



INTERNATIONALIZATION TRAJECTORIES OF GREEN START-UPS IN MOROCCO: A MULTIPLE CASE STUDY WITHIN THE RENEWABLE ENERGY CLUSTER

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Abstract: *This paper analyses the internationalization trajectories of Moroccan green start-ups operating within a cluster-based environment. Using a qualitative multiple case study of six start-ups belonging to the Renewable Energy Cluster (ENR), the study explores the roles of incubation, networking, and innovation in the international process. Data were collected between March and June 2025 through semi-directed interviews completed by a questionnaire and analyzed using a thematic analysis. The results show that cluster membership constitutes a structuring context for internationalization without being a direct determinant. Incubation and networking contribute indirectly to the international path, with innovation acting as a mediating mechanism through which cluster-related resources are transformed into competitive capabilities for foreign markets. The results also highlight the conditioning role of contextual factors such as proximity and entrepreneurial behaviors. The study also contributes to the literature on start-up internationalization by proposing a contextualized understanding of cluster-based mechanisms in an emerging economy.*

Key Words: *Green start-ups, Internationalization, Clusters, Incubation, Networking, Innovation, Internationalization trajectories, Sustainable entrepreneurial ecosystems*

1. INTRODUCTION

In the context of the global energy transition and increasing international competition, start-ups operating in the renewable energy sector, particularly in emerging economies such as Morocco, play a growing role in the development of innovative solutions. For these young firms, internationalization represents an important strategic lever, yet it remains a complex process due to organizational, financial, and institutional constraints.

The field of international entrepreneurship has developed to examine how young firms engage in cross-border activities. The literature shows that start-up internationalization trajectories do not necessarily follow standardized incremental patterns, but are strongly shaped by the resources mobilized, organizational learning processes, and the context in which firms operate (Knight and Liesch, 2016). In emerging economies, these trajectories are especially influenced by institutional constraints and by firms' dependence on their external environment (Borini and al., 2017).

Among the environments likely to influence these trajectories, clusters occupy a central position in literature. Defined as geographic concentrations of interconnected firms and organizations, clusters enhance competitiveness through knowledge externalities and dense interactions among actors (Porter, 1998). Empirical studies indicate that the international orientation of a cluster can influence the internationalization strategies of embedded firms, notably by facilitating access to international networks and foreign partners (Jankowska and Götz, 2017).

Beyond their spatial dimension, clusters can also be understood as entrepreneurial ecosystems in which interactions among actors and collective intellectual capital support firm growth and innovation (Temouri and al., 2023). Within such ecosystems, knowledge-sharing and networking mechanisms contribute to the development of organizational capabilities among cluster members (Franco and Esteve, 2024).

However, while the literature highlights the importance of various organizational and contextual factors in firm internationalization, it remains limited in its understanding of the underlying mechanisms shaping this process, particularly in emerging economies. Recent systematic reviews emphasize the need for qualitative, context-specific research capable of unpacking how internationalization trajectories are constructed in

practice, beyond export performance outcomes alone (Calheiros-Lobo and al., 2023).

Responding directly to this call, this article aims to analyze how cluster membership influences the internationalization trajectories of green start-ups in Morocco, drawing on a multiple case study conducted within a renewable energy cluster. The remainder of the paper is structured as follows: the first part reviews the relevant literature, the second one presents the research methodology, and the third part discusses the empirical findings.

2. LITERATURE REVIEW

In this section, we review three key conceptual foundations that underpin the present study. First, we discuss start-ups as specific actors in the internationalization process, highlighting their constraints and strategic characteristics. Second, we examine firm internationalization as a strategic and process-based phenomenon, with a focus on how internationalization trajectories are formed. Third, we explore internationalization trajectories within cluster-based environments, emphasizing how such contexts may shape firms' internationalization through various interrelated mechanisms.

2.1 Start-ups as specific actors in the internationalization process

Start-ups differ from established firms due to their organizational youth, high levels of uncertainty, and limited financial, human, and organizational resources. These characteristics make internationalization both a strategic opportunity and a challenging process. Unlike mature firms, start-ups' internationalization cannot be understood as a simple incremental geographic expansion, but rather as a strategic choice closely linked to learning capabilities, value proposition differentiation, and access to external resources.

Recent studies highlight that digital technologies and online channels can reduce certain barriers to internationalization, such as market access, visibility, and customer interaction. However, their effectiveness depends on how firms deploy these tools and on the complementary organizational capabilities they develop. (Jean and Kim, 2020) show that the use of platforms and websites can support SMEs' internationalization when integrated into a coherent strategy. Similarly, (Cassetta and al., 2020) demonstrate that e-business technologies foster exporting activities when combined with organizational and process innovations as well as appropriate internal skills.

For start-ups, external support mechanisms therefore play a central role in the internationalization process. (Gao and al, 2021) emphasize the role of business incubators as international knowledge intermediaries that facilitate start-ups' international growth through access to networks, strategic resources, and institutional support. In parallel, research focusing on born global start-ups, particularly in Industry 4.0 contexts, underlines the importance of institutional environments and support mechanisms in addressing internationalization risks and critical success factors (Oliva and al., 2022).

In the case of green start-ups, environmental orientation is discussed as a quality-related dimension associated with innovativeness, growth orientation, and international orientation (Neumann, 2023). While this orientation may strengthen the propensity of green start-ups to engage in foreign markets, existing studies also indicate that such firms remain dependent on enabling mechanisms such as networking, incubation support, and structured innovation processes to overcome the resource constraints inherent to their early stage of development.

2.2. Conceptual Foundations and Dynamics of Firm Internationalization

Despite the relatively long-standing interest in firm internationalization, this phenomenon has long been approached through fragmented perspectives, primarily focusing on entry modes or export decisions. From the earliest foundational works, internationalization has been viewed as a process of firms' gradual commitment to foreign markets (Welch and Luostarinen, 1988). However, changes in economic and organizational contexts have led scholars to renew and broaden their analytical frameworks.

Consequently, several questions arise: how should firm internationalization be defined today? Should it be considered a strategy, an evolutionary process, or a combination of both? And how are internationalization trajectories formed over time?

2.2.1. Definition of the Concept of Internationalization

Firm internationalization is traditionally defined as the process through which a firm develops its activities beyond national borders, whether in a progressive manner or not. This definition goes beyond export activities alone to encompass a range of international engagement modes, including partnerships, foreign direct investment, and hybrid forms of establishment in foreign markets (Welch and Luostarinen, 1988). Accordingly, internationalization refers to an evolving dynamic

characterized by successive decisions and an increasing degree of commitment to international markets.

Contemporary literature emphasizes the multidimensional nature of this concept, stressing that internationalization should not be understood solely as an outcome, but rather as a strategic process involving organizational choices, resource allocation trade-offs, and continuous adaptation to the international environment (Welch & Paavilainen-Mäntymäki, 2014). This perspective makes it possible to better capture the diversity of international trajectories observed among firms, particularly in contexts characterized by uncertainty and market complexity.

2.2.2. Internationalization as an Evolutionary Process

Process-based approaches to internationalization highlight the evolutionary and non-linear nature of firms' international engagement. Contrary to classical models based on gradual and sequential progression, recent research shows that internationalization trajectories may be characterized by phases of acceleration, slowdown, or strategic reconfiguration (Santangelo and Meyer, 2017). These dynamics reflect the influence of organizational learning, accumulated experience, and interactions with the external environment.

From this perspective, internationalization is viewed as a continuous learning process, during which firms adjust their strategies in response to perceived opportunities and encountered constraints. (Vahlne and Johanson 2017) emphasize that internationalization decisions are deeply embedded in interorganizational relationships and networks, which help reduce uncertainty and facilitate access to foreign markets. This relational view of the process makes it possible to integrate the social and contextual dimensions of internationalization, beyond factors internal to the firm alone.

2.2.3. Firms' Internationalization Trajectories

The notion of trajectory occupies a central place in contemporary analyses of internationalization. It refers to the idea that firms' international paths result from sequences of actions and decisions unfolding over time, rather than from isolated or one-off choices. Internationalization trajectories thus reflect the way firms combine learning, progressive commitment, and strategic adaptation in response to changes in their environment (Welch and Paavilainen-Mäntymäki, 2014).

Several studies highlight that these trajectories may vary considerably from one firm to another, depending on factors such as international experience, organizational capabilities, or the institutional context in which firms operate (Santangelo and Meyer, 2017). This heterogeneity of internationalization trajectories calls for moving beyond uniform approaches to internationalization in favor of more fine-grained analyses attentive to processes

and specific contexts. In this regard, examining environments likely to structure and orient internationalization trajectories emerges as a particularly relevant research avenue, paving the way for the analysis of clusters in the following section.

2.3. Clusters as Contextual Environments Shaping Firms' Internationalization Trajectories

The mid-1990s marked a turning point in the analysis of territorial dynamics of competitiveness, with the emergence of studies focusing on clusters and their role in firm development. The seminal work of Porter (1998) contributed to popularizing the concept of clusters by highlighting the geographical concentration of interconnected firms, institutions, and specialized actors within the same sector. Building on this perspective, several studies have shown that clusters facilitate access to resources, knowledge, and market opportunities, thereby strengthening firms' ability to engage in international competitive dynamics (Maskell and Malmberg, 1999; Bathelt, Malmberg, and Maskell, 2004).

2.3.1. Definition of the Cluster Concept

To clarify the concept of cluster and to identify the main dimensions mobilized in the recent literature, this section is synthesized in the form of a table. The table highlights the different conceptual approaches to clusters as well as the key dimensions emphasized by contemporary authors.

Table 1: Definitions of the Cluster

Authors	Definitions
Porter (1998)	A cluster is a geographical concentration of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions that both compete and

	cooperate.
Porter (2000)	Clusters refer to geographically proximate groupings of interconnected firms and institutions whose interactions enhance firms' productivity, innovation, and competitiveness.
(Bathelt, Malmberg and Maskell, 2004)	Clusters are territorial environments characterized by intensive local interactions and external connections that enable the creation and diffusion of knowledge.
(Delgado, Porter and Stern, 2016)	Clusters are geographically concentrated sets of related industries whose co-location influences economic performance and regional competitive advantage
(Jankowska and Götz, 2017)	Clusters are territorial structures composed of interconnected firms and institutions that may influence firms' strategies, particularly their international orientation.
(Fioravanti, Stocker and Macau, 2023)	Clusters are defined as localized systems of economic and institutional actors whose interactions facilitate knowledge sharing and the development of collective capabilities.

2.3.2. Internationalization Trajectories in Cluster-Based Environments

Research on firm internationalization increasingly acknowledges that internationalization trajectories are shaped not only by firm-specific resources but also by the environments in which firms are embedded. In this respect, cluster-based environments have been examined as contextual settings that can influence how firms initiate, develop, and adjust their international activities over time. Rather than acting as static geographic concentrations, clusters are increasingly conceptualized as dynamic

environments that condition firms' strategic paths, including their international expansion (Chen, 2021).

Many studies emphasize that clusters may affect internationalization trajectories by facilitating access to information, reducing uncertainty, and exposing firms to international opportunities through collective interactions. Firms embedded in clusters benefit from shared experiences, collective learning, and indirect exposure to foreign markets via other internationally active members or institutional actors operating within the cluster (Fernhaber, Gilbert, and McDougall, 2008).

More recent contributions adopt an ecosystem-based perspective, highlighting that internationalization within clusters evolves through iterative and non-linear processes. In such environments, firms continuously adapt their international strategies in response to feedback from local interactions and external linkages. International trajectories are thus shaped by a combination of local embeddedness and outward-oriented connections, rather than by isolated firm-level decisions (Santangelo and Meyer, 2017).

Furthermore, research suggests that cluster organizations themselves may play an active role in shaping firms' international trajectories by coordinating collective actions such as international projects, trade missions, and partnerships with foreign actors. These collective initiatives can function as catalysts that connect local innovation systems to global markets, thereby influencing firms' ability to engage and sustain international activities over time (Osarenkhoe and Fjellström, 2024).

In the context of emerging economies, clusters have also been analyzed as policy-driven instruments designed to enhance firms' international competitiveness. However, recent studies underline that the extent to which clusters effectively support internationalization trajectories depends on governance structures, coordination capabilities, and the quality of interactions among actors within the cluster (Amraoui and al., 2019; El Waatmani and Makhtari, 2019).

2.3.3. Mechanisms Shaping Internationalization within Cluster-Based Environments

Building on the previous sections, the literature suggests that clusters influence firms' internationalization trajectories through a set of underlying mechanisms rather than through a direct or uniform effect. Within cluster-based environments, firms benefit from collective structures and repeated interactions that shape their access to resources, knowledge, and strategic opportunities relevant to international expansion. Among

these mechanisms, networking, innovation, and incubation are consistently identified as key channels through which clusters may structure internationalization processes, particularly for start-ups and young innovative firms.

2.3.3.1. Networking as a Mechanism for Internationalization

Networking is widely recognized as a central mechanism in firms' internationalization processes, especially for young and resource-constrained ventures. Network relationships provide access to foreign market knowledge, partners, and opportunities that firms are often unable to develop independently. Early process-based studies emphasize that internationalization frequently unfolds through the gradual development of relationships with customers, suppliers, and intermediaries, which shape firms' engagement in foreign markets over time (Coviello and Munro, 1997).

Subsequent research confirms that networks influence not only market entry decisions but also the evolution of internationalization trajectories. Through repeated interactions, firms learn, adapt, and adjust their international strategies.

Ojala (2009) shows that network relationships play a decisive role in opportunity recognition and entry into psychically distant markets, particularly for knowledge-intensive start-ups. Within cluster-based environments, such networking processes are facilitated by spatial proximity and frequent interactions among heterogeneous actors, which may accelerate learning and reduce internationalization uncertainty.

2.3.3.2. Innovation as a Driver of Internationalization Trajectories

Innovation constitutes a second key mechanism linking cluster participation to internationalization trajectories. Rather than being limited to technological novelty, innovation often refers to firms' ability to develop distinctive value propositions and scalable business models. Recent research shows that early and sustained internationalization is frequently associated with business model innovation and niche-oriented strategies that allow firms to overcome liabilities of smallness and newness (Hennart, Majocchi, & Hagen, 2021).

In the case of green start-ups, innovation is closely related to environmental orientation and quality-based differentiation. Neumann (2023) demonstrates that

environmentally oriented start-ups tend to exhibit higher levels of innovativeness, stronger growth orientation, and a greater international orientation. These findings suggest that sustainability-driven innovation enhances firms' international attractiveness by aligning their offerings with international standards and market expectations. Within cluster-based environments, innovation processes may be further reinforced through collective learning and knowledge exchanges, enabling firms to transform localized capabilities into internationally relevant offerings.

2.3.3.3. Incubation and Support Mechanisms

Incubation and support mechanisms represent a third important channel through which clusters may influence firms' internationalization trajectories. Business incubators, accelerators, and support organizations embedded within clusters provide firms with access to mentoring, training, and strategic guidance that can reduce organizational and market-related uncertainties. These mechanisms are particularly relevant for start-ups, which often lack international experience and structured capabilities in the early stages of development (Hausberg and Korreck, 2020).

Empirical evidence suggests that incubation mechanisms increasingly integrate international dimensions, such as exposure to global business practices, access to international networks, and support for foreign market entry. Bone, Allen, and Haley (2019) highlight that incubation and acceleration programs contribute to firms' international readiness by strengthening managerial capabilities and facilitating connections with external partners, thereby supporting more sustainable international engagement over time.

2.3.4. Relationships between the mechanisms

Incubation and internationalization

The literature recognizes incubation as an important support mechanism for start-ups facing uncertainty, limited resources, and capability gaps. Incubation programs are generally designed to strengthen firms' strategic, organizational, and learning capacities, which are considered critical for operating in complex and competitive environments. Several studies suggest that incubation can indirectly support firms' openness to international markets by enhancing managerial skills, strategic clarity, and access to specialized expertise, without assuming a direct or uniform effect on

internationalization outcomes (Bone and al., 2019; Hausberg and Korreck, 2020).

Networking and innovation

Existing research highlights the close relationship between networking activities and firms' innovation processes. Interactions with a diverse set of actors including firms, institutions, and experts can facilitate knowledge exchange, collective learning, and the recombination of complementary resources. Such relational dynamics are particularly important in knowledge-intensive and technology-driven sectors, where innovation depends on access to external information and expertise. Prior studies indicate that networks may contribute to firms' innovative capacity by enabling learning and collaboration, although the nature and intensity of these effects may vary across contexts (Phelps, Heidl and Wadhwa, 2012; Ojala, 2009).

Innovation and internationalization trajectories

Innovation has long been associated with firms' ability to compete and expand beyond domestic markets. By developing differentiated products, services, or business models, innovative firms may better respond to the demands and constraints of international markets. The literature suggests that innovation can support international market entry and subsequent growth by enhancing firms' competitiveness and adaptability. However, the ways in which innovation is mobilized within internationalization trajectories remain context-dependent and are not uniformly established across firms (Boermans and Roelfsema, 2016).

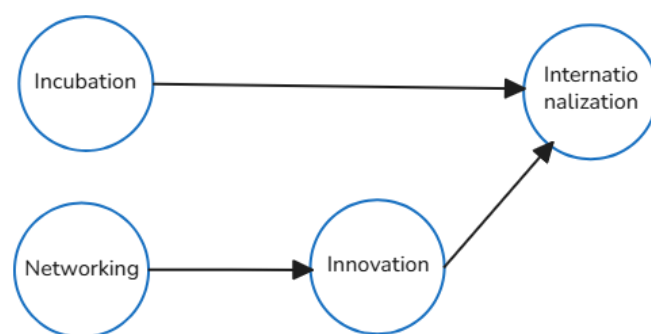


Fig -1: The conceptual research model.

3. METHODOLOGY

3.1. Research design

The methodology adopted in this study is based on a multiple case study approach with an exploratory purpose.

This methodological choice is justified by the nature of the research question, which aims to understand complex mechanisms and relationships between variables embedded in a specific organizational context, namely a cluster-based environment.

The case study strategy is particularly appropriate when the phenomenon under investigation is contemporary, context-dependent, and insufficiently explored, and when the boundaries between the phenomenon and its context are difficult to clearly delineate (Yin, 2014). From this perspective, case studies enable an in-depth analysis of organizational and relational dynamics, privileging exploration and understanding over statistical generalization.

The use of multiple cases further enhances the analytical validity of the research by allowing cross-case comparisons and the identification of recurring patterns across empirical situations (Eisenhardt and Graebner, 2007). This approach is consistent with a qualitative research design aimed at building explanatory frameworks grounded in empirical evidence (George and Bennett, 2005).

3.2. Research context and sample selection

3.2.1 Research context

The empirical setting of this study is the Renewable Energy Cluster (ENR), a Moroccan ecosystem dedicated to the development of renewable energy and clean technologies. The cluster plays a key role in supporting innovative firms through networking activities, innovation support mechanisms, and access to market opportunities at both national and international levels.

In 2014, the ENR Cluster, in partnership with the Moroccan Climate Innovation Center (MCIC), launched the Green Business Incubator, the first incubator in Morocco fully dedicated to renewable energy and clean technologies. The incubator aims to support the emergence of innovative start-ups, contribute to sustainable development, and foster durable job creation in support of the Kingdom's energy transition (ENR Cluster, 2024).

The ENR Cluster therefore represents a relevant organizational and institutional context for examining incubation, networking, and innovation mechanisms and their role in shaping start-ups' internationalization trajectories.

3.2.2 Research sample

The research sample consists of six Moroccan green start-ups, all members of the ENR Cluster and beneficiaries of its incubation program. The sample was selected using a purposive sampling strategy, commonly employed in exploratory qualitative research to identify information-

rich cases (Patton, 2015). The limited number of cases is consistent with a multiple case study approach, which prioritizes analytical depth and cross-case comparison over statistical generalization (Yin, 2014).

The selection criteria included:

- membership in the ENR Cluster;
- participation in the cluster's incubation program;
- engagement in innovation-related activities;
- international orientation or experience, particularly toward African (Egypt, Sub-Saharan Africa) and European markets (France, Spain), which are common export destinations for Moroccan renewable energy firms.

Table 2: Information on companies studied

Start-up Code	Start-up	Main activity	City	Year of creation	Interviewee	Targeted International Market	Interview Duration
ENT 1	Ecowatt	Installation and maintenance of solar energy systems	Casa/Agadir	2017	CEO	North Africa, Sub-Saharan Africa	1 hour
ENT 2	Biodome SARL	Design and construction of biogas and composting plants	Casa	2016	CEO	Africa, Europe	45 minutes
ENT 3	Green Watech	Autonomous and eco-friendly wastewater treatment and reuse solutions	Marrakech	2018	CEO	Africa, Southern Europe	40 minutes
ENT 4	City Farmers	Design of vertical green walls and hydroponic fodder systems	Casa	2019	CEO	Africa	30 minutes
ENT 5	RETIC	Responsible and secure management of end-of-life IT equipment	Casa/ Benimellal	2015	CEO	Africa	50 minutes
ENT 6	Cuimer	Transformation of fish waste into innovative luxury leather	Casa	2020	CEO	Europe, international premium markets	1 hour

3.3. Data collection and data analysis

Data were collected between March and June 2025 through an exploratory qualitative approach based primarily on semi-structured interviews, complemented by a structured questionnaire. This combination followed a triangulation

logic and aimed to enrich the empirical material by confronting in-depth managerial discourses with more systematic assessments (Denzin, 1978; Flick, 2018).

The interviews were conducted with the founders and chief executive officers of the selected green start-ups, considered key informants due to their central position in strategic orientation and organizational development (Gibbert, Ruigrok & Wicki, 2008). An interview guide was used to ensure consistency across cases while leaving sufficient flexibility for respondents to elaborate freely on their experiences. The questions focused on organizational practices, interaction patterns, and concrete experiences related to firm development within the cluster environment. In parallel, a short questionnaire was administered to capture more structured perceptions and to complement the qualitative material (Creswell & Plano Clark, 2018).

All interviews were audio-recorded, fully transcribed, and repeatedly reread in order to ensure deep immersion in the empirical material. The analytical process followed an inductive thematic approach inspired by Miles and Huberman (1994) and Saldaña (2016).

Figure 3 presents an overview of the research data collection and analysis process :

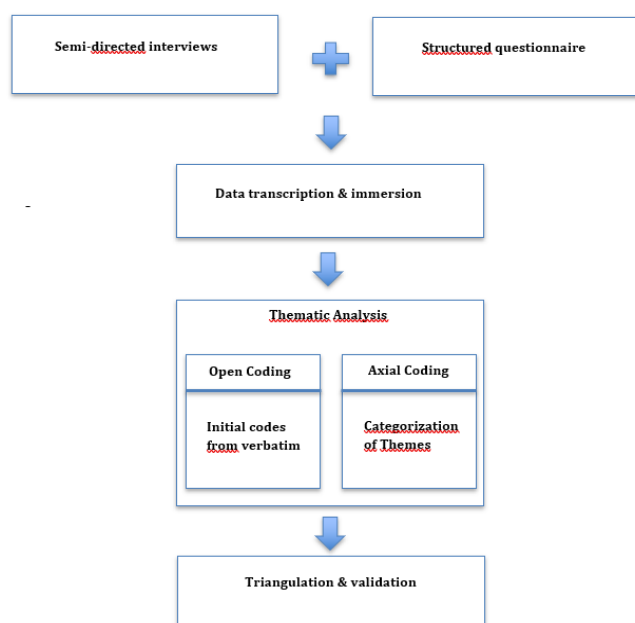


Fig -2: Research Data Collection Process.

The first stage consisted of open coding. At this phase, no predefined analytical grid was used. Instead, codes were progressively constructed from the interviewees' verbatim. Each transcript was examined line by line to identify meaningful segments reflecting actions, interpretations,

practices, and perceived effects. These segments were assigned initial codes closely aligned with the participants' own expressions. This open and data-driven process allowed recurrent patterns to emerge and led to the identification of preliminary sub-themes grounded in the empirical material.

In a second stage, axial coding was conducted to structure relationships between codes and to group them into broader analytical categories. This step involved continuous back-and-forth between data and emerging categories, systematic comparison across interviews, and progressive refinement of coding decisions. Through this iterative process, the analytical structure was stabilized and consolidated, resulting in the emergence of a coherent thematic framework that underpins the analysis. The unit of coding adopted was semantic, focusing on meanings, interpretations, and action logics rather than on formal segmentation of discourse (Saldaña, 2016).

No qualitative data analysis software was used. This choice was deliberate and consistent with the limited number of cases and the exploratory nature of the study. Manual coding enabled close engagement with the data, facilitated sensitivity to context, and allowed continuous analytical adjustments throughout the process. Coding tables and analytical memos were used to document coding decisions, track category development, and ensure transparency of the analytical process.

Several procedures were implemented to strengthen the rigor and validity of the analysis. First, triangulation between interview material and questionnaire responses was used to support the consistency of interpretations. Second, systematic cross-case comparisons were conducted to identify convergences, divergences, and recurrent patterns across the six start-ups.

Third, the coding process involved repeated recoding cycles, during which initial codes and categories were reviewed, refined, and, when necessary, reorganized.

Finally, analytical memos and intermediate summaries were produced throughout the process to maintain an explicit audit trail and to enhance the coherence and credibility of the interpretations (Eisenhardt, 1989; Yin, 2014).

The thematic structure resulting from this analytical process is summarized in Table 3 and constitutes the basis for the presentation of the empirical findings in the following section.

Table 3: Research themes and sub-themes

Themes	Sub-Themes
Incubation mechanisms within the cluster	- Role of incubation in acquiring new knowledge and skills - Contribution of incubation to organizational learning capacity - Transformation of knowledge into innovation outcomes - Support provided for accessing financial and non-financial resources - Development of an innovation-oriented organizational culture - Facilitation of networking opportunities through incubation activities (events, mentoring, collective programs)
Networking dynamics in a cluster-based environment	- Level of trust in local industry contacts - Level of trust in international industry contacts - Quality of relationships with local partners and institutions - Quality of relationships with foreign partners - Importance of organizational and institutional networks in firm strategy - Engagement in partnerships with other cluster members
Innovation processes and collaborative dynamics	- Evolution of collaborative innovation projects within the cluster - Development of technological and organizational innovations - Changes in R&D-related activities and investments - Role of universities and research actors in innovation processes - Contribution of training and knowledge-sharing initiatives
Internationalization trajectories of start-ups	- International markets targeted or explored - Perceived role of innovation in supporting international market entry - Influence of networks on international opportunities - Progressive structuring of international activities - Role of the cluster in shaping internationalization pathways

4. RESULT ANALYSIS

4.1. Internationalization trajectories of the studied green start-ups

This section examines the internationalization trajectories of the six green start-ups based on the discourse of their founders and top managers. Rather than focusing on formal international expansion outcomes, the analysis explores how internationalization emerges empirically through concrete exposure experiences, which progressively shape firms' international orientation. The aim is to identify the forms taken by early international engagement and to situate the ENR Cluster as a contextual space of international visibility and opportunity.

Across cases, the analysis of interview data led to the identification of a first analytical theme: internationalization trajectories grounded in cluster-enabled international exposure. Empirically, this theme is reflected in recurring references to international trade fairs, foreign delegations, sectoral webinars, and collective multi-actor events. These elements point to a phase of internationalization characterized less by immediate foreign market entry than by progressive contact-building, opportunity sensing, and learning.

International exposure mainly took the form of participation in international sector-specific events, establishment of initial contacts with foreign actors, targeting of African and European markets, and the gradual integration of international dimensions into firm development strategies.

ENT1 describes a gradual internationalization trajectory initiated through participation in international renewable energy trade fairs:

"Participating in trade fairs such as Intersolar allowed us to meet international players in the solar sector and better understand how to position our solutions abroad. Without the support of the cluster, this level of exposure would have been very difficult to achieve." (ENT1)

This statement supports the analytical category of international exposure through sectoral events, indicating that trade fairs function as exploratory spaces where firms scan foreign markets and assess their international positioning rather than immediately pursuing expansion.

For ENT2, international openness developed through collective missions and foreign delegations organized within the cluster framework:

"The foreign delegations organized by the cluster helped us explore African markets and directly discuss energy needs with local actors." (ENT2)

This quote feeds into the category of collective international prospecting, highlighting how cluster-led missions act as intermediated entry points that expose firms to international contexts while limiting individual uncertainty.

ENT3 emphasizes the role of international webinars and institutional interactions:

"The webinar organized with SolarPower Europe on investment opportunities in the solar sector helped us better understand European partners' expectations and the standards required to operate internationally." (ENT3)

This verbatim supports the category of institutional and cognitive exposure, pointing to internationalization as a learning-oriented process through which firms progressively internalize international norms, standards, and expectations.

ENT4 highlights the importance of large international technology events:

"At GITEX, we had the opportunity to interact with international investors and technology providers. These

events open concrete international perspectives for innovative solutions.” (ENT4)

This statement contributes to the category of visibility-oriented exposure, indicating how international events provide access to global investors and technology actors, thereby expanding firms’ perceived international opportunity space.

ENT5 stresses the cluster’s role in enabling access to international networks otherwise unreachable for young ventures:

“As a start-up, we would not have been able to access certain international networks on our own. The cluster provided visibility and credibility that significantly enhanced our international exposure.” (ENT5)

This quote empirically supports the category of cluster-enabled access and legitimacy, showing that internationalization at this stage is shaped by facilitated exposure and credibility-by-affiliation rather than by autonomous international deployment.

Finally, ENT6 refers to multi-actor collective initiatives organized by the cluster:

“The sustainable caravans organized by the cluster bring together national and international actors. They create a favorable environment to build contacts and explore collaborations beyond the Moroccan market.” (ENT6)

This statement feeds into the category of structured collective exposure, emphasizing how repeated multi-actor encounters constitute pre-internationalization arenas where relationships and opportunities are progressively constructed.

Overall, the empirical evidence indicates that the internationalization trajectories of the studied start-ups are progressive, heterogeneous, and strongly embedded in the cluster-based environment. While all firms display a clear international orientation, their trajectories are not yet structured around formalized international expansion strategies. Instead, they are primarily shaped by cluster-enabled exposure experiences that provide access, visibility, and learning opportunities.

At this stage of the analysis, internationalization emerges mainly as a process of situated exposure. Networking is therefore approached here as a channel of international engagement rather than as a fully developed structuring mechanism. This first analytical theme establishes the ENR Cluster as a space of early international interaction, which

provides the empirical foundation for examining, in the following sections, how incubation mechanisms, networking dynamics, and innovation processes interact to structure internationalization trajectories.

4.2. The role of networking in internationalization trajectories

This section examines how networking is mobilized by the studied start-ups within their internationalization trajectories. This analytical theme emerged from repeated references in the interviews to relational practices, international contacts, and cluster-mediated interactions. To explore this dimension, founders were notably asked questions such as:

“How would you assess the importance of your organizational network in your international strategy?”;

“How would you evaluate the quality of your relationships with local and foreign partners?”;

and “What role does the cluster play in facilitating your partnerships and external relations?”

The analysis of the empirical material led to the identification of three interrelated analytical categories: networking as a channel for international exposure, institutional and cluster-based networking, and the heterogeneous outcomes of networking practices.

4.2.1. Networking as a channel for international exposure

Several respondents associate networking primarily with initial international exposure and opportunity sensing, rather than with immediate commercial expansion. This empirical category reflects a form of exploratory networking oriented toward market scanning and early international awareness.

ENT1 explains:

“International exhibitions such as Intersolar allowed us to identify potential technical partners and better understand European market requirements.” (ENT1)

This statement empirically supports the category of exploratory international networking, showing that participation in international fairs is mobilized as a learning and positioning device. Networking here contributes to internationalization by enabling firms to decode foreign market expectations rather than by directly generating foreign sales.

Similarly, ENT2 highlights the importance of global technology events:

"Without these international events, it would have been very difficult to reach foreign investors interested in renewable energy projects." (ENT2)

This quote feeds into the analytical category of networking as access to international financial and strategic actors. It suggests that networking operates as a gateway to actors otherwise difficult to approach, positioning international events as relational infrastructures supporting early-stage international trajectories.

Together, these verbatims indicate that networking initially functions as a channel of exposure and orientation, anchoring internationalization trajectories in progressive relational engagement rather than in immediate market penetration.

4.2.2. Institutional and cluster-based networking

Beyond trade fairs, interviewees frequently referred to institutional and cluster-organized networking initiatives as central to their international orientation. This empirical category captures the role of the cluster as a relational intermediary structuring access to international actors.

ENT3 notes:

"The webinars organized with international institutions helped us build trust-based relationships with foreign actors and better position our solutions internationally." (ENT3)

This statement supports the analytical category of relational embedding through institutional networking, highlighting how cluster-mediated initiatives foster trust-building processes and cognitive alignment with international partners.

ENT5 emphasizes the symbolic and relational value of cluster membership:

"Being part of the cluster gives us credibility vis-à-vis foreign partners, even when it does not immediately result in contracts." (ENT5)

This verbatim empirically grounds the category of network-based legitimacy, indicating that networking within the cluster contributes to internationalization by enhancing perceived reliability and reducing credibility gaps when approaching foreign actors.

These findings show that networking is not only transactional but also institutional and symbolic, contributing to internationalization trajectories through

legitimization, relational learning, and reputational signaling.

4.2.3. Limits and heterogeneity of networking outcomes

Although networking is widely recognized as important, respondents also stress its uneven and uncertain outcomes. This analytical category emerged from contrasting assessments of the effectiveness of relational activities.

ENT4 adopts a cautious perspective:

"Contacts established during international events are useful, but they often require a long follow-up before leading to actual collaboration." (ENT4)

This quote supports the category of temporal distance between contact and outcome, indicating that networking is perceived as a long-term investment whose international effects are neither immediate nor guaranteed.

By contrast, ENT6 reports a more advanced relational deployment:

"The networks developed through the cluster helped us enter foreign markets, but only after significant efforts to structure and maintain these relationships." (ENT6)

This statement empirically supports the category of network activation, showing that networking contributes to internationalization only when firms actively invest in organizing, maintaining, and operationalizing relationships.

Taken together, these findings indicate that networking enhances visibility, access, and legitimacy, but does not systematically translate into effective international engagement. The heterogeneity of outcomes suggests that networking alone cannot explain internationalization trajectories. Rather, it must be articulated with additional mechanisms that structure and transform relational resources. This observation leads to the examination of incubation as a key structuring mechanism in the following section.

4.3. The role of incubation in structuring internationalization conditions

This analytical theme emerged from repeated references made by respondents to the incubation program when they were asked to describe the factors that influenced their networking practices, learning processes, and

preparedness for international engagement. During the interviews, founders were notably invited to reflect on questions such as:

- What concrete changes did incubation bring to the way you work and interact with partners?
- How did the incubation program influence your networking practices?
- Did incubation affect your readiness for international development, and if so, how?

Across the six cases, incubation was rarely associated with direct international outcomes. Instead, the coding of the verbatims revealed a recurring pattern in which incubation was linked to the structuring of networking practices, facilitated access to ecosystem actors, and learning dynamics. These empirical regularities progressively led to the construction of incubation as a core analytical theme, understood as a mechanism shaping the relational and learning conditions under which internationalization trajectories could emerge.

4.3.1. Incubation as a mechanism structuring networking practices

This first sub-theme emerged from numerous passages in which respondents associated incubation with changes in how they organized, selected, and managed their relationships. When asked about the evolution of their networking practices, several founders explicitly referred to incubation as a turning point from informal contacts toward more structured relational strategies.

ENT3 explains:

"The incubation program helped us better organize our contacts and focus on partners that were more relevant to our development."

This statement empirically grounds the category of networking structuration through incubation. The respondent links incubation to a reorientation of networking practices, moving from dispersed interactions toward more targeted and strategic relationships.

Similarly, ENT1 notes:

"Incubation allowed us to professionalize our approach to networking, especially within the renewable energy ecosystem."

Here, incubation is associated with the professionalization of relational practices. Across interviews, such extracts converged toward the idea that incubation does not create

networks, but reshapes the way start-ups engage with them.

However, the verbatims also reveal heterogeneity in how this structuring effect operates. Two out of six start-ups indicate that incubation mainly reinforced pre-existing networks rather than generating new ones.

ENT6, for instance, states:

"Incubation strengthened relationships we had already established, but did not radically change our networking strategy."

This empirical evidence led to the identification of a second-order category referring to incubation as an enabling rather than transforming device. Taken together, these discourses support the analytical interpretation of incubation as a mechanism that structures networking practices, while leaving room for firm-specific trajectories and initial conditions.

4.3.2. Facilitated access to ecosystem actors and learning opportunities

A second sub-theme emerged from the recurrent association between incubation and access to resources, actors, and learning spaces. When founders were invited to describe what incubation concretely brought to their development, they frequently referred to training sessions, mentoring activities, and collective events as moments of exposure to new actors and knowledge.

ENT2 notes:

"Through incubation, we were exposed to experts and institutions that helped us better understand international market expectations."

This verbatim empirically anchors the category of facilitated access to ecosystem actors and learning opportunities. Incubation is here framed as an interface connecting start-ups to institutional and expert environments, which contributes to shaping their understanding of international requirements.

ENT5 reinforces this interpretation by linking incubation to issues of legitimacy and external recognition:

"Being incubated within the cluster increased our credibility and legitimacy when interacting with external partners."

Across cases, such statements reveal that incubation is experienced not only as a support device, but also as a

symbolic and relational resource that alters how start-ups are perceived by ecosystem actors.

Nevertheless, respondents also emphasized the limits of this facilitated access.

ENT4 remarks:

“Incubation opens doors, but transforming these opportunities into concrete results requires additional internal efforts.”

This extract empirically supports the interpretation that incubation contributes to building exposure and learning conditions, without automatically producing international outcomes. The theme thus emerged from the tension observed in the data between access to resources and the difficulty of converting them into concrete achievements.

4.3.3. Incubation as an indirect contributor to internationalization trajectories

The cross-case analysis of the above categories led to the construction of incubation as an indirect contributor to internationalization trajectories. When explicitly questioned about the link between incubation and international development, respondents rarely described a linear or immediate effect.

Instead, they consistently framed incubation as shaping the relational and learning environment within which internationalization could progressively take form.

ENT4's statement that *“incubation opens doors”* but does not replace internal efforts, and ENT6's observation that incubation mainly strengthened existing networks, both point to incubation as a conditional catalyst.

Overall, the empirical material suggests that incubation contributes to internationalization by structuring networking practices, facilitating access to ecosystem actors, and supporting learning dynamics. These effects do not lead mechanically to international expansion but prepare the ground upon which other mechanisms can operate. This finding empirically supports the analytical interpretation of incubation as an intermediate mechanism whose contribution to internationalization trajectories depends on its interaction with networking dynamics and the subsequent transformation of these resources into innovation, which is examined in the following section.

4.4. Innovation as a mediating mechanism in internationalization trajectories

When founders were invited to explain what had concretely enabled them to move beyond international exposure toward actual foreign market engagement, their discourse repeatedly converged on issues related to solution development, technological adaptation, and value proposition refinement.

Questions such as:

- What made international expansion possible in practice?
- How did your offering evolve before approaching foreign markets?
- What role did innovation play in your international positioning?

consistently elicited references to product evolution, learning processes, and iterative experimentation.

The systematic coding of these responses highlighted a recurrent configuration in which incubation and networking were not described as producing international outcomes, but rather as feeding processes of technical, organizational, and strategic innovation. On this basis, innovation was constructed analytically as the key mechanism through which ecosystem-based resources were transformed into internationally mobilizable capabilities.

4.4.1. Innovation as an outcome of relational and support mechanisms

A first analytical dimension became visible through numerous passages where respondents associated innovation with interactions inside the cluster and with support received through incubation. When reflecting on the evolution of their projects, founders frequently referred to peer exchanges, expert input, and training activities as decisive moments in the maturation of their solutions.

ENT2 explains:

“Exchanges with other cluster members and the training sessions helped us improve our solution and adapt it to foreign market requirements.”

This statement anchors innovation in collective learning processes rather than in isolated internal development. Innovation appears here as the result of exposure to diverse knowledge sources and feedback loops operating within the cluster environment.

ENT5 expresses a similar view:

“Technical support and expert feedback were essential to the evolution of our offering.”

In this extract, innovation is directly linked to incubation-related mechanisms. Such statements, recurrent throughout the interviews, progressively oriented the analysis toward an interpretation of innovation as the tangible output of relational dynamics and structured support frameworks.

4.4.2. Innovation as a condition for international market access

A second analytical dimension took shape around the relationship between innovation and access to foreign markets. When founders were asked what had concretely allowed them to approach international partners or clients, they overwhelmingly pointed to the maturity, robustness, and distinctiveness of their solutions.

ENT1 states:

"Without a reliable and differentiated solution, it would have been impossible to convince foreign partners or clients."

Here, innovation is explicitly framed as a prerequisite for international credibility. Market access is not portrayed as a consequence of contacts alone, but as dependent on the existence of a sufficiently developed offering.

ENT6 similarly notes:

"Innovation was the main factor enabling us to position ourselves in European markets."

Conversely, other respondents emphasized that shortcomings in innovation limited their international reach.

ENT4 remarks:

"Despite an active network, the lack of sufficiently developed solutions limited our international deployment."

This extract provides empirical grounding for distinguishing between international exposure and effective international engagement. It illustrates that relational resources only acquired strategic value once translated into concrete innovative outputs.

4.4.3. Innovation as a mediating mechanism in internationalization trajectories

The articulation of the two preceding dimensions led to the identification of innovation as a mediating mechanism linking incubation and networking to internationalization trajectories. While incubation and networking were consistently associated with learning opportunities, exposure, and access to resources, international

development was described as becoming possible only once these inputs were converted into innovative solutions.

This transformational role of innovation does not unfold uniformly across firms. Some start-ups reported relatively rapid valorization of ecosystem-based inputs, whereas others described longer cycles of experimentation and adjustment.

ENT3 illustrates this process:

"Innovation was a gradual process, requiring several iterations before it could be valorized internationally."

Such statements support the interpretation of innovation as a pivotal stage rather than a mechanical outcome of cluster participation.

To sum up, the empirical material indicates that innovation constitutes the central hinge through which incubation and networking exert their influence on internationalization trajectories. By enabling the translation of relational and support mechanisms into competitive offerings, innovation connects the dynamics of the cluster environment to the concrete international paths observed among the studied start-ups. This finding underpins the post-analysis conceptual model developed in the following section.

5. DISCUSSION OF THE RESULTS

5.1. Internationalization trajectories of green start-ups within a cluster-based context

The findings of this study confirm that the internationalization trajectories of the investigated green start-ups cannot be explained solely by firms' internal resources and capabilities. In line with previous research emphasizing the role of territorial environments in shaping internationalization processes (Chen, 2021; Fernhaber, Gilbert and McDougall, 2008), the results show that anchoring within the Renewable Energy Cluster (ENR) provides a structuring context in which international trajectories are formed.

However, the empirical evidence also indicates that cluster membership does not automatically lead to internationalization. This is evidenced in the interview data by the diversity of trajectories observed among the six start-ups, ranging from exploratory international exposure to more advanced forms of foreign engagement. The observed trajectories are progressive, differentiated, and highly dependent on the ways in which start-ups

appropriate the resources and opportunities offered by the ecosystem. This finding is consistent with more recent approaches that conceptualize internationalization trajectories as iterative and non-linear processes shaped by ongoing interactions between local embeddedness and external connections (Santangelo and Meyer, 2017).

Thus, the study confirms the structuring role of the cluster while highlighting that it operates primarily as a facilitating framework rather than a direct determinant of internationalization outcomes.

5.2. Incubation and networking as conditional mechanisms supporting internationalization

The results related to incubation and networking support existing literature that views these mechanisms as indirect enablers of internationalization rather than direct drivers (Bone and al., 2019; Hausberg and Korreck, 2020). Incubation appears to play a key role in structuring networking practices, strengthening learning processes, and enhancing strategic clarity in relation to international markets.

Nevertheless, the empirical analysis clearly shows that neither incubation nor networking systematically translates into international expansion, as illustrated by founders' repeated references to difficulties in converting contacts, support mechanisms, and ecosystem opportunities into concrete international outcomes. Their effects remain contingent upon entrepreneurs' levels of engagement, their ability to mobilize available resources, and their capacity to transform interactions into actionable opportunities. This heterogeneity echoes studies emphasizing that the effectiveness of clusters and support mechanisms largely depends on governance structures, coordination capacities, and the quality of interactions among actors (Amraoui and al., 2019; El Waatmani and Makhtari, 2019).

These results therefore nuance more normative perspectives on incubation and networking by demonstrating that their contribution to internationalization is conditional and uneven across firms.

5.3. Innovation as a central mechanism transforming cluster-based resources

One of the main contributions of this research lies in identifying innovation as a central mechanism linking incubation and networking to internationalization

trajectories. While prior studies have established a general relationship between innovation and international expansion (Boermans and Roelfsema, 2016), the present findings allow for a more refined understanding of how innovation operates within a cluster-based context.

The analysis shows that relational and institutional resources provided by the cluster only lead to internationalization when they are translated into concrete innovations, whether technological, organizational, or business-model-related. This interpretation is grounded in founders' recurrent emphasis on solution maturation, technical adaptation, and iterative development processes as prerequisites for approaching foreign markets. Innovation thus acts as a mediating mechanism, transforming collective resources into competitive capabilities that can be deployed in foreign markets.

By adopting a mechanism-based perspective, this study moves beyond linear views of internationalization and contributes to a more nuanced understanding of how ecosystem-level resources are converted into international outcomes.

5.4. Toward an enriched conceptual model of green start-ups' internationalization

Based on the empirical results, this study proposes an enriched conceptual model of green start-ups' internationalization within a sectoral cluster (Cluster ENR). Unlike models focusing exclusively on firm-level characteristics, the post-analysis model highlights the articulation between incubation, networking, and innovation within a context shaped by geographic proximity and heterogeneous entrepreneurial behaviors.

The cluster emerges as a structuring environment in which support and interaction mechanisms operate in an indirect and conditional manner. Innovation occupies a central position in this model, acting as the mechanism through which ecosystem-based resources are transformed into internationalization outcomes.

This model contributes to the literature on start-up internationalization in emerging economies by offering an integrative and contextualized interpretation of the mechanisms underlying internationalization trajectories.

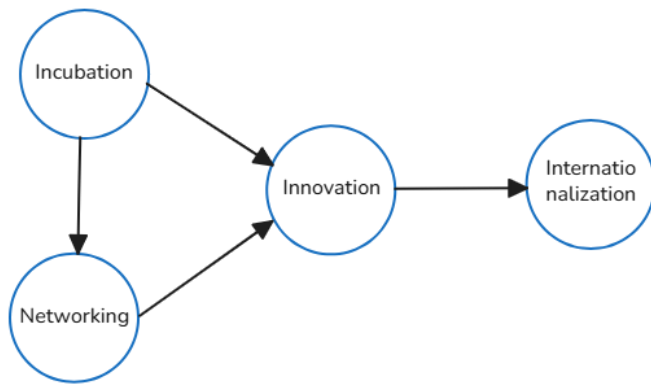


Fig -3: Post-analysis conceptual model of internationalization mechanisms in a cluster-based environment

6. CONCLUSION

This research aimed to analyze the internationalization trajectories of Moroccan green start-ups within a cluster-based environment, with a specific focus on incubation, networking, and innovation mechanisms. Based on a qualitative multiple case study of six start-ups that are members of the Renewable Energy Cluster (ENR), the study provides original empirical insights into start-up internationalization in an emerging economy context.

The results show that cluster membership constitutes a structuring context for internationalization, without acting as a direct or automatic determinant. The ENR cluster plays a facilitating role by reducing uncertainty, improving access to information, and exposing start-ups to international opportunities through collective support mechanisms. However, these mechanisms contribute to internationalization only when they are actively appropriated and mobilized by entrepreneurs.

One of the main contributions of this study lies in identifying innovation as a mediating mechanism through which resources generated by incubation and networking are transformed into competitive capabilities exploitable in international markets. This mediation process is conditioned by contextual factors, particularly geographical and organizational proximity within the cluster, as well as entrepreneurial behaviors such as engagement, proactiveness, and the ability to leverage collective support devices. This perspective makes it possible to move beyond a linear view of internationalization and to propose an enriched conceptual model that articulates cluster mechanisms with behavioral and proximity-related dynamics.

From a theoretical perspective, this study contributes to the literature on start-up internationalization by offering a

contextualized analysis of the mechanisms operating within clusters in emerging economies. It shows that the role of clusters lies not only in resource access, but also in their capacity to structure learning, innovation, and intermediation processes that condition international openness.

From a managerial and institutional standpoint, the findings highlight the importance for public actors and cluster organizations in Morocco to design support schemes that foster not only network access, but also the effective transformation of these resources into internationally exploitable innovations. The ENR cluster thus illustrates the potential of cluster policies to support Morocco's energy transition while strengthening the international competitiveness of green start-ups.

This study nevertheless presents certain limitations, related to the limited number of cases analyzed and the specificity of the sectoral context. Future research could extend the analysis to other clusters, sectors, or countries, or adopt longitudinal approaches to examine the evolution of internationalization trajectories over time and to further explore the dynamic role of entrepreneurial behaviors and proximity dimensions.

REFERENCES

- Amraoui, B., Ouhajjou, A., Monni, S., & El Idrissi, N. E. A. (2019). Performance of clusters in Morocco in the shifting economic and industrial reforms. *Insights into Regional Development*, 1(3), 227–243.
- Bathelt, H., Malmberg, A., & Maskell, P. (2004). Clusters and knowledge: Local buzz, global pipelines and the process of knowledge creation. *Progress in Human Geography*, 28(1), 31–56.
- Boermans, M. A., & Roelfsema, H. (2016). Small firm internationalization, innovation, and growth. *International Economics and Economic Policy*, 13(2), 283–296.
- Bone, J., Allen, O., & Haley, C. (2019). *Business incubators and accelerators: The national picture*. London: BEIS / Nesta.
- Borini, F. M., Cahen, F. R., & Oliveira Junior, M. M. (2017). The internationalisation of new technology-based firms from emerging markets. *International Journal of Technology Management*, 74(1/2/3/4), 2–24. <https://doi.org/10.1504/IJTM.2017.10004282>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Calheiros-Lobo, N., Ferreira, J. J. M., & Vasconcelos Ferreira, F. A. (2023). SME internationalization and export performance: A systematic review with bibliometric analysis. *Sustainability*, 15(3), 1–25.

- Cassetta, E., Monarca, U., Dileo, I., Di Berardino, C., & Pini, M. (2020). The relationship between digital technologies and internationalisation: Evidence from Italian SMEs. *European Journal of Innovation Management*, 23(4), 635–656. <https://doi.org/10.1108/EJIM-02-2019-0051>
- Chen, Y. (2021). Cluster internationalization: Qualitative review, theoretical directions and the rise of emerging markets' themes. *Sustainability*, 13(19), 10514.
- Cluster ENR. (2024). *Green Business Incubator*. [Online]. Available: <https://clusterenr.ma/entrepreneuriat-et-innovation/>
- Coviello, N. E., & Munro, H. J. (1997). Network relationships and the internationalisation process of small software firms. *International Business Review*, 6(4), 361–386.
- Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). Sage.
- Delgado, M., Porter, M. E., & Stern, S. (2016). Defining clusters of related industries. *Journal of Economic Geography*, 16(1), 1–38. <https://doi.org/10.1093/jeg/lbv017>
- Denzin, N. K. (1978). *The research act: A theoretical introduction to sociological methods*. McGraw-Hill.
- Denzin, N. K. (2012). Triangulation 2.0. *Journal of Mixed Methods Research*, 6(2), 80–88.
- Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, 14(4), 532–550.
- Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases. *Academy of Management Journal*, 50(1), 25–32.
- El Waatmani, A., & Makhtari, M. (2019). Déterminants et mesure de la performance des clusters : un aperçu sur le modèle marocain. *Moroccan Journal of Entrepreneurship, Innovation and Management*, 3(2), 77–89.
- Fernhaber, S. A., Gilbert, B. A., & McDougall, P. P. (2008). International entrepreneurship and geographic location: Analyzing the role of clusters. *Journal of International Business Studies*, 39(2), 267–290.
- Flick, U. (2018). *An introduction to qualitative research* (6th ed.). Sage.
- Franco, M., & Esteve, L. (2024). Clusters as a mechanism of sharing knowledge and innovation: A network approach. *Global Business Review*.
- Gao, Q., Cui, L., Lew, Y. K., Li, Z., & Khan, Z. (2021). Business incubators as international knowledge intermediaries: Exploring their role in the internationalization of start-ups from an emerging market. *Journal of International Management*, 27(4), 100861. <https://doi.org/10.1016/j.intman.2021.100861>
- Gibbert, M., Ruigrok, W., & Wicki, B. (2008). What passes as a rigorous case study? *Strategic Management Journal*, 29(13), 1465–1474.
- Hausberg, J. P., & Korreck, S. (2020). Business incubators and accelerators: A systematic literature review. *Journal of Technology Transfer*, 45(1), 151–176.
- Hennart, J.-F., Majocchi, A., & Hagen, B. (2021). What's so special about born globals? *Journal of International Business Studies*, 52(9), 1665–1694.
- Jean, R.-J. B., & Kim, D. (2020). Internet and SMEs' internationalization: The role of platforms and websites. *Journal of International Management*, 26(1), 100690. <https://doi.org/10.1016/j.intman.2019.100690>
- Jankowska, B., & Götz, M. (2017). Internationalization intensity of clusters and their impact on firm internationalization. *European Planning Studies*, 25(6), 958–977.
- Knight, G. A., & Liesch, P. W. (2016). Internationalization: From incremental to born global. *Journal of World Business*, 51(1), 93–102.
- Kvale, S., & Brinkmann, S. (2009). *InterViews: Learning the craft of qualitative research interviewing*. Sage.
- Maskell, P., & Malmberg, A. (1999). Localised learning and industrial competitiveness. *Cambridge Journal of Economics*, 23(2), 167–185.
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis* (3rd ed.). Sage.
- Neumann, T. (2023). Are greener start-ups of superior quality? *Journal of Innovation and Entrepreneurship*, 12(1), 1–23.
- Ojala, A. (2009). Internationalization of knowledge-intensive SMEs. *International Business Review*, 18(1), 50–59.
- Oliva, F. L., Couto, M. H. G., Santos, R. F., & Bresciani, S. (2022). Risks and critical success factors in the internationalization of born global start-ups. *Technological Forecasting and Social Change*, 174, 121250.
- Osarenkhoe, A., & Fjellström, D. (2024). A cluster's internationalization as a catalyst for innovation systems. *EuroMed Journal of Business*, 19(2), 229–246.
- Patton, M. Q. (2015). *Qualitative research & evaluation methods* (4th ed.). Sage.
- Phelps, C., Heidl, R., & Wadhwa, A. (2012). Knowledge, networks, and innovation. *Journal of Management*, 38(4), 1115–1166.
- Porter, M. E. (1998). Clusters and the new economics of competition. *Harvard Business Review*, 76(6), 77–90.
- Porter, M. E. (2000). Locations, clusters, and company strategy. In G. L. Clark et al. (Eds.), *The Oxford handbook of economic geography* (pp. 253–274). Oxford University Press.
- Santangelo, G. D., & Meyer, K. E. (2017). Internationalization as an evolutionary process. *Journal of International Business Studies*, 48(9), 1114–1130.
- Saldaña, J. (2016). *The coding manual for qualitative researchers* (3rd ed.). Sage.

- Temouri, Y., Luong, H.-P., Pereira, V., & Rammal, H. (2023). The role of cluster ecosystems and intellectual capital. *Journal of Intellectual Capital*.
- Welch, L. S., & Luostarinen, R. (1988). Internationalization: Evolution of a concept. *Journal of General Management*, 14(2), 34–55.
- Welch, C., & Paavilainen-Mäntymäki, E. (2014). Putting process back in internationalisation research. *International Journal of Management Reviews*, 16(1), 2–23.
- Yin, R. K. (2014). *Case study research: Design and methods* (5th ed.). Sage.