“The effect of the entrepreneurial process on decision-making effectiveness: Evidence from Lebanese small and medium enterprises”

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THE EFFECT OF THE ENTREPRENEURIAL PROCESS ON DECISION-MAKING EFFECTIVENESS: EVIDENCE FROM LEBANESE SMALL AND MEDIUM ENTERPRISES

Abstract

In Lebanese SMEs, characterized by the dominance of informal networks and weak organizational structures, a lack of clarity stemming from ambiguous roles and processes creates a gap in understanding among stakeholders. This situation is significant for the entrepreneurial process, which depends on recognizing and seizing opportunities, as it hampers decision-making. This paper analyzes the influence of four dimensions of entrepreneurial process on the effectiveness of decision-making, drawing on evidence from SMEs in North Lebanon. A deductive quantitative approach was adopted, based on a questionnaire administered to SME managers and executives. Data were collected using a cross-sectional design with a convenience sample of 310 respondents. The results show that the effect of network transformation is the strongest on decision-making effectiveness ($\beta = 0.836$, $p < 0.001$), followed by adaptive recombination ($\beta = 0.103$) and value conversion ($\beta = 0.124$). Relational reproduction has a small but significant negative effect on decision-making effectiveness ($\beta = -0.038$, $p = 0.005$).

Entrepreneurial process dimensions affect decision-making in Lebanese SMEs, with network transformation being the most influential, urging managers to expand beyond traditional relationships. Adaptive recombination and value conversion boost agility by reconfiguring resources. Results demonstrate the entrepreneur's ability to transform opportunities into operational value and support effective decision-making. The negative impact of relational reproduction warns against over-relying on closed networks. This study encourages Lebanese SMEs to be more adaptive and reflective in managing networks and resources, emphasizing openness and flexibility. A proactive entrepreneurial mindset is critical for adapting resources and creating value through strategic decision-making.

Keywords network transformation, value conversion, continuity, adaptability, entrepreneurship

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INTRODUCTION

In a world where globalization, uncertainty, and competition are increasing, small and medium-sized enterprises (SMEs) experience complex challenges, especially in the management of resources, innovation, and adaptation to changes in the market. As essential drivers of productivity and employment, managers reconcile short-term survival imperatives with long-term growth objectives, making the quality of their decision-making crucial to their performance and sustainability. In this context, SMEs are increasingly relying on their entrepreneurial networks to access resources, information, and opportunities that exceed their internal capabilities (Khahro et al., 2023). These relational dynamics, based on continuous interactions and collaborative approaches, reflect an entrepreneurial process that transcends individual action to become part of a collective construction based on relational reproduction, adaptive recombination, network transformation, and value creation.

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Despite the increasing awareness of the significance of these networks, the mobilization of the networks is still insufficiently structured, as the interactions between the actors are still informal, the information is gathered and processed traditionally, and no mechanisms of coordination and formalization are present. This situation leads to cumbersome, time-consuming, and costly processes, limiting the relevance, speed, and ultimately, the effectiveness of decisions made. Consequently, a gap persists between the potential offered by entrepreneurial dynamics and their actual translation into efficient decisions (Sanda & Sallama, 2023). This observation highlights a central problem: the difficulty SMEs face in transforming their entrepreneurial and relational practices into an operational lever for improving decision-making quality (Tunio et al., 2021).

Decision-making is a major practical challenge for SMEs, where the room for maneuver is often limited, and the entrepreneur's bounded rationality, based on intuitive and mental processes, has immediate effects on decision-making effectiveness (Nketsiah & Van der Westhuizen, 2025). Furthermore, the components of the entrepreneurial process are often addressed in a general manner, without a clear distinction between its dimensions (Nguyen et al., 2024). Thus, although the entrepreneurial process is recognized as a structuring framework for managerial action, the differentiated effects of its components on decision-making effectiveness remain insufficiently understood, particularly in the context of Lebanese SMEs. Lebanese SMEs' integration of entrepreneurial processes into decision-making is underdeveloped, limiting decision effectiveness. Theoretically, this paper proposes a clear structuration of the entrepreneurial process through specific, complementary analytical dimensions. This will allow for a more nuanced conceptual understanding. In practice, it will enable SME managers to adopt a structured approach to understanding the entrepreneurial process and applying it to their decision-making. This approach is relevant in the Lebanese context, where resources are scarce, and networking is key. In addition, the connection to decision-making opens avenues for further analysis of managerial behavior.

1. LITERATURE REVIEW AND HYPOTHESES

Entrepreneurship fosters SMEs that create jobs and generate profits (Hägg et al., 2024). However, entrepreneurship should not be seen merely as the act of doing business, but as a dynamic, evolutionary, and continuous process (Kutzewski & Wakkee, 2025). Resources are mobilized, changed, and adapted through continuous interactions, gradual changes, and learning, influenced by environmental limitations and opportunities, with time playing a role in structuring this process (Yang & Gabrielsson, 2017). The entrepreneurial process is characterized by specific features that highlight its dynamic nature (Siqueira & Honig, 2019).

Initiating and developing an entrepreneurial project depends on the entrepreneur's ability to mobilize and develop resources and skills. Several studies consider entrepreneurship from a processual perspective (Siqueira & Honig, 2019). This process is triggered for different purposes: creation, transfer, or takeover. The entrepreneurial phenomenon is multifaceted, and the process reflects its holistic and dynamic dimension. From this viewpoint, the entrepreneurial process can be seen as a dynamic system of actions and relationships defined by information flows and continuous interactions among the actor, the actor's network, and the environment (Wang et al., 2021). This approach enables us to transcend the fragmented picture of the entrepreneurial process by focusing on its complementary and interdependent dimensions, including relational reproduction, adaptive recombination, network transformation, and value conversion (Wang et al., 2022).

Relational reproduction refers to the mobilization and continuity of existing relationships, allowing entrepreneurs to rely on ties based on trust and accumulated experience. Entrepreneurs use pre-existing networks during venture start-up and growth, a key part of entrepreneurial social capital (Carle & Rayna, 2024). This dynamic facilitates access to essential resources such as information, informal financing, and social support, while reducing uncertainty and transaction costs, thereby expediting decision-making. However, it can also limit openness to new sources of information by reinforcing dependence on already established networks (Mets et al., 2022).

Adaptive recombination is an indicator of entrepreneurs' capacity to creatively reorganize and integrate their resources in response to changes in their surrounding environment as outlined in adaptive action theories (Stephan, 2024). This is an integral part of the logic of continuous adjustment, described as processes of experimentation, learning, and resource reallocation (Ardede et al., 2025). This dimension acknowledges the non-linear nature of the entrepreneurial process; decisions are progressively shaped by constraints, opportunities, trial and error, and knowledge (Nguyen et al., 2024).

Transformation of networks focuses on the qualitative and quantitative nature of entrepreneurs' relationships throughout the entrepreneurial process (Pérez-Fernández et al., 2020). This dimension emphasizes entrepreneurs' openness to new partners, stakeholders, and institutions. This leads to diversification of information sources and access to complementary resources; it also reinforces the company's capacity to adapt to an uncertain environment (Tóth-Pajor et al., 2023).

Value conversion is defined as the capacity to convert resources, relationships, and opportunities into tangible results, which may be economic, strategic, or social in nature. Value conversion is, therefore, a culminating point in the entrepreneurial process, whereby actions taken result in operational decisions and tangible value creation (Corrêa et al., 2024). This stage links to previous phases in which relationships and resources matter only if they lead to outcomes such as revenue, advantage, recognition, or social impact (Manalu et al., 2025).

In SMEs, decision processes occur within a context characterized by information, time, and cognitive limitations, thereby rendering decision processes complex. Decision processes in SMEs often rely on partial information, which compels managers to implement mechanisms for arbitration and simplification (Durac & Moga, 2023). Bounded rationality, therefore, suggests that decision processes result in attempts to satisfy constraints rather than achieving pure optimality, primarily due to time and resource limitations. Founders tend to accept satisfactory, not optimal, decisions (Sama, 2022). This is crucial for SMEs needing quick decisions despite limited data. Decision-makers rely on heuristics, which simplify choices (Jordão et al., 2020). Meanwhile, effectuation theory posits a decision logic characterized by progressive adaptation to resources and opportunities, emphasizing the role of entrepreneurs in decision-making (Patnaik & Hashir, 2024). The theory emphasizes the role of social interactions and relationships in decision processes, especially in uncertain environments. They adopt a means-based approach, developing strategies around existing resources rather than fixed objectives (Osunmakinde et al., 2025).

The entrepreneurial process influences decision-making through an opportunity-focused, non-linear approach centered on leadership, contrasting traditional planning (Baroncelli et al., 2024). Entrepreneurs use leadership and networks to secure resources, often with less formal processes than larger firms. They make flexible decisions influenced by external factors like personnel, vision, values, and skills (Alomari & El-Khateeb, 2025). Entrepreneurs act swiftly on ideas, leveraging relationships and information to mobilize resources. Rapid decisions can promote growth, but success varies; some pursue quick expansion, others seek balance. Outcomes depend on decision-making, traits, industry, and strategy. Complex decisions involve selecting among alternatives and building compromises to satisfy the organization (Delladio et al., 2023). Decision systems aim to guide the SME by synthesizing relevant operational, internal, and external information necessary for timely, effective decisions. An SME's survival depends on having sufficient relevant, reliable, accurate, and up-to-date information. Complex problems impact all organizations, including SMEs, prompting strategic decision-making (Kutzewski & Wakkee, 2025).

Thus, the entrepreneurial process emerges as a structuring framework for better understanding decision-making mechanisms, as it influences the quality, speed, and relevance of managerial choices through the mobilization and transformation of resources. However, existing research remains fragmented and fails to comprehensively examine the differential effects of its dimensions on decision-making effectiveness, particularly in the context of SMEs. The context of Lebanese SMEs, with limited resources and reliance on networks, is underexplored. This gap justifies the value of an inte-

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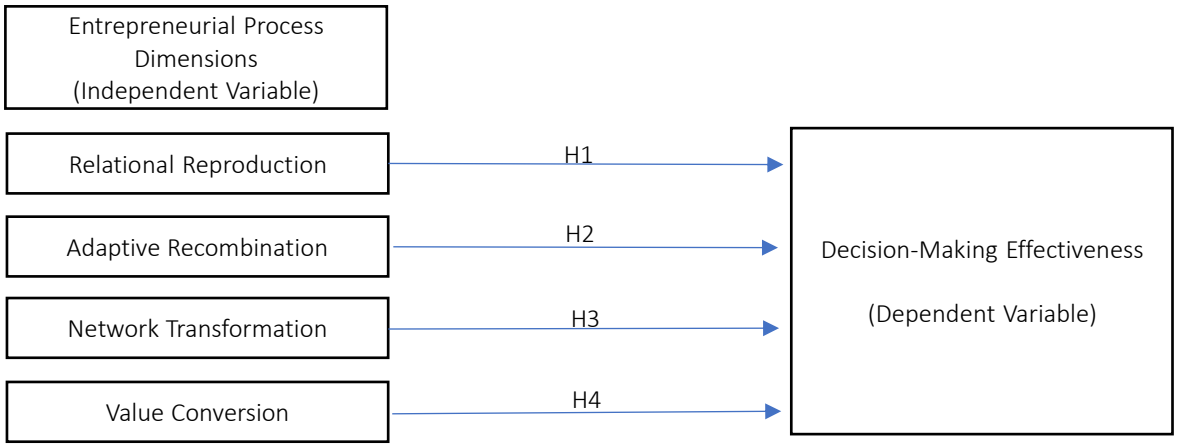

Figure 1. Proposed conceptual framework

grated approach, aimed at jointly analyzing the dimensions of the entrepreneurial process and their influence on decision-making effectiveness. From this perspective, the present study aims to examine the effects of relational reproduction, adaptive recombination, network transformation, and value conversion on decision-making effectiveness of SMEs in North Lebanon. This paper aims to analyze the influence of four dimensions of the entrepreneurial process, namely relational reproduction, adaptive recombination, network transformation, and value conversion on the effectiveness of decision-making.

The proposed conceptual framework in Figure 1 is based on the idea that entrepreneurial processes, understood as a structured dynamic of actions and relationships, are major determinants of effective decision-making within SMEs (Liu et al., 2024). Relational reproduction posits that the mobilization of pre-existing relationships, grounded in trust and accumulated experience, positively influences decision-making effectiveness (Manolopoulos et al., 2024). Adaptive recombination suggests that the ability to rearrange existing resources, knowledge, and practices according to environmental constraints and opportunities improves decisional adjustment and reduces uncertainty (Kutzewski & Wakkee, 2025). Network transformation argues that expanding and reconfiguring professional networks enhances access to diverse information, thereby strengthening the relevance of managerial decision-making (Bruce et al., 2023; Deligianni et al., 2016). Finally, value conversion holds that the ability to transform latent value into concrete economic or strategic proposals directly contributes to effective decision-making (Baroncelli et al., 2024; Zhang et al., 2022). Four deduced hypotheses are illustrated in Figure 1.

H1: Relational reproduction has a direct statistical influence on decision-making effectiveness in Lebanese SMEs.

H2: Adaptive recombination is positively correlated with decision-making effectiveness in Lebanese SMEs.

H3: Network transformation has a direct effect on decision-making effectiveness in Lebanese SMEs.

H4: Value conversion directly influences the effectiveness of decision-making in Lebanese SMEs.

2. METHODS

This study adopts a positivist perspective, positing that the influence of the entrepreneurial process on decision-making effectiveness can be observed, measured, and explained through causal relationships (Xu et al., 2024). In line with positivist philosophy in management science, the study draws on the bounded and effectuation theories of entrepreneurship and decision-making to formulate empirically testable hypotheses. We thus position ourselves within a logic of objectifying reality, seeking to test theoretical relationships rather

than offering a subjective interpretation of entrepreneurial practices. In terms of research design, the study adopts an explanatory approach, with the primary objective of analyzing the influence of the entrepreneurial process on decision-making effectiveness in Lebanese SMEs. This choice is consistent with a deductive approach, in which hypotheses are formulated from the theoretical literature and then tested against empirical field data (Dallal & Sankari, 2025). The explanatory approach thus enables one to go beyond mere description to highlight structured links between the dimensions of the entrepreneurial process and the observed decision-making outcomes.

A quantitative method was chosen to verify the conceptual model of decision-making processes in the small and medium-sized enterprises visited in Lebanese cities. Data collection was based on a structured questionnaire administered to managers and employees of Lebanese SMEs. This population was selected due to their direct involvement in the entrepreneurial and decision-making processes within these SMEs. The quantitative phase involved distributing the questionnaire in a paper format, with anonymity guaranteed. All participants gave their free and informed consent to participate in the research. This anonymization was intended to protect respondents' freedom of expression, particularly when assessing the entrepreneurial process and the effectiveness of decision-making. Before the final administration of the questionnaire, a face validation was conducted, involving professors as expert field evaluators in entrepreneurship. This approach strengthened the content validity and reliability of the measured constructs. Furthermore, a pilot test was conducted with 15 entrepreneurs. This test aimed to verify the clarity of the wording, the consistency of the items, and the relevance of the measurement scales. The feedback received enabled adjustments to certain statements, reduced semantic ambiguities, and improved the overall fluidity of the measurement instrument.

The sample was selected through convenience sampling. This approach was used because of limited access to employees and managers in Lebanese SMEs. The descriptive statistical analysis of demographic characteristics was conducted on a sample of 310 respondents. Table 1 presents the demographic factors, encompassing five measures.

Table 1. Participant demographics

Demographics	Measures	Frequency	Valid Percentage
Gender	Male	135	43.5
	Female	175	56.5
Age Range	Under 30	15	4.8
	30–39	123	39.7
	40–49	125	40.3
	50 and over	47	15.2
Education Level	Technical	77	24.8
	Bachelor's	55	17.7
	Master's	53	17.1
	Doctorate	125	40.3
Job Title	Senior Manager	48	15.5
	Middle Manager	82	26.5
	Employee	180	58
Length of Service	Less than 3 years	85	27.4
	3–5 years	21	6.8
	6–10 years	88	28.4
	10–15 years	75	24.2
	More than 16 years	41	13.2
	Total	310	100.0

The majority of respondents are women (175, 56.5%), compared to men (135, 43.5%). The analysis reveals that most participants are middle class, aged 40 to 49 (125 respondents, 40.3%), followed closely by those aged 30 to 39 (123 respondents, 39.7%). Individuals aged 50 and above constitute 15.2% (47 respondents), while those aged 30 and under account for 4.8% (15 respondents). The largest group of respondents holds a Ph.D. (125, 40.3%), followed by technical (77, 24.8%), bachelor's (55, 17.7%), and master's degrees (53, 17.1%), reflecting a diverse academic background. Regarding professional status, the analysis indicates that most participants are employees (180 respondents, 58.1%), with middle managers comprising 26.5% (82 respondents), and senior managers representing the smallest group at 15.5% (48 respondents). The data further show a broad distribution of professional seniority, with most respondents having between 6 and 10 years of experience (88 respondents, 28.4%), followed by those with less than 3 years (85 respondents, 27.4%), and 10 to 15 years (75 respondents, 24.2%). Fewer respondents have 3 to 5 years of experience (21, 6.8%), while those with over 16 years of experience account for 13.2% (41 respondents).

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Table 2. Variables' operational definition

Variables	Operational definition	Indicators	References
Relational Reproduction	It measures how pre-existing relationships are used in entrepreneurial activities.	• Mobilization of pre-existing relationships • Influence of personal relationships • Relational trust • Continuity of partnerships • Uncertainty reduction through relationships • Relational legacy in decision-making	(Syrett & Keles, 2022; Manesh et al., 2022)
Adaptive Recombination	It assesses the ability to reallocate resources in response to environmental constraints and opportunities.	• Resource reorganization • Flexibility of internal skills • Adjustment of practices • Creativity in the face of constraints • Adaptive decision-making • Organizational learning	(Hoda et al., 2020; Laguía et al., 2017)
Network Transformation	It refers to the evolution and enrichment of the company's relationships over time.	• Evolution of the professional network • Integration of new players • Strengthening of external relationships • Expanded access to resources • Relational attractiveness • Network alignment with strategy	(Pérez-Fernández et al., 2020; Tóth-Pajor et al., 2023; Purbasari & Raharja, 2023)
Value Conversion	It involves transforming these resources and relationships into economic, organizational, or symbolic value.	• Creation of relational value • Transformation of resources into results • Economic value generated • Partnership added value • Competitive advantage • Measurable organizational benefits	(Staniewski & Awruk, 2019; Hoda et al., 2020)
Decision-Making Effectiveness	This variable represents the outcome of the entrepreneurial process, indicating actors' ability to make coherent, rapid, and appropriate decisions.	• Decision speed • Strategic coherence • Quality of decision analysis • Decision accountability • Impact of decisions on performance • Management of unforeseen situations • Contribution of decisions to success	(Wang et al., 2021; Puspita & Wardani, 2022; Abdi, 2024; Yamauchi et al., 2024)

Table 2 defines the operational definitions of the variables. The entrepreneurial process is the central explanatory variable in the research. It is understood as a multidimensional construct reflecting the mechanisms by which entrepreneurs mobilize, transform, and leverage resources within their organizational environment. This process is operationalized through four dimensions.

These variables are measured using Likert-type scales, allowing quantification of respondents' perceptions and statistical analysis of relationships across the model's dimensions. This operationalization ensures consistency between the theoretical foundations and empirical methodological framework. These specific scales were integrated into the survey questionnaire and evaluated on a five-point Likert scale, ranging from 1 "Strongly disagree" to 5 "Strongly agree."

3. RESULTS

The collected data underwent comprehensive statistical analyses, including convergent validity assessments to determine relationships among variables, and a stepwise multiple regression analysis to validate models and test hypotheses. These analyses were performed utilizing SPSS 27, thereby ensuring methodological rigor in hypothesis verification.

Table 3 presents the descriptive statistics. It highlights the key distributional characteristics of the variables measured among the 310 respondents. All variables have minimum values near the lower end of the scale and maximum values near the upper end, indicating that participants fully used the measurement scale.

The average relational reproduction score is 3.46, marginally above the midpoint, with a standard deviation of 0.838, denoting moderate variability. The range from 1.00 to 5.00 confirms that responses encompass all categories. The mean for the adaptive recombination score is 3.71, which indicates predominantly high scores on the scale. With a standard deviation of 0.79160, responses are more consistent than those for relational re-

Table 3. Descriptive statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Relational Reproduction	310	1.00	5.00	3.46	.838
Adaptive Recombination	310	1.00	5.00	3.71	.791
Network Transformation	310	1.00	5.00	3.85	.919
Value Conversion	310	1.00	5.00	3.73	.740
Decision-Making Effectiveness	310	1.00	5.00	3.81	.595

production. Regarding network transformation, the mean is 3.85, the highest among the dimensions of the entrepreneurial process. Nevertheless, the comparatively larger standard deviation of 0.919 indicates greater response dispersion, reflecting increased variability in observed levels. The value conversion dimension exhibits a mean of 3.73, similar to that of adaptive recombination. The standard deviation of 0.740, the lowest among the independent variables, suggests a narrower distribution of responses around the mean. The effectiveness of decision-making has an average score of 3.81, placing the responses in the upper segment of the measurement scale. The standard deviation of 0.595, which is the lowest among all variables, indicates limited variability and relative uniformity in the perceptions articulated by the respondents.

Table 4 examines the normality indicators. These indicators rely on the combined analysis of skewness, kurtosis, and Shapiro-Wilk test results for each measured variable. These statistics assess the shapes of the distributions observed in the sample. The skewness and kurtosis values indicate distributions that are predominantly positively skewed, with varying degrees of concentration around the mean.

All variables exhibit positive skewness, indicating that responses tend to favor higher levels on the scale. This suggests predominantly positive perceptions of entrepreneurial practices and decision-making. Conversely, responses pertaining to relational reproduction and adaptive recombination demonstrate greater dispersion. The analysis of relational reproduction reveals a skewness coefficient of 0.521 (SE 0.138), indicating moderate positive skewness, with a tendency for responses to cluster at the lower end of the distribution. Its kurtosis is 0.174 (SE 0.276), which is close to zero, indicating a mesokurtic distribution. The Shapiro-Wilk test produces a statistic of 0.898 with a p-value of 0.200, exceeding typical significance thresholds. These findings suggest that components of entrepreneurial activity within SMEs are interconnected rather than isolated. The normality results reflect the entrepreneurial attitude. Managers can identify stable practices and areas requiring support, formalization, or further learning to enhance decision-making.

Table 4. Normality indicators

Variables	Skewness		Kurtosis		Shapiro-Wilk	
	Statistic	Std. Error	Statistic	Std. Error	Statistic	Sig.
Relational Reproduction	0.521	.138	0.174	.276	0.898	0.200
Adaptive Recombination	0.808	.138	0.813	.276	0.930	0.200
Network Transformation	1.207	.138	1.381	.276	0.924	0.200
Value Conversion	0.773	.138	0.682	.276	0.935	0.200
Decision-Making Effectiveness	1.062	.138	1.107	.276	0.926	0.200

Table 5. Data validity and reliability

Variables	KMO	Approx. Chi-Square	Sig.	Cronbach alpha	Items
The entire questionnaire	0.961	4880.1	0.00	0.914	31
Relational Reproduction	0.816	515.0	0.00	0.788	6
Adaptive Recombination	0.805	531.4	0.00	0.777	6
Network Transformation	0.900	1121.2	0.00	0.908	6
VC Value Conversion	0.844	514.4	0.00	0.758	6
EDM Decision-Making Effectiveness	0.863	568.1	0.00	0.811	7

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Table 5 evaluates data validity and reliability. The latter is based on a joint examination of the sampling adequacy indices (KMO) and Bartlett's test of sphericity, and Cronbach's alpha for the entire questionnaire and each measured dimension.

The KMO index is 0.961, showing very high suitability for the questionnaire. Bartlett's test yields a chi-square of 4880.1 with a p-value of 0.00, indicating significant correlations among the variables. The Cronbach's alpha is 0.914 for 31 items, reflecting high internal consistency. For the relational reproduction dimension, the KMO is 0.816, and Bartlett's test of sphericity yields a chi-square of 515.0 (p = 0.00), confirming the adequacy of the data. Cronbach's alpha for this dimension is 0.788 across six items. The adaptive recombination dimension has a KMO of 0.805, Bartlett's chi-square of 531.4 (p = 0.00), and a Cronbach's alpha of 0.777 for six items. The value conversion dimension shows a KMO of 0.900, Bartlett's chi-square of 1121.2 (p = 0.00), and a Cronbach's alpha of 0.908. The value conversion dimension has a KMO of 0.844, Bartlett's chi-square of 514.4 (p = 0.00), and a Cronbach's alpha of 0.758 for six items. Decision-making effectiveness (DME) had a KMO of 0.863, indicating good data fit. Bartlett's test yields a chi-square of 568.1 with p = 0.00, confirming the presence of correlations among items. Cronbach's alpha of 0.811 for seven items shows good internal consistency.

Table 6 examines divergent validity, which relies on the analysis of interdimensional correlations, supplemented by tolerance and variance inflation factor (VIF) indicators. These statistics assess the empirical distinctness of the constructs. The correlations, tolerance levels, and VIF values show positive but distinct relationships among the dimensions, providing clear statistical evidence of their differentiation.

The correlation coefficients among the entrepreneurial process dimensions range from 0.539 to 0.772, all positive. Relational reproduction correlates 0.579 with adaptive recombination and 0.539 with network transformation, showing moderate associations. The correlation between relational reproduction and value conversion is 0.749, a stronger link than the one between relational reproduction and value conversion. Adaptive recombination correlates 0.676 with network transformation and 0.751 with value conversion, indicating substantial interdependence. Network transformation and value conversion have the strongest correlation at 0.772. Overall, correlations range from 0.565 to 0.981, revealing diverse associations. Tolerance indices range from 0.812 to 0.993, indicating significant variance, and VIF values range from 1.001 to 1.364, indicating minimal collinearity.

Table 7 presents the results of the stepwise regression. This analysis of successive regression models highlights the evolution of the statistical relationships between the dimensions of the entrepreneurial process and decision-making effectiveness.

Model 1 uses only network transformation as a variable. The unstandardized (B = 0.946) and standardized (β = 0.981) coefficients indicate a very strong positive association with the dependent variable. The Student's *t*-value (88.086, p = 0.000) indicates a significant relationship. The correlation (R = 0.981) and R^2 (0.962) indicate that this model explains most of the variance in decision-making. Fisher's F (7759.0) confirms the model's statistical consistency. These indices support hypothesis H3.

Model 2 adds adaptive recombination to network transformation. Network transformation has a high coefficient (β = 0.886), while adaptive recombination's coefficient is moderate (β

Table 6. Divergent validity

Variables	RR	AR	NT	VC	Tolerance	VIF
RR Relational Reproduction	1				0.733	1.364
AR Adaptive Recombination	0.579**	1			0.812	1.231
NT Network Transformation	0.539**	0.676**	1		0.978	1.022
VC Value Conversion	0.749**	0.751**	0.772**	1	0.993	1.001
EDM Decision-Making Effectiveness	0.565**	0.739**	0.981**	0.818**	–	–

Note: **. Correlation is significant at the 0.01 level (2-tailed).

Table 7. Regression coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.189	.042		4.517	.000
	Network Transformation	.946	.011	.981	88.086	.000
	R =	0.981	R squared =	0.962	F test =	7759.0
2	(Constant)	.078	.037		2.112	.000
	Network Transformation	.855	.012	.886	69.019	.000
	Adaptive Recombination	.125	.011	.140	10.914	.000
	R =	0.986	R squared =	0.972	F test =	5426.9
3	(Constant)	.605	.038		7.138	.000
	Network Transformation	.811	.014	.840	57.713	.000
	Adaptive Recombination	.090	.013	.101	7.184	.000
	Value Conversion	.099	.017	.094	5.768	.000
	R =	0.988	R squared =	0.975	F test =	4009.3
4	(Constant)	.718	.038		8.479	.000
	Network Transformation	.806	.014	.836	57.733	.000
	Adaptive Recombination	.092	.012	.103	7.427	.000
	Value Conversion	.132	.020	.124	6.427	.000
	Relational Reproduction	–.036	.013	–.038	–2.835	.005
	R =	0.988	R squared =	0.976	F test =	3078.2

Note: a. Dependent Variable: Decision-Making Effectiveness.

= 0.140) with a *t*-value of 10.914 and $p = 0.000$. R^2 increases from 0.986 to 0.972, improving the model's explanatory power. The *F*-test of 5426.9 confirms its validity. The model jointly supports hypotheses H2 and H3, showing their combined contribution.

Model 3 adds value conversion as a third variable alongside network transformation and adaptive recombination. The standardized coefficients show network transformation as the strongest (β = 0.840), with adaptive recombination (β = 0.101) and value conversion (β = 0.094) contributing positively but less significantly. All *t*-values are significant at 0.000. $R^2 = 0.975$ and a Fisher's test of 4009.3 indicate a slight improvement in model fit. This model supports hypothesis H4.

Finally, model 4 introduces relational reproduction. The coefficients indicate that network transformation (β = 0.836), adaptive recombination (β = 0.103), and value conversion (β = 0.124) are positively associated with decision-making effectiveness. Conversely, relational reproduction has a negative coefficient (β = –0.038), with a *t*-value of –2.835 and a *p*-value of 0.005, indicating an inverse relationship. The R^2 is 0.976, and Fisher's exact test ($F = 3078.2$) confirms robustness. This model supports hypothesis H1.

4. DISCUSSION

The results highlight a differentiated structuring of entrepreneurial processes in relation to decision-making effectiveness in Lebanese SMEs. In Lebanese SMEs, practices for structuring and developing networks are integral to observed decision-making processes. Network transformation appears to be the dimension most strongly associated with decision-making effectiveness. It occupies a central place across the models. From the first model onward, this dimension exhibits a very high and stable standardized coefficient, indicating that it is the variable most strongly associated with decision-making effectiveness. This preeminence aligns with past studies highlighting the structuring role of professional networks in accessing information, coordinating stakeholders, and reducing decision-making uncertainty (Stephan, 2024; Ardede et al., 2025). This observation aligns with past studies that emphasize the ability to integrate new partners and reconfigure existing relationships as a key lever for accessing relevant information (Tunio et al., 2021; Hägg et al., 2024). Entrepreneurs benefit from openness to new actors and from renewing their information sources in decision-making processes. However, while past studies emphasize network density or stability, the results suggest that the dynamics of relationship transformation and reconfiguration

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are particularly pronounced (Sanda & Sallama, 2023; Sipos et al., 2024).

Adaptive recombination occupies an intermediate position in the interpretation of the results. The multivariate models increasingly support adaptive recombination. The coefficients associated with this variable remain positive and significant, though of lower magnitude than those for network transformation. Results show that adjusting resources and practices improves decision-making. SMEs should foster flexibility by forming cross-functional or temporary groups to combine skills, enhancing adaptability and leaders' ability to adapt as circumstances change. These results are consistent with past research that describes resource and practice recombination as a lever for strategic adjustment in SMEs (Firli Musfar et al., 2025; Puspita & Wardani, 2022). Nevertheless, the observed statistics indicate that this dimension functions more as a complementary mechanism than as a dominant factor, casting doubt on theoretical approaches that attribute to it a central role (Liu et al., 2024; Deligianni et al., 2016). The observed coefficients confirm its role in shaping decisions, consistent with the literature, which describes the recombination of resources and practices as a response to organizational and environmental constraints (Siqueira & Honig, 2019).

Value conversion also shows a positive association with decision-making effectiveness. The coefficients indicate a positive and significant relationship, though of smaller magnitude than for the other dimensions. This observation aligns with past research that views value conversion as a gradual process, dependent on managers' ability to formalize and exploit latent opportunities (Syrett & Keles, 2022; Wang et al., 2019). Value conversion contributes to structuring decisions, without, however, supplanting the influence of networks and adaptability. It clarifies choices but does not dominate decisions. Lebanese SMEs benefit from formal tools, such as tracking tables and indicators, to convert opportunities into actions, thereby promoting consistent, traceable decisions.

Relational reproduction reveals a contrasting result. The coefficient is negative yet statistically significant. Results confirmed that social embeddedness negatively influences decision-making, despite its vital role for SMEs (Delladio et al., 2023; Durac & Moga, 2023). This result diverges from prior studies that have emphasized relational continuity and trust as the foundations of decision-making in SMEs (Firli Musfar et al., 2025). This divergence enriches the theoretical debate by highlighting that relational stability can conflict with the logic of network renewal and openness. However, the data suggest that excessive reliance on existing relationships can conflict with the logics of transformation and adaptation, which are widely emphasized in recent literature (Manalu et al., 2025).

The results enrich previous research by offering a hierarchical and articulated understanding of entrepreneurial processes (Sanda & Sallama, 2023; Mets et al., 2022). It highlights that the effectiveness of decision-making appears to be more closely associated with logics of transformation and openness than with mechanisms of simple reproduction, while confirming the supplementary role of adaptive and value-converting capacities. This integrated approach allows us to move beyond a fragmented view of entrepreneurial processes and provides a coherent analytical perspective grounded in observed results.

Theoretically, this paper offers an integrated reading of entrepreneurial processes by demonstrating the empirical hierarchy of the analyzed dimensions. It provides original insights by clearly distinguishing the effects of transformation, recombination, conversion, and relational reproduction, whereas some literature tends to group them into broader categories. The analysis also highlights the value of a sequential approach to the models, allowing for a better understanding of the specific contribution of each dimension. Regarding managerial contributions, the findings indicate that the practices observed in the studied SMEs emphasize the significance of network evolution and their reconfiguration within decision-making processes. Additionally, they underscore the complementary roles of adaptive and value-conversion capacities, while also highlighting the potentially ambivalent effects of excessively reproducing existing relationships. These elements offer useful analytical benchmarks for SME managers to reflect on the balance between continuity and renewal in their decision-making practices.

This study nevertheless has certain limitations, particularly the cross-sectional nature of the data and the use of convenience sampling, which limit the interpretative scope of the results. The sample of 310 individuals was selected using convenience sampling, which may limit the generalizability of the results to Lebanese SMEs. A subsequent study with a larger, randomized sample would strengthen the representativeness of the conclusions. In this regard, several avenues for future research can be explored. Longitudinal studies would enable analysis of the evolution of entrepreneurial processes over time and their delayed impact on decision-making. The integration of mediating or moderating variables, such as the institutional context, leadership style, or the degree of environmental uncertainty, would also offer a more nuanced understanding of observed relationships, including cultural perceptions and personal interactions within SMEs.

CONCLUSION

This study aimed to analyze the influence of the four dimensions of the entrepreneurial process on decision-making effectiveness. The results highlight the differential effects of the four dimensions among Lebanese SMEs. Network transformation, adaptive recombination, and value conversion positively affect the effectiveness of decision-making. Conversely, relational reproduction shows a negative association, suggesting that relying solely on established relationships can limit decision-making dynamics. By integrating these dimensions coherently into their operational practices, small and medium-sized enterprises (SMEs) can enhance their capacity to mitigate uncertainty, arbitrate among alternatives more effectively, and reinforce their long-term development. Such an approach cultivates a decision-making culture that is receptive to change, anchored in learning, and ongoing transformation, which are essential components of the resilience and competitiveness of SMEs. SME leaders should pay particular attention to the active, evolving management of their networks to promote their renewal and diversification. Developing internal practices that enable the flexible recombination of resources and skills, as well as formalized value-conversion mechanisms, is relevant to transforming identified opportunities into coherent operational decisions.

To conclude, the effectiveness of decision-making depends less on the simple availability of resources than on SME capacity to reconfigure, open up, and integrate them into evolving dynamics. Decision-makers are invited to rethink managerial practices by favoring more adaptive, reflective approaches to action, geared toward the continuous transformation of networks and resources. From this perspective, the contribution of this analysis lies in highlighting the entrepreneurial process as an operational lever for structuring and guiding decision-making practices. It therefore offers a fresh perspective on decision-making in SMEs, placing it at the heart of relational and evolving dynamics rather than within a strictly rational, static framework. These results open avenues for further research to deepen analysis of the intermediary mechanisms likely to influence this relationship, particularly by integrating contextual, organizational, and cognitive variables to better understand the complexity of decision-making processes in crisis.

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