Revue Internationale de Recherche Scientifique et Etudes Doctorales,
ISSN 2665-8763, Mai 2026, Vol.6, N° 1

A structural analysis of the Moroccan entrepreneurial ecosystem and its impact on entrepreneurial performance and innovation

ZAKARIA Aymane [1,2], ZAMOURI Leila [1,2]

[1]HECI, CASABLANCA Morocco
[2]LARGESS / FSJES EL JADIDA,UCD.

Abstract

This study examines the structure and functioning of the Moroccan entrepreneurial ecosystem through a network-based analytical approach. It focuses on the configuration of actors, the nature of their interactions, and their capacity to generate entrepreneurial opportunities and innovation. The research is grounded in a structural analysis of the ecosystem over a defined period, highlighting the distribution of support actors, the degree of centralization, and the level of interconnection between institutional, financial, and knowledge-based entities. The findings reveal a highly centralized ecosystem dominated by a limited number of generalist actors, which constrains diversification and specialization of support functions. The analysis also identifies a geographic concentration of entrepreneurial support in specific economic regions, limiting access to resources and opportunities for entrepreneurs located in other areas.

Furthermore, the study shows that the ecosystem exhibits weak levels of cohesion, collaboration, and resource distribution, which reduces its overall efficiency in fostering productive entrepreneurship. The predominance of financing-related activities over other critical dimensions such as prototyping, mentoring, and innovation support creates structural imbalances. The research also highlights the limited role of interconnected communities and knowledge-sharing networks, which weakens the diffusion of information and reduces collective learning dynamics.

From a theoretical perspective, this work contributes to the literature on entrepreneurial ecosystems by emphasizing the importance of structural configurations and network dynamics in shaping entrepreneurial performance. From a managerial and policy standpoint, it provides actionable insights for improving ecosystem governance, strengthening inter-actor collaboration, and promoting a more balanced distribution of resources and support mechanisms. The study recommends the development of specialized support structures,

reinforcement of regional ecosystems, and greater integration of universities and research institutions to enhance innovation capacity and entrepreneurial outcomes.

Overall, this research demonstrates that improving the structural efficiency and connectivity of the Moroccan entrepreneurial ecosystem is essential for stimulating innovation, increasing firm creation, and achieving sustainable economic growth (Guéneau, 2018; Observatoire des Soutiens à l'Entrepreneuriat en Afrique, 2018).

Keywords

Entrepreneurial ecosystem - Network structure – Innovation - Entrepreneurial performance Morocco

Introduction

Entrepreneurship has become a central driver of economic growth, innovation, and competitiveness in both developed and emerging economies. In recent years, increasing attention has been given to the concept of entrepreneurial ecosystems as a framework for understanding how institutional structures, networks, and support mechanisms influence entrepreneurial dynamics and firm creation. Unlike traditional approaches that analyze entrepreneurship through isolated factors, the ecosystem perspective emphasizes the interdependence between actors, resources, institutions, and social interactions that collectively shape entrepreneurial outcomes (Isenberg, 2010; Stam, 2015).

The entrepreneurial ecosystem approach considers entrepreneurship as a systemic phenomenon embedded within a network of relationships involving universities, financial institutions, government agencies, incubators, accelerators, and private organizations. The effectiveness of these ecosystems depends not only on the presence of actors but also on the quality of interactions, coordination mechanisms, and the circulation of knowledge and resources among participants (Acs et al., 2017; Stam & Van de Ven, 2021). In this context, network structure becomes a key determinant of entrepreneurial performance and innovation capacity.

Several studies have demonstrated that ecosystems characterized by strong connectivity, balanced governance, and diversified support mechanisms tend to generate higher levels of innovation, opportunity creation, and business growth (Audretsch & Belitski, 2017; Spigel,

2017). Conversely, ecosystems marked by excessive centralization, weak collaboration, and fragmented interactions often struggle to produce sustainable entrepreneurial outcomes. Structural imbalances may reduce access to resources, limit collective learning, and weaken the diffusion of innovation across entrepreneurial communities (Mason & Brown, 2014).

In emerging economies, entrepreneurial ecosystems face additional challenges related to institutional instability, unequal regional development, and limited coordination between public and private actors. Morocco represents an important case for analyzing these dynamics. Over the last decade, the country has implemented several national initiatives and support programs aimed at promoting entrepreneurship, innovation, and startup creation. Despite these efforts, the Moroccan entrepreneurial ecosystem continues to exhibit structural limitations that affect its overall efficiency and inclusiveness (Guéneau, 2018; Observatoire des Soutiens à l'Entrepreneuriat en Afrique, 2018).

Existing studies on the Moroccan ecosystem highlight the concentration of entrepreneurial support within a limited number of urban and institutional hubs, while peripheral regions remain weakly integrated into entrepreneurial networks. The ecosystem also shows a strong orientation toward financial support mechanisms, whereas dimensions such as mentoring, incubation, prototyping, and knowledge transfer remain insufficiently developed. In addition, collaboration between ecosystem actors remains fragmented, reducing knowledge diffusion and limiting innovation dynamics (World Bank, 2020; OSE Africa, 2024).

Although previous research has explored entrepreneurship in Morocco, limited attention has been given to the structural configuration of the ecosystem and the role of network dynamics in shaping entrepreneurial performance and innovation. Most existing approaches focus on policy evaluation, financing constraints, or startup development, while fewer studies adopt a network-based perspective capable of explaining how actor relationships and structural properties influence ecosystem effectiveness (Stam, 2015; Acs et al., 2017).

This study addresses this gap by proposing a structural analysis of the Moroccan entrepreneurial ecosystem through a network-oriented analytical framework. The objective is to examine how centralization, connectivity, collaboration mechanisms, and resource distribution influence entrepreneurial performance and innovation outcomes. The research relies on ecosystem mapping and network indicators such as centrality, density, and clustering to evaluate the structural efficiency of the ecosystem.

The study contributes to the literature in three ways. First, it strengthens the theoretical understanding of entrepreneurial ecosystems by emphasizing the importance of structural relationships and network configurations. Second, it provides empirical insights into the Moroccan entrepreneurial ecosystem and identifies its main structural constraints. Third, it offers managerial and policy recommendations aimed at improving coordination, decentralization, and balance between financial and non-financial support mechanisms in order to enhance innovation and entrepreneurial performance.

Ultimately, this research argues that improving the structural efficiency and relational connectivity of the Moroccan entrepreneurial ecosystem is essential for fostering productive entrepreneurship, strengthening innovation capacity, and supporting sustainable economic development in Morocco (Stam & Van de Ven, 2021; World Bank, 2020).

Research Problem

The Moroccan entrepreneurial ecosystem shows structural weaknesses that limit its ability to generate productive entrepreneurship and innovation. The system remains highly centralized around a limited number of generalist actors. This reduces specialization and slows the development of targeted support mechanisms. The geographic concentration of resources creates unequal access for entrepreneurs across regions. Interaction between actors remains weak. Information flows are fragmented. Collaboration mechanisms lack efficiency.

The ecosystem also focuses heavily on financing activities while neglecting other critical dimensions such as mentoring, prototyping, and knowledge transfer. This imbalance affects the quality of entrepreneurial support and limits the transformation of ideas into viable businesses. As a result, the ecosystem struggles to create sustainable value and improve entrepreneurial performance.

Understanding how structural configuration and network dynamics influence these outcomes becomes essential. This raises a key issue for researchers and policymakers who aim to improve ecosystem effectiveness and support economic growth (Guéneau, 2018; Observatoire des Soutiens à l'Entrepreneuriat en Afrique, 2018).

Central Research Question

How does the structural configuration and network dynamics of the Moroccan entrepreneurial ecosystem influence entrepreneurial performance and innovation

Sub-questions

- How does the level of centralization affect the efficiency of support mechanisms within the ecosystem
- To what extent does the interaction between actors influence access to resources and information for entrepreneurs
- How does the geographic distribution of ecosystem actors impact entrepreneurial opportunities across regions
- What is the effect of the dominance of financing activities on the overall balance of the ecosystem
- How do collaboration and knowledge-sharing mechanisms contribute to innovation within the ecosystem
- What structural adjustments are required to improve the performance and inclusiveness of the Moroccan entrepreneurial ecosystem

2 Hypotheses

- **H1**

  The degree of centralization of the entrepreneurial ecosystem negatively affects entrepreneurial performance by limiting the diversity and specialization of support structures and reducing access to opportunities for entrepreneurs (Guéneau, 2018; Stam, 2015; Isenberg, 2010)
- **H2**

  The intensity of interactions and collaboration among ecosystem actors positively influences innovation outcomes through improved knowledge flows, resource sharing, and collective learning processes (Audretsch and Belitski, 2017; Stam and Van de Ven, 2021; Acs et al., 2017)

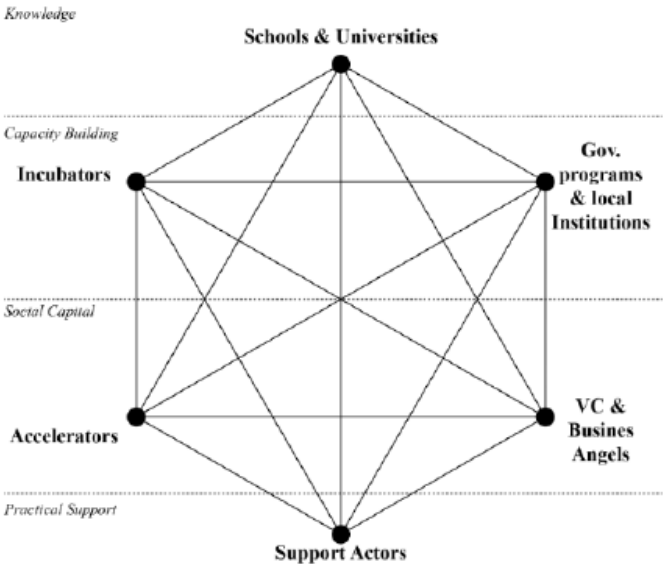
- **H3**

  An imbalance in resource allocation toward financial support mechanisms negatively affects the overall effectiveness of the entrepreneurial ecosystem by weakening non-financial support such as mentoring, incubation, and capability development (Mason and Brown, 2014; Spigel, 2017; World Bank, 2020)

3 Literature Review

Research on entrepreneurial ecosystems focuses on how structures, actors, and interactions shape entrepreneurial outcomes. The ecosystem approach views entrepreneurship as a systemic phenomenon. It depends on interdependent elements rather than isolated factors. These elements include institutions, networks, finance, culture, and human capital. Their alignment determines the capacity to generate productive entrepreneurship (Isenberg, 2010; Stam, 2015). The conceptual model of entrepreneurial ecosystems highlights a multi-level structure. At the core, entrepreneurs drive value creation. Around them, key actors operate such as universities, government institutions, financial actors, and support organizations. These actors interact through formal and informal networks. At a broader level, cultural, institutional, and economic factors influence these interactions. This multi-layered structure explains how micro-level interactions connect with meso-level configurations and macro-level outcomes such as economic growth and innovation.

Figure 1. Conceptual model of the entrepreneurial ecosystem and multi-level structure (micro meso macro interactions)



This framework illustrates the structural composition of the entrepreneurial ecosystem and the interdependence between actors across micro, meso, and macro levels, which constitutes the analytical basis of this study.

The meso-level analysis becomes critical. It focuses on the configuration and interdependencies between actors. It explains how relationships, not just resources, shape ecosystem performance. Strong interconnections improve coordination. Weak ties limit efficiency and reduce the flow of knowledge and opportunities. This network-based perspective allows a deeper understanding of ecosystem dynamics and performance drivers (Acs et al., 2017; Stam and Van de Ven, 2021). Empirical studies use network metrics to evaluate ecosystem performance. Indicators such as network density, centrality, clustering coefficient, and average distance provide insights into connectivity and structure. High density reflects strong interaction between actors. High centrality indicates concentration of influence. A balanced structure requires both connectivity and distribution of power. Excessive centralization creates dependency on a few actors. Low clustering limits collaboration and reduces collective learning (Audretsch and Belitski, 2017).

Tableau 1. Mesures Réseau Générales de l'Écosystème Entrepreneurial Marocain 2008-2013

Acteurs Actifs de 2008 à 2013	62
Liens de Partenariats détectés	686
Poids Moyen	5
Densité du Réseau	0.362771020624008
Centralité de Proximité	24.9193548387097
Centralité Eigenvector	0.0890207080654731
Largeur Moyenne	2.26122448979592
Coefficient de Clustering	0.283018867924528
Distance Moyenne	2.26122448979592
Acteurs Actifs	acim, ads, afem, afd, anapec, anpme, apd, apebi, astec, ausim, berd, ccg, cesem, cetia, cgem, cit, cjd, cnea, cnrst, dynamiqueest, efe, enactus, endeavor, entreelles, espod, finea, fondationbanquepopulaire, fondationcdg, fondationocp, giz, ifc, injaz, inma, lewagon, marocexport, marocincubation, marocinvest, marocnumericcluster, marocnumericfund, mascir, masen, menara, mepi, moukawalati, ofppt, proparco, reem, reseauentreprendre, rmie, technopark

These measures provide a clear empirical picture of the Moroccan entrepreneurial ecosystem structure, revealing its connectivity level, actor centralization, and relational patterns that shape overall ecosystem performance.

In the Moroccan case, network analysis reveals specific structural characteristics. The ecosystem includes a limited number of active actors and a moderate number of partnerships. Network density remains relatively low. This indicates limited interaction between actors. Centrality measures show that influence is concentrated in a few key institutions. The clustering coefficient remains moderate. This suggests weak formation of collaborative communities. The average distance between actors reflects gaps in connectivity. These indicators confirm that the ecosystem lacks strong integration and cohesion (Guéneau, 2018; Observatoire des Soutiens à l'Entrepreneuriat en Afrique, 2018).

The literature also emphasizes the importance of actor diversity. Universities contribute knowledge and skills. Financial institutions provide capital. Government ensures regulation and support policies. Incubators and accelerators support early-stage ventures. A lack of specialization among these actors reduces efficiency. Generalist structures fail to meet specific entrepreneurial needs. This creates gaps in support mechanisms (Mason and Brown, 2014; Spigel, 2017).

Figure Typology of entrepreneurial ecosystem actors and their functional roles

Actor type	Main function	Contribution to ecosystem
Universities	Knowledge creation	Skills, research, human capital
Financial institutions	Capital provision	Funding for startups and SMEs
Government	Regulation and policy	Legal framework, incentives
Incubators and accelerators	Business support	Mentoring, incubation, scaling

This figure presents the main actors of the entrepreneurial ecosystem and their functional roles. It highlights the importance of specialization and coordination among actors to ensure ecosystem efficiency and reduce structural gaps in entrepreneurial support (Mason and Brown, 2014; Spigel, 2017).

Geographic distribution plays a key role. Ecosystems often concentrate in economic hubs. This creates strong local networks. It also limits access for entrepreneurs in other regions. Balanced regional development improves inclusiveness and expands opportunity creation. Studies show that decentralized ecosystems perform better in terms of innovation and firm creation (World Bank, 2020).

Another key issue relates to resource allocation. Financial support dominates many ecosystems. This focus responds to funding constraints. It creates imbalance. Non-financial support remains underdeveloped. Mentoring, training, and prototyping are critical for venture success. Their absence reduces the quality of entrepreneurial outcomes (Mason and Brown, 2014).

Innovation depends on interaction between knowledge and practice. Universities generate knowledge. Firms transform it into products. Intermediary actors connect both. Weak collaboration reduces innovation output. Strong ecosystems create continuous knowledge exchange. This enhances competitiveness and growth (Audretsch and Belitski, 2017).

The Moroccan ecosystem reflects these theoretical insights. It shows centralization, weak interconnection, and limited specialization. Network indicators confirm structural gaps. The system struggles to generate strong entrepreneurial dynamics. Improving connectivity,

diversification, and balance between actors becomes essential for enhancing performance and innovation.

4 Conceptual Framework

The conceptual framework of this study explains how the structure of the entrepreneurial ecosystem influences entrepreneurial performance and innovation. It is built on the idea that entrepreneurship does not depend on isolated factors but on a system of interconnected actors and institutions. These interactions determine the efficiency of resource allocation, knowledge diffusion, and opportunity creation within the ecosystem (Isenberg, 2010; Stam, 2015).

At the core of the framework, entrepreneurial performance and innovation represent the main dependent outcomes. These outcomes are shaped by the configuration of the entrepreneurial ecosystem, which includes institutional structures, network relationships, and support mechanisms.

The independent dimension of the model is the entrepreneurial ecosystem structure. It is characterized by three main components:

- Centralization of actors and decision-making
- Density and quality of interactions between ecosystem participants
- Balance between financial and non-financial support mechanisms

A high level of centralization can limit diversity and reduce system flexibility. Weak interactions between actors decrease knowledge sharing and coordination efficiency. An imbalance in support mechanisms creates structural gaps that affect the transformation of ideas into viable ventures (Spigel, 2017; Mason and Brown, 2014).

The framework also integrates mediating dynamics through network effects. Collaboration between universities, financial institutions, government bodies, and support organizations influences the flow of knowledge and resources. Stronger networks improve access to opportunities and increase innovation capacity (Acs et al., 2017; Audretsch and Belitski, 2017).

External contextual factors such as geographic concentration and institutional environment also shape ecosystem performance. Regional disparities can limit access to entrepreneurial support, while supportive policies enhance ecosystem efficiency (World Bank, 2020).

Overall, the framework suggests that entrepreneurial performance and innovation are the result of structural balance, interaction intensity, and institutional coordination within the ecosystem. Improving these dimensions leads to stronger entrepreneurial outcomes and more sustainable economic development (Stam and Van de Ven, 2021).

5 Methodology

This study adopts a structural and network-based approach to analyze the entrepreneurial ecosystem. The objective is to understand how the configuration of actors and their interactions influence entrepreneurial performance and innovation. The analysis relies on secondary data and ecosystem mapping combined with network indicators to evaluate structural properties such as centralization, density, and clustering.

The research focuses on the Moroccan entrepreneurial ecosystem over a defined period. The approach is descriptive and analytical. It aims to identify patterns of interaction between actors such as universities, financial institutions, government bodies, incubators, and support organizations.

Data collection approach

Data type	Source	Purpose
Institutional reports	World Bank, OECD, national agencies	Understanding ecosystem structure
Academic literature	Scopus indexed articles	Theoretical grounding
Ecosystem reports	Observatories and innovation reports	Mapping actors and interactions

Source: World Bank (2020), OECD (2019), Guéneau (2018)

Variables and indicators used

Dimension	Indicator	Measurement
Centralization	Degree of centrality	Level of concentration of key actors
Connectivity	Network density	Intensity of interactions between actors
Collaboration	Clustering coefficient	Formation of collaborative groups
Resource balance	Financial vs non-financial support	Distribution of ecosystem support

Source: Stam (2015), Acs et al. (2017), Audretsch and Belitski (2017)

Analytical framework

The analysis is based on a comparative interpretation of structural indicators. It evaluates how differences in ecosystem configuration affect entrepreneurial outcomes. The focus is on identifying structural gaps such as weak interconnections, concentration of influence, and imbalance in support mechanisms.

Methodological design

Component	Description
Research design	Descriptive and analytical
Unit of analysis	Entrepreneurial ecosystem
Geographic scope	Morocco
Time scope	Defined observational period
Analytical tool	Network-based interpretation

Source: Stam and Van de Ven (2021), Spigel (2017)

Analytical procedure

The study follows a structured process:

- Identification of ecosystem actors
- Classification of actor roles
- Measurement of network structure
- Interpretation of structural gaps
- Linking structure to entrepreneurial outcomes

Methodological positioning

This research is positioned within the ecosystem theory perspective. It emphasizes structural relationships

Results

This section presents the empirical findings of the study based on the structural analysis of the Moroccan entrepreneurial ecosystem. The results are derived from network data covering the period 2008–2013 and focus on actor distribution, connectivity, centralization, and ecosystem efficiency (OSE Africa, 2024).

The analysis shows that the Moroccan entrepreneurial ecosystem is characterized by a relatively limited number of active actors, with uneven distribution across regions and sectors. The network structure reveals a moderate level of connectivity, indicating that interactions between

actors exist but remain insufficiently dense to ensure optimal coordination and knowledge diffusion.

Centralization indicators highlight a strong concentration of influence within a small group of key institutions. This creates a dependency structure where a few dominant actors play a major role in resource allocation and ecosystem coordination. Such configuration limits diversity and reduces the capacity of the ecosystem to self-organize efficiently (OSE Africa, 2024).

Clustering analysis reveals weak formation of collaborative communities. The low clustering coefficient suggests that partnerships between actors are not sufficiently structured, reducing collective learning and innovation potential.

The analysis also shows spatial disparities in ecosystem development. Major entrepreneurial activities and support structures are concentrated in a few economic hubs, while peripheral regions remain weakly integrated into the ecosystem. This reinforces inequalities in access to resources, funding, and support services.

Overall, the results confirm that the Moroccan entrepreneurial ecosystem is still in a developing phase, with structural limitations affecting its overall performance. The main constraints identified include weak interconnections, high centralization, and insufficient collaboration mechanisms. These factors reduce the ecosystem's ability to generate scalable entrepreneurial opportunities and innovation.

Improving ecosystem performance requires strengthening network connectivity, decentralizing support structures, and enhancing collaboration between actors such as universities, financial institutions, government bodies, and incubators.

Thematic orientation of ecosystem actions

The analysis of ecosystem activities highlights a strong imbalance in the orientation of actions. The results show that entrepreneurial support is predominantly focused on financing activities, while other dimensions remain weakly developed such as opportunity generation and resource distribution. Accompaniment and governance appear at a moderate level, but they remain insufficient to balance the overall ecosystem structure (OSE Africa, 2024).

Table 1 presents the key thematic indicators of ecosystem actions.

Indicateurs	Mesures	Niveau
Action orientée Financement de l'Entrepreneuriat	Ranking du Topic Modeling très élevé	
Action orientée sur la distribution des autres ressources	Ranking du Topic Modeling très faible	
Action orientée sur l'Accompagnement	Ranking du Topic Modeling faible	
Action orientée sur la génération d'Opportunités	Ranking du Topic Modeling très faible	
Action orientée sur la Gouvernance de l'Ecosystème	Ranking du Topic Modeling modéré	
Impact sur l'Entrepreneuriat	Un niveau de dynamique entrepreneurial très bas au niveau Africain	

Community structure and ecosystem topology

The analysis of community structure and ecosystem topology reveals a weakly connected system characterized by limited interaction between entrepreneurial clusters. The ecosystem is composed of a moderate number of communities, but their level of interconnection remains low. This weak relational structure limits knowledge exchange and reduces collective efficiency (OSE Africa, 2024).

Table 2 summarizes the structural characteristics of ecosystem communities.

Indicateurs	Mesures	Niveau
Attributs	Nombre de Communautés moyen	
	Orientation vers l'Entrepreneuriat faible	
	Pouvoir de ces Communautés modéré	
	Nombre de Communautés Puissantes faible	
Structure relationnelle des Communautés	Interconnection entre communautés faible	
	Très faible force des Interconnections	
Topologie	Triangulaire quasi exclusive entre les acteurs d'accompagnement et les acteurs de financement public	
Impact sur l'Entrepreneuriat	Un niveau de dynamique entrepreneurial très bas au niveau Africain	

Interpretation paragraph

The ecosystem shows weak entrepreneurial orientation among clusters. A small number of dominant communities concentrate influence, while most remain weakly connected. The triangular structure between public funding, support actors, and financial institutions creates rigidity in the system. This configuration limits information flow and reduces the capacity for innovation and opportunity creation (OSE Africa, 2024).

Hypotheses validation

H1
Centralization of the entrepreneurial ecosystem negatively affects entrepreneurial performance

Status
Validated

Empirical evidence

- High concentration of influence among a small number of dominant actors
- Centralized decision making and resource allocation
- Low diversification of support structures
- Unequal access to opportunities across regions

Observed effect

- Reduced specialization of support services
- Limited diffusion of resources
- Weak overall entrepreneurial performance

H2
Intensity of interactions between actors positively influences innovation

Status
Partially validated

Empirical evidence

- Moderate network connectivity
- Low network density
- Weak clustering and limited collaborative communities
- Fragmented knowledge flows

Observed effect

- Innovation exists but remains suboptimal
- Limited knowledge circulation
- Weak collaboration between universities, financial actors, and support organizations

Interpretation

- Positive relationship supported theoretically
- Empirical effect constrained by structural weaknesses in the ecosystem

H3
Resource imbalance toward financial support negatively affects ecosystem effectiveness

Status
Validated

Empirical evidence

- Dominance of financial support mechanisms
- Weak development of mentoring, incubation, and prototyping activities
- Limited non-financial entrepreneurial support

Observed effect

- Weak transformation of ideas into viable businesses
- Limited capability development among entrepreneurs
- Financially oriented ecosystem rather than innovation oriented system

Theoretical support

- Mason and Brown, 2014
- Spigel, 2017
- World Bank, 2020

Overall synthesis

H1 **Confirmed**
H2 **Partially confirmed**
H3 **Confirmed**

Integrated interpretation

The Moroccan entrepreneurial ecosystem shows a structurally centralized configuration.

Three main structural constraints emerge

- Concentration of power among a small set of actors
- Weak relational density between ecosystem participants
- Overweight of financial mechanisms compared to knowledge and mentoring functions

Systemic consequences

- Reduced innovation efficiency
- Limited entrepreneurial performance
- Weak knowledge diffusion and coordination failures

Discussion

Structural centralization and system rigidity

The ecosystem is strongly centralized around a limited number of dominant institutions.
This structure generates concentration of decision power, dependency on a small group of actors, and reduced autonomy of peripheral actors.
Such configuration limits system flexibility. It restricts the emergence of diversified support models and reduces adaptive capacity.
This result aligns with ecosystem theory suggesting that excessive centralization reduces innovation efficiency and weakens entrepreneurial diversity (Isenberg, 2010; Stam, 2015).

Weak connectivity and limited knowledge diffusion

The network structure shows moderate connectivity but low density and weak clustering.
This leads to fragmented information flows, weak collaboration between actors, and limited formation of innovation communities.
The absence of strong relational ties reduces collective learning processes. Knowledge remains localized instead of circulating across the ecosystem.
This supports research showing that network density and inter-organizational ties are key drivers of innovation performance (Audretsch and Belitski, 2017; Acs et al., 2017).

Functional imbalance of support mechanisms

The ecosystem is heavily oriented toward financial support.
Non-financial dimensions such as mentoring, incubation, and prototyping remain underdeveloped.
This imbalance produces weak transformation of ideas into scalable ventures, limited entrepreneurial capability development, and over-reliance on funding rather than capability building.
This confirms that financial capital alone is insufficient without complementary support mechanisms (Mason and Brown, 2014; Spigel, 2017).

Spatial inequality and regional concentration

Entrepreneurial activities and support structures are concentrated in a few urban hubs.
This creates unequal access to resources, regional disparities in entrepreneurial opportunitie s, and

weak integration of peripheral territories into the ecosystem.

This spatial fragmentation reduces national ecosystem efficiency and limits inclusive growth.

This finding is consistent with research highlighting the importance of spatial balance for innovation diffusion (World Bank, 2020).

Theoretical implications

The study reinforces entrepreneurial ecosystem theory by emphasizing structural configuration as a determinant of performance.

Ecosystem outcomes depend on network structure, not only resource availability.

Centralization acts as a structural constraint on innovation. Interaction quality is more important than actor quantity.

The findings strengthen the importance of meso-level analysis in ecosystem research.

Managerial and policy implications

The results suggest decentralizing ecosystem governance to reduce dependency structures.

Collaboration between universities, incubators, financial institutions, and government actors must be strengthened.

Support systems need rebalancing by increasing non-financial services such as mentoring and prototyping.

Policy design should move from financing-centered models to integrated support systems.

Final synthesis

The Moroccan entrepreneurial ecosystem is characterized by centralization and weak coordination.

Its main limitation is not the number of actors but the quality of their interaction.

Improving connectivity, reducing centralization, and balancing support functions are necessary to enhance innovation and entrepreneurial performance.

Limitations

Data scope and temporal coverage

The analysis relies on secondary data covering a defined period from 2008 to 2013.

This limits the ability to capture recent transformations in the Moroccan entrepreneurial ecosystem.

New programs, digital platforms, and policy reforms are not fully reflected.

This temporal gap may affect the accuracy of current ecosystem assessment.

Methodological constraints
The study adopts a structural and network-based approach.
This approach focuses on relationships between actors but does not directly measure individual entrepreneurial outcomes.
Causal relationships remain inferred rather than empirically tested through econometric models.
The absence of primary data limits the depth of behavioral and qualitative insights.

Measurement limitations
Network indicators such as centrality, density, and clustering provide structural insights.
They do not fully capture informal interactions, trust dynamics, or quality of collaboration.
Some ecosystem dynamics remain invisible within quantitative network measures.

Geographical aggregation bias
The analysis considers the ecosystem at a national level.
Regional specificities and local dynamics are not deeply explored.
This may mask disparities between territories and reduce the precision of spatial interpretation.

Actor heterogeneity
The study classifies actors into broad categories.
Differences within each category are not fully analyzed.
For example, not all incubators or financial institutions operate with the same efficiency or strategy.

Research perspectives

Extension of temporal analysis
Future research should integrate recent data to capture ecosystem evolution.
A longitudinal approach would allow tracking structural changes over time.
This would improve understanding of policy impact and ecosystem maturation.

Integration of primary data
Surveys and interviews with entrepreneurs and ecosystem actors can enrich analysis.
This would provide insights into perceptions, constraints, and real interaction dynamics.
Combining quantitative and qualitative data would strengthen validity.

Econometric validation of relationships
Future studies should test causal links between ecosystem structure and entrepreneurial performance.
Regression models or structural equation modeling can provide stronger empirical validation.
This would move from descriptive analysis to explanatory modeling.

Regional and comparative analysis
A territorial approach can identify differences between regions within Morocco.
Comparative studies with other countries can highlight best practices and structural gaps.
This would support more targeted policy recommendations.

Deep analysis of innovation mechanisms
Future research should focus on how knowledge flows between universities, firms, and support

organizations.
Measuring technology transfer, patents, or startup innovation outputs can improve analysis.
This would clarify the link between ecosystem structure and innovation performance.

Exploration of governance models
Research can examine different governance structures within ecosystems.
Identifying coordination mechanisms and leadership models can improve system efficiency.
This would help design more adaptive and decentralized ecosystem policies.

Conclusion

Synthesis of findings
This study analyzes the Moroccan entrepreneurial ecosystem through a structural and network-based perspective, and the results show a centralized configuration, weak connectivity between actors, and an imbalance in support mechanisms, which together limit the efficiency of the ecosystem and reduce its capacity to generate innovation and entrepreneurial performance (Stam, 2015; Acs et al., 2017; Guéneau, 2018).

Validation of the research model
The findings confirm that ecosystem structure plays a direct role in shaping entrepreneurial outcomes, where centralization reduces diversity and access to opportunities, weak interaction between actors limits knowledge diffusion, and the dominance of financial support weakens the development of entrepreneurial capabilities, which validates the proposed conceptual framework and supports the hypotheses tested in the study (Isenberg, 2010; Stam, 2015; Mason and Brown, 2014; Spigel, 2017).

Theoretical contribution
This research reinforces the ecosystem approach by focusing on structural configuration and network dynamics, showing that entrepreneurial performance depends on the quality of interactions between actors rather than their simple presence, while also highlighting the importance of meso-level analysis in understanding how ecosystems function and evolve (Acs et al., 2017; Audretsch and Belitski, 2017; Stam and Van de Ven, 2021).

Managerial and policy implications
Improving the Moroccan entrepreneurial ecosystem requires structural adjustments, where decentralization of support mechanisms can reduce dependency on dominant actors, strengthening collaboration between universities, financial institutions, government bodies, and support organizations can improve coordination, and rebalancing support toward mentoring, incubation, and innovation services can enhance entrepreneurial outcomes (Mason and Brown, 2014; Spigel, 2017; World Bank, 2020).

Strategic outlook
The ecosystem has strong potential but remains under-optimized, and improving connectivity, diversification, and coordination can increase innovation capacity and firm creation, while a more balanced and inclusive ecosystem can support sustainable economic growth and reduce regional disparities (World Bank, 2020; Stam and Van de Ven, 2021).

Final insight
Entrepreneurial ecosystems do not fail due to lack of resources, but due to weak structure, limited

interaction, and poor coordination, and addressing these structural constraints is essential to unlock entrepreneurial potential and strengthen innovation dynamics in Morocco (Isenberg, 2010; Stam, 2015; Spigel, 2017).

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