with dominant loadings of 0.572, 0.779, 0.689, 0.806, and 0.664, respectively. Overall, the rotated factor structure demonstrates that each indicator loads predominantly on a single factor, with relatively limited cross-loadings, indicating adequate discriminability among the three dimensions. These findings confirm the multidimensional nature of the ENA construct, supported by empirically distinct yet related dimensions. In the subsequent stage, this factor structure will be further examined using confirmatory factor analysis, where the retained indicators will be reordered and specified within the measurement model using standardized notation (e.g., X1.1.1, X1.1.2, and so forth) to rigorously assess construct validity and reliability.

Table 3. Rotated Component Matrix

Item	Factor 1	Factor 2	Factor 3
1	0.813	0.365	-0.007
2	0.763	0.206	0.039
3	0.250	0.811	0.081
4	0.399	0.671	0.081
5	0.729	0.261	0.290
6	0.056	0.716	0.165

7	0.226	0.773	0.237
8	0.387	0.548	0.327
9	0.829	0.142	0.307
10	0.563	0.162	0.572
11	0.166	0.173	0.779
12	0.105	0.312	0.689
13	0.129	0.215	0.806
14	0.430	-0.111	0.664
15	0.560	0.215	0.363

Confirmatory Factor Analysis (CFA)

The CFA results presented in Table 4 and Figure 2 confirm ENA as a multidimensional construct consisting of three dimensions, namely RA, CMP, and BRF. All indicators across the three dimensions exhibit statistically significant C.R. values with p-value<0.05, indicating that each indicator adequately reflects its corresponding latent construct (Hair et al.. 2019). Specifically, most indicators demonstrate strong statistical significance with p-value<0.001, while indicators within the CMP dimension also remain significant with p-value ranging from 0.003-0.007, suggesting that no indicators require removal at this stage.

The RA dimension is represented by indicators X1.1.1-X1.1.5, all of which show strong C.R. values (e.g., 4.922, 4.295, 4.872, and 5.815), confirming their validity in measuring the underlying dimension. This dimension demonstrates satisfactory internal consistency and convergent validity, as indicated by Cronbach's Alpha=0.82, Composite Reliability=0.85, and AVE=0.54. In parallel, the CMP dimension is measured by indicators X1.2.1-X1.2.5, all of which are statistically significant with p-value<0.05 and C.R. values ranging from 2.691-2.969, supported by Cronbach's Alpha=0.86, Composite Reliability=0.88, and AVE=0.60, reflecting robust measurement quality.

The BRF dimension is captured by indicators X1.3.1-X1.3.5, all of which exhibit strong statistical significance with p-value<0.001 and substantial C.R. values (e.g., 3.897, 4.646, 4.167, and 3.967). This dimension also demonstrates adequate internal consistency and convergent validity, as reflected by Cronbach's Alpha=0.84, Composite Reliability=0.86, and AVE=0.56. Overall, the CFA results confirm that all three ENA dimensions are measured by reliable and convergently valid indicators, indicating that the ENA measurement model meets the required statistical criteria and is suitable for subsequent structural model analysis.

Table 4. CFA Results for ENA

Dimention	Indicator	Estimate (Unstd.)	S.E.	C.R.	p-value	Cronbach's Alpha (Std.)	Composite Reliability	AVE
Relational Accessibility (RA)	X1.1.1	1.000	—	—	—	0.82	0.85	0.54
	X1.1.2	0.770	0.156	4.922	<0.001			
	X1.1.3	0.532	0.124	4.295	<0.001			
	X1.1.4	0.759	0.156	4.872	<0.001			
	X1.1.5	0.742	0.128	5.815	<0.001			
Conversion Monetized Capability (CMP)	X1.2.1	1.000	—	—	—	0.86	0.88	0.60
	X1.2.2	1.604	0.589	2.722	0.006			
	X1.2.3	1.255	0.442	2.837	0.005			
	X1.2.4	1.871	0.630	2.969	0.003			
	X1.2.5	1.402	0.521	2.691	0.007			
Buyer Request	X1.3.1	1.000	—	—	—	0.84	0.86	0.56
	X1.3.2	0.836	0.215	3.897	<0.001			

Flexibility (BRF)	X1.3.3	1.071	0.231	4.646	<0.001
	X1.3.4	0.946	0.227	4.167	<0.001
	X1.3.5	0.948	0.239	3.967	<0.001

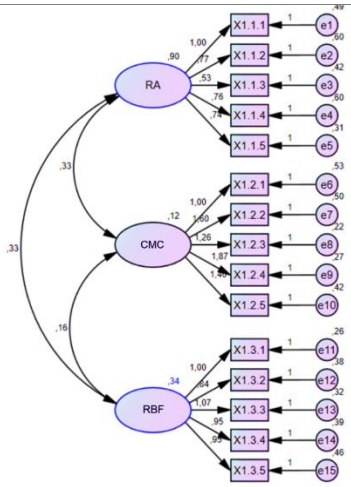

Figure 2. The measurement model of ENA

Based on Table 5, the goodness-of-fit evaluation indicates that the CMIN/DF ratio of 1.624 falls within the recommended range, suggesting an adequate level of fit between the observed covariance matrix and the covariance matrix estimated for the ENA model. From the perspective of approximation error, the RMSEA value of 0.016 indicates a very low level of model misspecification and reflects a good overall model fit. In addition, the RMR value of 0.075 remains below the recommended threshold, further supporting that the model residuals are relatively small.

Regarding comparative fit indices, the CFI value of 0.929 meets the commonly accepted criterion (≥0.90), indicating that the ENA model demonstrates good fit relative to the baseline model. Meanwhile, the GFI value of 0.710 suggests a moderate level of absolute model fit, indicating that the model is acceptable although it does not fully approach the ideal value. The AGFI value of 0.599 and TLI value of 0.793 imply that the model fit is marginal and that there is room for improvement, particularly given the multidimensional structure and complexity of the ENA construct. Nevertheless, supported by strong key fit indices such as RMSEA and CFI, the overall measurement model of ENA can be considered acceptable and suitable for subsequent structural analysis.

Table 5. Goodness-of-Fit Evaluation of the ENA Model

Goodness-of-Fit Measures	Obtained Value	Recommended Value
Chi-square/df (CMIN/DF)	1.624	≤3 = good; ≤5 = acceptable (Kline, 2023; Marsh & Hocevar, 1985)
Goodness-of-fit index (GFI)	0.710	0-1 (Hair et al., 2013)
Root Mean Square Error of Approximation (RMSEA)	0.016	<0.06 = good; <0.08 = acceptable; <0.10 = mediocre (Hair et al., 2013; MacCallum et al., 1996)
Adjusted GFI (AGFI)	0.599	Approaching 1 (Hair et al., 2013)
Root Mean Square Residual (RMR)	0.075	< 0.08 (Hu & Bentler, 1999)
Comparative Fit Index (CFI)	0.929	≥ 0.90 (Hu & Bentler, 1999)
Tucker-Lewis Index (TLI)	0.793	Approaching 1 (Hair et al., 2013)

Discussion

The findings from the EFA and CFA jointly demonstrate that ENA is empirically supported as a coherent and multidimensional construct. The EFA results indicate that the

observed indicators naturally cluster into a stable factor structure, reflecting distinct but related aspects of entrepreneurial networking behavior. These groupings were subsequently confirmed through CFA, which validated the measurement structure and showed that each set of indicators consistently reflects its intended latent dimension. The convergence between EFA and CFA results suggests that ENA is not a fragmented or overlapping concept, but rather a structured capability with clear internal organization. Overall, these findings provide robust empirical support for conceptualizing ENA as a higher-order construct composed of multiple, functionally differentiated dimensions.

The first dimension, RA, captures the entrepreneur's ability to access, activate, and sustain meaningful network relationships. This dimension reflects how entrepreneurs position themselves within social and business networks to secure information, support, and opportunities that would otherwise be difficult to obtain. RA emphasizes relational proximity, trust, and openness as key mechanisms through which network value is generated. Rather than focusing on the size of the network, this dimension highlights the quality and accessibility of relationships. As such, RA represents the relational foundation upon which entrepreneurial networking advantage is built.

The second dimension, CMP, represents the entrepreneur's capability to convert network-based resources into economic value. This dimension moves beyond access and focuses on utilization, emphasizing how relationships, information, and opportunities are transformed into revenue-generating outcomes. CMP reflects strategic judgment, timing, and the ability to align network resources with market demands. It underscores that networking advantage does not automatically lead to performance gains unless entrepreneurs possess the capability to monetize relational assets. Thus, CMP serves as the value-extraction mechanism within the ENA framework.

The third dimension, BRF, relates to the entrepreneur's flexibility in responding to diverse and evolving buyer requests through network-enabled solutions. This dimension captures the adaptive use of networks to accommodate customization, negotiation, and changing customer requirements. BRF reflects responsiveness and coordination across network actors to deliver tailored offerings without compromising efficiency. By enabling entrepreneurs to adjust their responses based on buyer-specific needs, this dimension highlights the role of networks in supporting flexibility under uncertainty. Consequently, BRF represents the adaptive and demand-facing component of ENA.

Taken together, the three dimensions illustrate that ENA operates as an integrated capability, combining relational access, value conversion, and response flexibility. ENA should therefore be understood not merely as the presence of entrepreneurial networks, but as the entrepreneur's ability to orchestrate networks dynamically to create advantage. this perspective is consistent with resource-advantage theory, which conceptualizes competition as an evolutionary process driven by firms' heterogeneous access to and deployment of resources (Hunt, 2012; Varadarajan, 2023). Within this framework, entrepreneurial networks function as strategic resources whose value is contingent upon how effectively they are accessed, leveraged, and transformed into market offerings (Friske & Zachary, 2017). Accordingly, ENA represents an applied manifestation of resource-advantage theory at the entrepreneurial level, explaining how network-based resources are mobilized to support superior performance, adaptability, and resilience (Goh, 2003; Varadarajan, 2023). Future research may further explore how ENA interacts with contextual factors such as digitalization, environmental turbulence, and strategic orientation, thereby extending its explanatory power across diverse entrepreneurial settings.

CONCLUSION

This study contributes to the entrepreneurship and networking literature by empirically establishing ENA as a multidimensional capability composed of RA, CMP, and BRF, grounded in resource-advantage theory. By validating a robust measurement model, the findings demonstrate that entrepreneurial networks generate advantage not merely through their presence, but through entrepreneurs' abilities to access relationships, convert network resources into economic value, and respond flexibly to buyer demands. Conceptually, this study extends the application of R-A Theory to the entrepreneurial context by explaining how heterogeneous network-based resources are strategically orchestrated to support competitive positioning in dynamic environments. Practically, the ENA framework provides a diagnostic lens for entrepreneurs and policymakers to assess and strengthen networking capabilities that enhance adaptability and performance. Overall, the validated ENA construct offers a solid foundation for future research examining its role in shaping strategic outcomes across diverse entrepreneurial and industrial settings.

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