administrative sciences

MDPI

Article

Impact of Entrepreneurship Support on Entrepreneurship Performance: A Sequential Exploratory Study

Rui Xiong and Hongyi Sun *

Department of Systems Engineering, City University of Hong Kong, Hong Kong 999077, China; ruixiong2-c@my.cityu.edu.hk
* Correspondence: mehsun@cityu.edu.hk

Abstract: Entrepreneurship support is undoubtedly necessary but often fails to meet expectations. To investigate the reasons behind this, a sequential exploratory methodology, with both qualitative and quantitative data, was used in this research. Within the Entrepreneurship Ecosystem (EE) paradigm, a conceptual model linking the macro environment, support system, support received, and entrepreneurship performance was developed based on qualitative data from 56 entrepreneurs' responses and three in-depth interviews in Study 1. Then empirical data from a survey of 244 entrepreneurs was used to validate the model in Study 2. The findings identified two reasons for the ineffectiveness of entrepreneurship policies. One is the constraint imposed by the macro environment, which presents significant challenges for improvement, and the other arises from the policies themselves, which are improvable and require targeted attention. The research reminds policymakers to consider not only the quantity of support but also its quality. Our study refines the EE Microfoundation theory, particularly the causal and mediating mechanisms linking entrepreneurs to their EE.

Keywords: entrepreneurship support; sequential exploratory study; entrepreneurship ecosystem microfoundation; entrepreneurship policy quality

Received: 13 November 2024
Revised: 26 December 2024
Accepted: 29 December 2024
Published: 3 January 2025

Citation: Xiong, R., & Sun, H. (2025). Impact of Entrepreneurship Support on Entrepreneurship Performance: A Sequential Exploratory Study. *Administrative Sciences*, *15*(1), 16. https://doi.org/10.3390/admsci15010016

1. Introduction

The contribution of entrepreneurship to economic and social development has been widely recognized (Arshed et al., 2016; Dahlstrand & Stevenson, 2010). Policymakers aim to promote regional entrepreneurship through a series of support efforts (Gilbert et al., 2004). However, these entrepreneurship support efforts often fail to meet expectations (Z. Acs et al., 2016; Arshed et al., 2016; Fotopoulos & Storey, 2019; Lerner, 2013). Consequently, the entrepreneurship policy debate has shifted towards exploring why entrepreneurship support efforts are ineffective (Arshed et al., 2014).

Existing research has discussed the ineffectiveness of entrepreneurship policies from the pre-policy formulation stage (e.g., Shane, 2009), the policy formulation stage (e.g., Arshed et al., 2014; Arshed & Carter, 2016), and the policy implementation stage (e.g., Arshed et al., 2016; Bennett, 2008; Niska & Vesala, 2013). Despite the abundance of research on entrepreneurship policies, a significant gap exists. Current studies predominantly adopt a macro-level perspective, prioritizing the viewpoint of policymakers while overlooking the crucial voice of the policy's intended beneficiaries—the entrepreneurs themselves. This creates a gap where policymakers are unaware of the true needs of entrepreneurs, while entrepreneurs often express dissatisfaction with the ineffective provision of support by policymakers. Therefore, the problem that we aim to address is why entrepreneurship support efforts often fail from the entrepreneurs' perspective.

Our study is based on the Entrepreneurship Ecosystem (EE) paradigm since it focuses more on entrepreneurs compared to other concepts such as clusters and industrial districts, and emphasizes the role of the entrepreneurial environment (Stam, 2015). Scholars have attempted to discuss the structure and mechanisms of the EE from various perspectives, such as the system perspective (e.g., Roundy et al., 2018; E. Stam & Van de Ven, 2021) and the configuration perspective (e.g., Spigel, 2017). These macro-level perspectives provide valuable insights into understanding the regional EE as a whole (Stam, 2018). However, they lack the causal and mediating mechanisms that connect entrepreneurs with their local EE (Roundy & Lyons, 2023; Wurth et al., 2022), making it difficult for the existing EE literature to explain the impact of entrepreneurship support efforts on Entrepreneurship Performance at the entrepreneurs' level. In addition, despite the significant relevance between the EE and public policies, existing research lacks a policy-oriented dimension, and empirical research findings have not yet been leveraged to advance the ecosystem concept theoretically so far (Nordling, 2019). Therefore, within the EE paradigm, our study aims to address the issue of entrepreneurship policy ineffectiveness by focusing on two sub-questions.

(1) *What EE elements can be influenced by entrepreneurship policies, which cannot, and what is the relationship between them?*
(2) *Through which channels do these EE elements influence Entrepreneurship Performance at the entrepreneurs' level?*

This research makes two contributions to the entrepreneurship literature. First, it reveals the reasons behind the ineffectiveness of entrepreneurship support efforts during the policy implementation stage from the entrepreneurs' perspective. Our findings emphasize that policymakers should focus not only on the quantity of support provided in the region but also on its quality as reflected in the support received by entrepreneurs. These findings hold practical significance, and we advocate for an evaluation model of support received by entrepreneurs to reflect policy quality and provide guidance for enhancing policy effectiveness. Second, it deepens the understanding of the metaphorical EE. We supplement the microfoundation of the EE by elucidating the causal and mediating mechanisms that connect entrepreneurs with their local EE. It highlights the pathways of different EE structures on Entrepreneurship Performance at the entrepreneurs' level.

2. Theoretical Background

2.1. The Ineffectiveness of Entrepreneurship Policies

As entrepreneurship is widely recognized as a key driver of economic and social development (Arshed et al., 2016; Dahlstrand & Stevenson, 2010), the purpose of entrepreneurship policy has shifted from early restrictions on large corporations to support efforts that enable the establishment and survival of small and medium enterprises (SMEs) (Gilbert et al., 2004). SMEs often require specific assistance to ensure their competitiveness in the market and prevent them from being disadvantaged due to their size (Huggins et al., 2015).

However, these entrepreneurship support efforts often fail to meet expectation. First, there is no evidence that entrepreneurship policies lead to an increase in entrepreneurial rates or improve the contribution of growth-oriented enterprises to employment and economic growth (Arshed et al., 2016). Second, these efforts have not achieved the commercial formation objectives or made long-term progress in fostering entrepreneurship (Fotopoulos & Storey, 2019; Lerner, 2013). Third, from a labor market perspective, the effectiveness of entrepreneurship policies in addressing economic and employment crises is also questionable (Román et al., 2013). Furthermore, public policies aimed at encouraging individuals

to become entrepreneurs have not significantly reduced or addressed any market failures; instead, they have been an unnecessary waste of taxpayers' money (Z. Acs et al., 2016).

Therefore, the debate on entrepreneurship policies has shifted towards exploring why entrepreneurship support efforts are ineffective (Arshed et al., 2014). The first perspective analyzes the types of entrepreneurs targeted by the policies, which refers to the pre-policy formulation stage. It has been found that while quality entrepreneurship has a positive effect on regional performance, quantity entrepreneurship leads to negative outcomes (Szerb et al., 2019). As a result, typical low-innovation startups create few job opportunities and generate little wealth, making policies aimed at encouraging more people to become entrepreneurs a form of bad public policy (Shane, 2009). The second perspective focuses on the policy formulation stage. It suggests that the involvement of various stakeholders, with different interests during the policy formulation stage, who exert their power to influence the policy process leads to complexity and confusion in policymaking (Arshed et al., 2014; Arshed & Carter, 2016). The third perspective examines the policy implementation stage. It argues that policy management is complex, and there are evident deficiencies when policies are delivered (Arshed et al., 2016; Bennett, 2008). Additionally, the differences in discourses between policymakers and entrepreneurs also affect the effectiveness of policies (Niska & Vesala, 2013).

It is evident that regardless of the analysis perspective, existing research on the effectiveness of policies primarily focuses on the macro level and policymakers. However, it lacks the voice of the target group who are the intended beneficiaries of these policies, specifically the entrepreneurs. This creates a gap where policymakers are unaware of the true needs of entrepreneurs, while entrepreneurs often complain about the ineffective provision of support by policymakers. Therefore, the question of which aspects and how policy affects entrepreneurs becomes an urgent matter that needs to be addressed.

2.2. The Entrepreneurship Ecosystem Paradigm

The Entrepreneurship Ecosystem (EE) paradigm, which reflects the interdependent actors and factors influencing entrepreneurship within a region (E. Stam & Van de Ven, 2021), is increasingly being utilized in the discussion of the effectiveness of entrepreneurship policies (c.f. Acs et al., 2016; Feldman & Lowe, 2018; Nordling, 2019; Muñoz et al., 2020). However, despite the significant interconnection between the EE and public policies, existing research lacks a policy-oriented dimension, and empirical research findings have not yet been leveraged to advance the ecosystem concept theoretically so far (Nordling, 2019). To demonstrate the reasons behind this gap, Table 1 provides a summary of several typical models of the EE in current research.

Table 1. EE models.

Model	Proposer	The EE Structure	Perspective	Target Question
The Six Domains model	Isenberg (2011)	Six general domains at the same level.	Comprehensive ecosystem perspective	What is the EE?
The Global Entrepreneurship and Development Index (GEDI)	Z. J. Acs et al. (2015)	Three pillars at the same level, with population-level processes and the institutional context embedded.	System perspective	How to reflect micro-level entrepreneurs and the macro-level environment at the same time?
Entrepreneurial Ecosystem model	E. Stam (2015)	Two conditions at different levels, with a causal relationship.	System perspective	How does the EE as a whole generate macro value?
The Entrepreneurial Ecosystems Attributes model	Spigel (2017)	Three top-down attributions, with a causal relationship.	Configuration perspective	How does the EE work? How do elements within the EE interact?

Among discussions of the structure and elements of the EE, the Six Domains model proposed by Isenberg (2011) is certainly the most widely circulated. In fact, the Six Domains model is a generalization of EE elements, with each element interacting at the same macro level. However, this "comprehensive ecosystem perspective" (Isenberg, 2011, p. 6) thinking lacks a clear causal structure, as "there are no arrows indicating what causes what. ... what we conceive of as outcomes are also powerful causes" (Isenberg, 2011, p. 7). This positions the model as an introduction to the concept of the EE.

On the other hand, the Six Domains model provides a foundation for further discussions on the structural components of the EE. Considering that discussing the EE elements at the same level can only be a description of successful territories, without deepening the understanding of how to improve an EE (Nicotra et al., 2018), E. Stam (2015) proposed an EE framework and its causal relationship with macro-level entrepreneurial activities and value. This system perspective focuses on "the emergence of effects at the level of the entire system, and looks at the relative performance outcomes of entire sets of multiple elements" (E. Stam & Van de Ven, 2021, p. 828). Stam's model divides the EE into systemic conditions and framework conditions, with the former considered crucial elements that determine the success of the EE, and the latter as the fundamental reason for value creation in the EE. Subsequent research has further discussed the EE elements in the model (e.g., Stam, 2018; E. Stam & Van de Ven, 2021), as well as the correlation between the overall EE index derived from this model and macro-level entrepreneurial activities as output (e.g., Leendertse et al., 2022). However, the causal relationship between systemic conditions and framework conditions within the internal EE structure has been overlooked, and the resulting EE index defines them with equal weight. This makes the model more focused on viewing the EE as a whole from a macro perspective to address the question of "How does the EE as a whole generate macro value?" while lacking exploration of how the internal structure of the EE functions.

To enhance the understanding of the internal dynamics of the EE, Spigel (2017) proposed the EE attributes model through qualitative case analysis. This model takes the configuration perspective of viewing regional EE as a social and cultural system and categorizes the EE elements into three levels: Material attributes, Social attributes, and Cultural attributes. The Cultural attributes form the foundation, enabling supportive Social attributes to emerge, which in turn give rise to Material attributes. In this model (a pyramid structure, with the lower level regarded as the foundation), the lower-level structures provide support to the upper-level structures, while the upper-level structures reinforce the lower-level structures, allowing the EE to evolve as a whole. This nuanced discussion of the EE structure combines regional historical development and logically explains how the EE works and how its elements interact. However, it still lacks quantitative evidence to validate the elements at different levels and the relationship among different structures.

Moreover, the EE attribute model provides a macro-level understanding of the overall EE, lacking the perspective of entrepreneurs as important participants in the EE at the micro level. To incorporate elements from the micro-level perspective of entrepreneurs, Z. J. Acs et al. (2015) combined individual level and institutional level variables from a system perspective to define three pillars at the same level. However, the focus of this model is on cross-level analysis and evaluation of the EE, and therefore can provide limited help in understanding how the EE affects entrepreneurs.

It is evident that current research on the EE primarily focuses on EE elements from the macro perspective. This perspective is crucial for understanding the generation of macro value and the evolution of the EE, but it also "created an implicit tendency in entrepreneurship theory to emphasize macro and ecosystem level dynamics rather than the causal and mediating mechanisms linking entrepreneurs and their local ecosystems"

(Roundy & Lyons, 2023, p. 447). In other words, the theory of the EE microfoundation is just emerging (Sun et al., 2020; Roundy & Im, 2024). Therefore, it is crucial to explore the perceptions and other cognitive factors of entrepreneurs (Edelman & Yli-Renko, 2010). While discussions on the roles of different participants in the EE are emerging (e.g., Fuentelsaz et al., 2018; de Villiers Scheepers et al., 2018), treating participants solely as internal elements of the EE disregards the entrepreneurs' viewpoint and fails to address how the EE impacts entrepreneurs (Wurth et al., 2022). As a result, it cannot answer the question of policy ineffectiveness from the entrepreneurs' perspective.

In short, within the EE paradigm, explaining policy ineffectiveness can be elaborated into two sub-questions. First, which EE elements are influenced by entrepreneurship policies, which are not, and what is the relationship between them? Second, through which channels do these EE elements influence Entrepreneurship Performance at the entrepreneur level? These questions aim to provide answers regarding the "what" and "how" of policy impact on entrepreneurs within the EE, how relational connections develop within the EE, and how these ties are influenced by broader contextual factors (Wurth et al., 2022).

3. Research Design

To construct a comprehensive and accurate model, a research design that combines qualitative and quantitative methods is necessary to integrate processes and mechanisms with outcomes (Wurth et al., 2022). Qualitative research can be used inductively to conceptualize new structures and relationships around emerging phenomena in entrepreneurship, enabling the possibility of novel theories and models (Van Burg et al., 2022). Subsequently, the findings from the qualitative study can establish the conceptual domain or dimensions that extend into the quantitative study (Curry & Nunez-Smith, 2014), and can be tested with larger samples (Bentahar & Cameron, 2015). This research approach is known as the sequential exploratory methodology.

The sequential exploratory methodology is a progressive strategy that allows for the use of qualitative data and existing literature to enhance quantitative results at any point in the research process (Edmonds & Kennedy, 2016). Therefore, a notable advantage of the sequential exploratory methodology is its robustness and effectiveness (Heesen et al., 2019). Since the theory of the EE microfoundation is still emerging, this exploratory and testing approach provides tentative explanations for the relationship between focal phenomena and related constructs (Wellman et al., 2023).

In this paper, Study 1 aims to propose models and relevant hypotheses through qualitative Grounded Theory and related literature, which is then tested through a quantitative study in Study 2.

4. Study 1 Qualitative Exploration

4.1. Qualitative Research Design and Data Collection

As the focus of our study is on exploring how the EE impacts entrepreneurs, rather than identifying specific factors that affect entrepreneurship performance, a questionnaire is designed. The questionnaire begins with a series of scales evaluating various aspects of the local EE, directing respondents' attention to the local environment and various stakeholders. Finally, an open-ended question "What suggestions do you have for the entrepreneurial environment in Hong Kong?" is designed to collect entrepreneurs' views on the local EE. Considering the potential misunderstanding of the academic term "Entrepreneurship Ecosystem" among the respondents, we use a more general expression of "entrepreneurial environment". The open-ended question is not mandatory, ensuring that all collected data reflect the most strongly perceived aspects of the impact of the EE on entrepreneurs while maintaining the validity and reliability of the data.

The questionnaires were distributed in Hong Kong between March and July 2022. Given the limited scope of the target group, the most suitable approach for collecting a broader range of data is the snowball sampling method (Liguori et al., 2019). Therefore, we collaborate with various organizations, including universities' innovation and entrepreneurship units' industrial organizations, and incubators. In total, 132 responses were collected, with 56 responses to the open-ended questions. In-depth interviews were conducted with 3 entrepreneurs.

4.2. Grounded Theory Method and Coding

According to the Proceduralized Grounded Theory, we conduct qualitative analysis in three stages. The first step, open coding, involves systematically encoding and labeling the raw qualitative data line by line to generate initial concepts and identify categories from the original materials. To minimize any potential researcher bias or influence, our study aims to use the participants' exact words as labels to capture the initial concepts. Given the extensive number of initial concepts and the overlapping meaning, categories are further developed to reclassify and consolidate the obtained initial concepts. Table A1 in Appendix A is a summary of the initial concepts and categories.

The second step, axial coding, involves identifying the underlying logical connections between categories and developing core categories along with their respective subcategories. In our study, the categories are classified based on their conceptual interrelationships, resulting in a total of 3 main categories. The core categories, their corresponding subcategories, and their definitions are presented in Table 2.

Table 2. Results of axial coding.

Core Categories	Definition	Subcategories	Connotation
Macro Environment	The inherent characteristics of the local EE. Cannot be influenced by entrepreneurship policies.	Economic Environment	The economic environment of the local EE, including international status, cost, economic development, etc.
		Social Environment	The social environment of the local EE, including politics, epidemics, etc.
		Culture Environment	The cultural environment of the region, including attitudes toward entrepreneurs, discrimination against entrepreneurial groups, etc.
EE elements/Support System	The elements of the local EE. Can be seen as a collection of support for entrepreneurs. Can be influenced by entrepreneurship policies.	Technology Support in the EE	The technical support that the local EE can provide for entrepreneurs, including R&D, product manufacturing, etc.
		Professional Support in the EE	The professional support that the local EE can provide for entrepreneurs, including legal, accounting, etc.
		Supply Chain Support in the EE	The supply chain support that the local EE can provide for entrepreneurs, including logistics, supply chain, etc.
		Market Support in the EE	The market support that the local EE can provide for entrepreneurs, including market size, government procurement, etc.
		Human Resources Support in the EE	The human resource support that the local EE can provide for entrepreneurs, including general workers, skilled workers, etc.
		Finance Support in the EE	The financial support that the local EE can provide for entrepreneurs, including financing projects, tax breaks, etc.
		Governance Support in the EE	The governance support that the local EE can provide for entrepreneurs, mainly provided by the government, including the government's attitude towards entrepreneurship, solving the problems of entrepreneurs, etc.

Table 2. *Cont.*

Core Categories	Definition	Subcategories	Connotation
Support Received by entrepreneurs	The support entrepreneurs actually receive in the EE.	Technology Support Received by Entrepreneurs	The technical support that entrepreneurs receive, including R&D support, support for product manufacturing, etc.
		Professional Support Received by Entrepreneurs	The professional support that entrepreneurs receive, including support for company registration, guidance on tax reporting, etc.
		Supply Chain Support Received by Entrepreneurs	The supply chain support that entrepreneurs receive, including support for upstream and downstream of the industrial chain, etc.
		Market Support Received by Entrepreneurs	The market support that entrepreneurs receive, including support from the government, policies, etc.
		Human Resources Support Received by Entrepreneurs	The human resources support that entrepreneurs receive, including support for recruitment channels, support for technical talent, etc.
		Finance Support Received by Entrepreneurs	The finance support that entrepreneurs receive, including tax reduction support, financing support, etc.
		Governance Support Received by Entrepreneurs	The governance support that entrepreneurs receive, including enterprise registration support, government help, etc.

The final step is selective coding, which entails analyzing the connections between the core categories and constructing a coherent narrative to describe behavioral phenomena and contextual conditions. This process ultimately results in the development of a new substantive theoretical framework, which is called the Entrepreneurship Ecosystem, Support Received by entrepreneurs and Entrepreneurship Performance model (the ESP model). Figure 1 illustrates the constructs within the ESP model, the relationships among them, and the potential hypotheses for further quantitative testing.

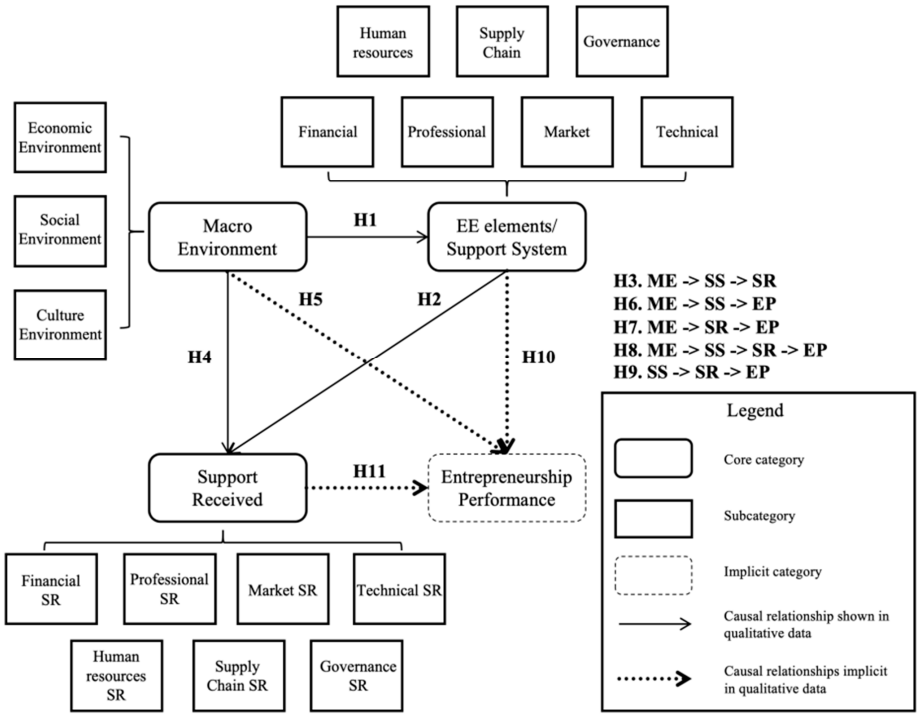

Figure 1. The relationship between the Entrepreneurship Ecosystem, Support Received by entrepreneurs and the Entrepreneurship Performance model (the ESP model).

It is worth noting that, although the open-ended question does not explicitly mention entrepreneurship performance, its implicit content can be further understood as "What impact does the EE have on your entrepreneurial process and entrepreneurship performance?" Therefore, Entrepreneurship Performance at the entrepreneurs' level can be considered as an implicit category, serving as the dependent variable of other constructs discussed above.

The data analysis process utilizes the idea of Constant Comparison, which involves iteratively refining and revising theories until theoretical saturation is achieved. Specifically, we randomly select three quarters of the qualitative data for coding analysis and model construction, while the remaining one quarter of the data is reserved for testing theoretical saturation. The findings indicate that the categories within the model are extensively developed and no new significant categories or relationships are found. Thus, it can be concluded that the ESP model has achieved theoretical saturation.

4.3. The Hypothesis Formulation

In this section, the initial hypotheses identified in the ESP model (Figure 1) is formulated by both the qualitative feedback from entrepreneurs and the review of relevant literature.

4.3.1. The Macro Environment and the EE Structure

The first sub-questions to answer are the following: Which EE elements are influenced by entrepreneurship policies and which ones are not? What is the relationship between them? We consider the following two pieces of comments by respondents:

> *"The Hong Kong government should have better resources on funding startups and work with universities, academies, professional associations, and the labor department to provide labor resource support."* (Comment A05)

> *"The government must quickly formulate a long-term population planning policy to meet the needs of innovation and technology development, including encouraging childbirth and introducing professionals."* (Comment A07)

In entrepreneurs' view, the government is the most significant player in the EE. It primarily acts as a policymaker or regulator, and the entrepreneurship policies implemented have an impact on how EE elements affect entrepreneurs. Consequently, for a specific aspect of the regional EE, such as financing, the government and other organizations play the role of influencers, while policies and regulations serve as the primary tools through which these influencers shape the extent of financing. This is similar to the role of the government in EE discussed by Johnson et al. (2022, p. 1): "We further emphasize the four roles of the federal government as a catalyst, coordinator, certifier, and customer in shaping these relationships."

Based on this viewpoint, we select seven elements that might be influenced by entrepreneurship policies, which are aligned with the classification of EE elements in previous studies (e.g., Stam, 2018; Suresh & Ramraj, 2012). Additionally, these EE elements can be seen as providing support to entrepreneurs (e.g., Spigel, 2017; Stam, 2015), and their integration forms the whole Support System.

In addition to these "support" elements, the analysis of qualitative data reveals the existence of broader macro-level factors within the local EE, which are mostly ignored in other EE models. To differentiate them from EE elements, we refer to these aspects of the macro environment as "factors". This distinction is supported by the following examples:

> *"High living costs in Hong Kong hinder international talents from developing startups here."* (Comment A21)

> *"I believe that as long as the overall economy improves, it will promote entrepreneurship."* (Comment B02)

When compared to the support EE elements that can be classified as specific aspects of the EE, these macro-level factors are inherent characteristics of the local EE. They are hard to be influenced by entrepreneurship policies and can directly impact entrepreneurship. This definition is very similar to Spigel's (2017) classification of EE attributes: "Supportive culture" and "Histories of entrepreneurship" are defined as the foundation of EE, influencing the next level of "Network", "investment capital", and so on. The former represents the Macro Environment factors, while the latter is considered as Support System elements for entrepreneurs. Based on this perspective, we identify 3 subcategories within the Macro Environment: Economic Environment, Social Environment and Culture Environment. These subcategories primarily reflect the socio-economic attributes of the local EE.

Similar conclusions are also drawn in discussions about the entrepreneurial environment: Gnyawali and Fogel (1994) regard the "entrepreneurial environment" as a combination of various factors that influence the development of entrepreneurship, which can be divided into two categories. The first category encompasses overall economic, socio-cultural, and political factors that impact people's willingness and ability to engage in entrepreneurial activities. The second category consists of assistance and support services that facilitate the entrepreneurial process. Clearly, the former are Macro Environment factors, while the latter are EE elements, or the Support System. Together, they constitute the entrepreneurial environment, or the regional EE from an entrepreneurs' perspective. Moreover, Macro Environment factors and EE elements exhibit a distinct hierarchical structure and interrelationship, as demonstrated in the following examples:

> *"Production capacity in GBA is sufficient to support HK innovators' needs only under good weather (pre-COVID days)."* (Comment A47)

> *"I only plan to establish my laboratory in Hong Kong, but even the cost for that is very expensive."* (Comment B03)

It can be inferred that the stability of the Macro Environment is a prerequisite for the EE elements to support the entrepreneurial process, and the extent of the Macro Environment determines the level of EE elements. Therefore, Macro Environment factors are defined as the upper-level structure of the EE, representing the inherent characteristics of the EE formed by historical, geographical, and other factors. In contrast, EE elements are regarded as the lower-level structure of the EE, representing the specific manifestations of regional EE's support for the entrepreneurial process in various aspects, which is the Support System from the entrepreneurs' perspective. In this context, the upper-level Macro Environment factors directly impact the entrepreneurial process and influence the extent of the lower-level Support System. Therefore, the following hypothesis is proposed:

Hypothesis 1. *The Macro Environment positively influences the Support System.*

4.3.2. The Support Received by Entrepreneurs and Entrepreneurship Performance

The second sub-question to answer is the following: How does the EE affect entrepreneurs? The concept of the EE aims to nurture and expand new companies at relatively low costs to benefit from their long-term growth compared to traditional economic development incentives (Andrews et al., 2022). However, a problem remains: Does the presence of high-level entrepreneurship support in an EE truly reflect the level of support received by entrepreneurs? In other words, are the entrepreneurship support efforts truly helpful for entrepreneurs? The following feedback illustrates this contradiction:

"It is extremely strange that there are people who cannot find jobs, and we as startups cannot hire people." (Comment A05)

Comment A05 highlights the differences in the understanding of the EE between the entrepreneurs' perspective and the macro perspective. Despite the availability of adequate, or even excessive human resources in the local EE, entrepreneurs do not receive effective labor support. During the qualitative data collection, a related contradictory phenomenon also emerged: managers from incubators in Hong Kong claimed to offer various entrepreneurship programs for entrepreneurs. However, interviewed Hong Kong entrepreneurs frequently expressed their inability to secure project funding due to various reasons. This suggests that, for entrepreneurs, what matters is not merely the existence or quantity of regional support provided, but rather the actual support they receive. In other words, the impact of EE on entrepreneurs is not linked to the level of support, but rather to the accessibility of the support (Hung & Effendi, 2011).

Therefore, we define the Support Received by entrepreneurs as an important mediating factor in the impact of EE on entrepreneurs. It bridges the transfer of resources and value from the macro-level environment to the individual level entrepreneurs and is a key factor influencing the entrepreneurial process. For the relationship between the Support Received and different EE structures, refer to the response below.

"The current political environment in Hong Kong is too turbulent to attract talent." (Comment A54)

It reveals that the unstable social-economic environment affects the influx of local talents, meaning that political factors, as the upper-level structure of the EE, influence Human Resources support, which is the lower-level structure of the EE. It then affects the Support Received by entrepreneurs from local human resources. In this process, the unstable socioeconomic environment serves as the fundamental reason, and its impact on the Support Received by entrepreneurs is primarily realized through the mediating factor of the Support System. Based on the aforementioned evidence, the following two hypotheses are proposed:

Hypothesis 2. *The Support System positively influences the Support Received.*

Hypothesis 3. *The Support System mediates the relationship between the Macro Environment and the Support Received.*

Furthermore, the Support Received by entrepreneurs corresponds to Support System elements, where Support System elements represent the supply of "support" at the macro regional level, while Support Received represents the demand for "support" at the entrepreneurs' level. Many respondents' comments and complaints not only reflect the current state of the local EE but also highlight the lack of assistance they receive and their hopes for improvement.

Although the qualitative results did not capture a direct influence of the Macro Environment on Support Received, we still put forward the following hypothesis to test for the presence of a direct effect in addition to the indirect effects:

Hypothesis 4. *The Macro Environment positively influences the Support Received.*

Then the discussion focuses on how these constructs impact Entrepreneurship Performance, which is considered the goal that entrepreneurship support efforts need to achieve (Niska & Vesala, 2013). First, the upper-level structure of the EE, specifically the Macro Environmental factors, has a direct impact on Entrepreneurship Performance (shown in

Comment A21 and Comment B02). This result is widely acknowledged across various research fields. In Strategy Management research, scholars have consistently recognized the macro environment as a crucial factor that affects a company's performance (Fiss, 2011; Miller, 1986). Similarly, in entrepreneurship research, both the creation and discovery perspectives highlight the importance of environmental influences in the entrepreneurial process (Edelman & Yli-Renko, 2010). Therefore, we have the following:

Hypothesis 5. *The Macro Environment positively influences the Entrepreneurship Performance.*

Furthermore, the above discussion also demonstrates the potential indirect impact of the Macro Environment on Entrepreneurship Performance:

Hypothesis 6. *The Support System mediates the relationship between the Macro Environment and the Entrepreneurship Performance.*

Hypothesis 7. *The Support Received mediates the relationship between the Macro Environment and the Entrepreneurship Performance.*

Hypothesis 8. *The Support System and the Support Received mediate the relationship between the Macro Environment and the Entrepreneurship Performance.*

Second, the lower-level structure of the EE, specifically the Support System, also affects Entrepreneurship Performance. As discussed earlier, we emphasize that entrepreneurs are not concerned with the quantity of support available in the region, but rather with how much support they actually receive. In other words, Support Received plays a crucial mediating role in the impact of the Support System on Entrepreneurship Performance. Therefore,

Hypothesis 9. *The Support Received mediates the relationship between the Support System and the Entrepreneurship Performance.*

However, the qualitative results do not capture a direct impact of the Support System on Entrepreneurship Performance. Considering that many EE studies emphasize the correlation of EE elements with entrepreneurial activities or macro-level entrepreneurship performance from a macro perspective (Leendertse et al., 2022; Nicotra et al., 2018) and government support policies positively influence or moderate SME performance (Falahat et al., 2021; Prasannath et al., 2024), it is essential to test the direct effect of the Support System on Entrepreneurship Performance at the entrepreneurs' level. Therefore, we propose the following hypothesis:

Hypothesis 10. *The Support System positively influences the Entrepreneurship Performance.*

Lastly, Support Received by entrepreneurs has a direct impact on Entrepreneurship Performance, as the support received by entrepreneurs from various aspects during the entrepreneurial process is significantly linked to entrepreneurial success (Kee et al., 2019). Therefore, we propose the following hypothesis:

Hypothesis 11. *The Support Received positively influences the Entrepreneurship Performance.*

In summary, H1 aims to validate the interrelationships within the EE structure. H2 and H4 examine the direct effect of different EE structures on Support Received, while H3 tests the indirect effect of the Macro Environment on Support Received. H5 and H10

test the direct effect of different EE structures on Entrepreneurship Performance, while H6–9 examine their indirect effect. Finally, H11 tests the relationship between Support Received and Entrepreneurship Performance. The later 10 hypotheses focus on verifying the channels through which the different EE structures influence entrepreneurs.

5. Study 2 Quantitative Evidence

5.1. Data Collection

To validate the ESP model, a questionnaire based on the model is designed. As our study explores the mechanism of EE from an entrepreneur's perspective, questionnaires targeting entrepreneurs are considered the best way to reflect the perceptions of entrepreneurs. To obtain a more comprehensive validation, we collected 332 original samples from mainland China from November 2022 to March 2023. These samples were recommended to entrepreneurs by entrepreneurship tutors from universities and project leaders from government entrepreneurship programs.

Considering the potential errors that may arise from online data collection, we follow Porter et al.'s (2019) recommendations for questionnaire design and remove invalid samples through LongString analysis. Specifically, samples with continuous responses exceeding half the length of the questionnaire and odd–even questions with continuous responses exceeding one-fourth of the questionnaire length are defined as invalid questionnaires based on Curran's (2016) suggestions. Finally, 244 valid samples were retained, resulting in a sample validity rate of 73.5%.

5.2. Measurement

The questionnaire designed based on the ESP model consists of four parts: Entrepreneurship Ecosystem, Support Received by entrepreneurs, Entrepreneurship Performance at the entrepreneurs' level, and control variables. The former three variables are assessed using a five-point Likert scale, where 1 indicates "Strongly disagree" and 5 indicates "Strongly agree" (for a detailed questionnaire, refer to Table A2 in Appendix B). The initial questionnaire design underwent pilot testing and was refined after discussions with 11 entrepreneurs and scholars.

5.2.1. Macro Environment and Support System

The Entrepreneurship Ecosystem part is based on the designs by Levie and Autio (2008) and Liguori et al. (2019). We treat the Macro Environment and Support System as separate constructs to examine their impacts individually. The Macro Environment represents the upper structure and includes entrepreneurs' perceptions of the Economic Environment, Social Environment and Culture Environment. The Support System represents the lower structure and consists of the 7 EE elements. Considering that the Support System can be seen as a collection of elements, we view it as a whole and measure it across its 7 dimensions.

5.2.2. Support Received by Entrepreneurs

The Support Received by entrepreneurs corresponds to EE elements, but we adopt a completely different strategy in measuring Support Received compared to the Support System. In fact, a second-order structure is designed to measure Support Received, consisting of three first-order constructs: Professional Support received, Financial Support received, and Technical Support received. The reason for this is that the Support System functions as a lower-level structure of the EE as a whole; therefore, what this model needs is entrepreneurs' overall perception of the Support System. On the other hand, Support Received is more micro-level, directly reflecting the needs at the entrepreneurs' level in various aspects. Therefore, we select three aspects of support for measurement.

5.2.3. Entrepreneurship Performance

Entrepreneurship Performance at the entrepreneur level is divided into Personal Performance and Company Performance (Omerzel Gomezelj & Kušce, 2013), acting as a second-order structure. Due to the limited availability of public financial data, non-financial indicators are more suitable for measurement (Lussier & Halabi, 2010). Therefore, we follow the suggestions from Zahra et al. (2002) to measure Company Performance from multiple dimensions, including financial indicators and different aspects of growth. Furthermore, considering the inherent instability of early-stage startups, using a single measure of Company Performance is not comprehensive (Omerzel Gomezelj & Kušce, 2013). Therefore, we supplement entrepreneur satisfaction as Personal Performance, allowing for a multidimensional mixed measurement of Entrepreneurship Performance and overcoming the limitations of a single performance measure (Kee et al., 2019). By focusing on the entrepreneurs' perspective, we utilize subjective data to measure Entrepreneurship Performance, which is valuable for assessing non-financial dimensions, more accessible than objective indicators, and has shown strong reliability and validity (W. Stam & Elfring, 2008).

5.2.4. Control Variables

To ensure the accuracy and reliability of the model, several control variables are included based on the findings of prior studies, with their data description as shown in Table A3 in Appendix B. First, the functionality of the EE is primarily at the sub-national level (Spigel et al., 2020); therefore, the City is controlled. Second, as entrepreneurs' age increases, their probability of success also increases (Azoulay et al., 2020), which may lead to different perceptions of the EE among entrepreneurs of different ages. Hence, entrepreneurs' age is controlled. Considering respondent privacy, we set 4 age groups up to over 45 years old because "The mean age at founding for the 1-in-1000 fastest growing new ventures is 45.0" (Azoulay et al., 2020, p. 65). Third, considering the potential impact of gender differences on the ability to access support (Fischer et al., 1993) that may result in perceptual differences, Gender is controlled. Fourth, as younger firms may have more challenges in seizing opportunities due to their small resource bases (W. Stam & Elfring, 2008), Firm Age is controlled. Due to privacy concerns and other reasons, many responses for Firm Age in the collected data are provided as a range; therefore, Firm Age is categorized according to the definition of the Global Entrepreneurship Monitor as 1–42 months (startup) and more than 42 months (established). Fifth, since formal education is considered a determinant of entrepreneurial performance (Van der Sluis et al., 2008), Educational Level of entrepreneurs is controlled. Finally, entrepreneurial education is found to positively influence entrepreneurial performance (Elert et al., 2015; Yeh et al., 2021), and thus entrepreneurial education is controlled.

5.3. Results from SEM Analysis

Considering that qualitative analysis has already identified the model and the pathways between constructs as well as the existence of latent constructs, we utilize Structural Equation Modeling to test the structural relationships and pathways among the constructs in the model (Arzubiaga et al., 2018; Hair et al., 2019). Partial Least Squares Structural Equation Modeling (PLS-SEM) is considered the most suitable method for our study. First, PLS-SEM is suitable for exploratory research for theory development (Hair et al., 2019). Second, PLS-SEM is a more rigorous method for analyzing the ESP model compared to regression analyses that assume error-free measurement (Bacq & Alt, 2018).

5.3.1. Quality of the Measurement Model

- *Sample size.* According to the Inverse Square Root method, the minimum sample size for our study is 59 (Kock & Hadaya, 2018).
- *Goodness of fit.* The Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), Tucker–Lewis Index (TLI), Incremental Fit Index (IFI), and chi-square were examined, with the results shown in Table A2 in Appendix B. The results demonstrate that the model fits well.
- *Common method bias.* Our data were sourced from 44 cities across various regions of China for 5 months, which helps reduce common method bias. For post hoc tests, we utilize three methods. First, Harman's single-factor test indicates that the most covariance explained by one factor is 37.04%, which is less than 50%. Second, the Unmeasured Latent Methods Factor does not notably improve the model's goodness of fit after including a common method factor (ΔCFI = −0.001, ΔRMSEA = −0.002, ΔTLI = −0.006, ΔIFI = −0.001). Third, a Confirmatory Factor Analysis with one factor performs significantly worse than the base model (CFI = 0.530, RMSEA = 0.145, TLI = 0.500, IFI = 0.533). These results suggest that common method biases are unlikely to influence the outcomes (Fuller et al., 2016; Podsakoff et al., 2003).
- Internal consistency reliability. The results of the reliability test are shown in Table A2 in Appendix B. First, Composite Reliability (CR) is examined, and the results indicate that the values of Cronbach's α are all above 0.70, suggesting strong consistency among the items in the scale. Second, the outer standardized factor loadings are tested to assess individual item reliability for each indicator. The results show that all items' loadings are above 0.7, demonstrating strong indicator reliability for the scale. Finally, the loadings to the second-order factor are all above 0.7, confirming the necessity of constructing second-order variables. In conclusion, the scales used in our study are internally consistent (Bacq & Alt, 2018; Hair et al., 2019; Kaya et al., 2020).
- Convergent and discriminant construct validity. The results of the validity test are presented in Tables A2, A4 and A5 in Appendix B. First, Average Variance Extracted (AVE) is examined, and the results are all above 0.5, indicating that the latent variable explains at least 50% of the variance of its indicators. Second, the Fornell–Lacker criterion and cross-loading are used to test discriminant construct validity, and the results confirm the validity of the measurement scales used in our study (Hair et al., 2019).

5.3.2. Test of the Structural Model and Mediating Effects

The results of the PLS-SEM analysis are illustrated in Figure A1 in Appendix B, and the assessment and validation of the structural model are presented in Table 3.

Table 3. Assessment and validation for a structural model.

Hypothesis	Path Coefficient	*p* Value	t Value	Decision	R^2	f^2	95%CILL	95%CIUL
H1: ME -> SS	0.730	0	22.071	Supported	0.533	1.143	0.662	0.813
H4: ME -> SR	0.089	0.225	1.214	Not supported	0.452	0.007	−0.057	0.233
H2: SS -> SR	0.605	0	8.605	Supported		0.311	0.467	0.743
H5: ME -> EP	0.329	0	3.873	Supported	0.255	0.067	0.152	0.488
H10: SS -> EP	0.051	0.613	0.506	Not supported		0.001	−0.141	0.255
H11: SR -> EP	0.196	0.012	2.516	Supported		0.028	0.042	0.349

The analysis results validate the ESP model and enhance the understanding of the relationships between different constructs. First, the two structures within the EE are examined. The upper-level structure of the EE, namely the Macro Environment, is found to

have a strong and significant positive correlation with the lower-level structure, the Support System (H1: path = 0.730, t = 22.071, $p < 0.001$). The Macro Environment accounts for 40.8% of the variance in the Support System, indicating a high explanatory power. Cohen's f^2 confirms the Macro Environment's significant explanatory power on the Support System.

Second, we examine the relationship between the EE and the Support Received by entrepreneurs. The Support System exhibits a strong and significant positive correlation with the Support Received by entrepreneurs (H2: path = 0.605, t = 8.605, $p < 0.001$). The effect size f^2 indicates that the Support System has a significant explanatory power on the Support Received, and when combined with the Macro Environment, they account for 45.6% of the variation in Support Received.

Regarding the upper-level structure of EE, there is insufficient evidence to prove a direct effect of the Macro Environment on the Support Received by entrepreneurs (H4: path = 0.089, t = 1.214, $p = 0.225$). Therefore, we analyze the specific indirect effect, total indirect effect, and total effect of the model, as shown in Table 4. By combining the direct and indirect effects, the relationships within the ESP model can be demonstrated in Figure 2. Solid lines represent significant direct effects between constructs. Dashed lines indicate significant indirect effects of the Macro Environment, including ME -> SS -> SR and ME -> SS -> SR -> EP. The dotted lines represent significant indirect effects of the Support System, specifically SS -> SR -> EP.

Table 4. Result of indirect effect and total effect.

	Specific Indirect Effect		**Total Indirect Effect**		**Total Effect**
H8: ME -> SS -> SR -> EP	0.086 (2.337) *	ME -> EP	0.141 (2.097) *	ME -> EP	0.470 (8.802) ***
H3: ME -> SS -> SR	0.442 (7.754) ***	ME -> SR	0.442 (7.754) ***	ME -> SR	0.531 (10.927) ***
H6: ME -> SS -> EP	0.037 (0.502)	SS -> EP	0.118 (2.368) *	SR -> EP	0.196 (2.516) *
H7: ME -> SR -> EP	0.017 (1.010)			SS -> EP	0.169 (1.930) †
H9: SS -> SR -> EP	0.118 (2.368) *			SS -> SR	0.605 (8.605) ***

Notes: t value is shown in parentheses. † $p < 0.1$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.

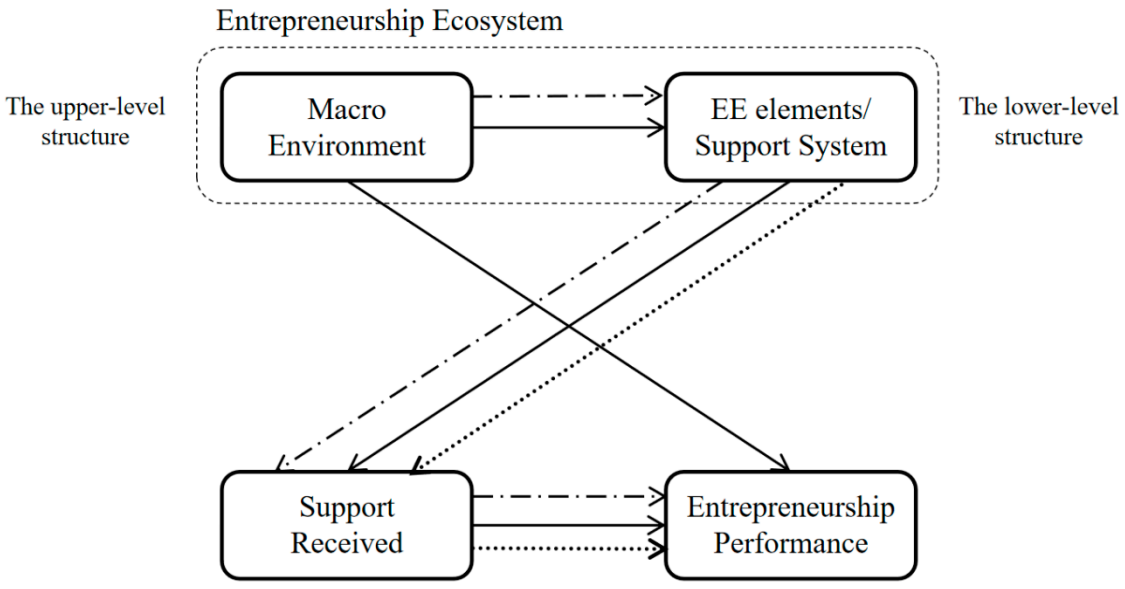

Figure 2. The verified ESP model.

The results indicate that although the direct effect of the Macro Environment on the Support Received by entrepreneurs is not significant, it has a significant and substantial indirect effect through the mediating role of the Support System (H3: path = 0.442, t = 7.754, $p < 0.001$; total effect: path = 0.531, t = 10.927, $p < 0.001$).

Lastly, the relationship between the EE, Support Received by entrepreneurs, and Entrepreneurship Performance is explored. Both the Macro Environment and Support Received show a significant positive correlation with Entrepreneurship Performance (H5: path = 0.329, t = 3.873, $p < 0.001$; H11: path = 0.196, t = 2.516, $p = 0.012$). However, there is insufficient evidence to support a direct relationship between the Support System and Entrepreneurship Performance (H10: path = 0.051, t = 0.506, $p = 0.613$). For the indirect effects and total effects, the Support System has a significant indirect effect on Entrepreneurship Performance through the mediating role of Support Received by entrepreneurs (H9: path = 0.118, t = 2.368, $p = 0.022$; total effect: path = 0.169, t = 1.930, $p = 0.054$). This indicates that Support Received plays an important mediating role in the impact of the Support System on Entrepreneurship Performance, and its influence on Entrepreneurship Performance is mainly realized through the mediating factor of Support Received by entrepreneurs.

Additionally, for the Macro Environment, there is a significant specific indirect effect through ME -> SS -> SR -> EP (H8: path = 0.086, t = 2.337, $p = 0.019$). However, the paths of ME -> SS -> EP (H6: path = 0.037, t = 0.502, $p = 0.616$) and ME -> SR -> EP (H7: path = 0.017, t = 1.010, $p = 0.313$) are not significant. This suggests that aside from the direct impact, the Macro Environment still has an indirect impact on Entrepreneurship Performance through a specific path of Support System and Support Received by entrepreneurs. Furthermore, the Macro Environment exhibits a strong and significant total effect on Entrepreneurship Performance (path = 0.470, t = 8.802, $p < 0.001$), but the total indirect effect is not large (path = 0.141, t = 2.097, $p = 0.036$), indicating that the dominant effect is still the direct effect of the Macro Environment.

5.3.3. Multi-Group Test

To test the generalizability of the ESP model, we conduct a multi-group analysis of control variables, with the results shown in Appendix B, Table A6. The primary question is whether the ESP model applies to most of the EE or if it is only specific to certain types of cities. Considering that the collected data include 44 cities, the city with the most samples had only 26, which did not meet the minimum sample requirement. Therefore, based on the 2023 Cities GDP ranking in China, we define cities with an annual GDP exceeding 1 trillion RMB as High-GDP Cities, and those below as Low-GDP Cities, testing for potential differences due to economic levels. The results indicated that there is not enough evidence to suggest that economic levels lead to differences in the ESP model, hence economic levels are regarded as not impacting the generalizability of the ESP model.

For entrepreneur age, since the sample sizes for "18–25" and "above 45" do not meet the minimum requirements, we compare "26–35" with "36–45", as well as "younger than 35" with "elder than 36". Both sets of results indicate that there is not enough evidence to suggest that entrepreneur age would lead to differences in the ESP model. For the educational level of entrepreneurs, while a study suggests a significant positive correlation between duration of education and entrepreneurship performance (Van der Sluis et al., 2008), there is no specific recommendation for grouping provided in the literature. It should be taken into account that undergraduate education is generally more broad-based while master's and doctoral degrees involve research training, which could impact the types of businesses they establish. And taking sample size into account, we compare those with undergraduate and below to those with master's and doctoral degrees. The results do not show any significant differences. Additionally, Gender, Firm Age and Entrepreneurial Education do not show any differences. In conclusion, the ESP model is generalizable, as economic levels of cities, entrepreneur Age, Gender, Firm Age, Educational Level of entrepreneurs and Entrepreneurial Education do not lead to differences.

5.4. Quantitative Support for the Qualitative Research

The quantitative evidence provides strong support for the model and hypotheses proposed in our qualitative research. Regarding the first sub-question concerning the relationships between EE structures, the upper-level structure has a significantly positive correlation with the Support System provided for entrepreneurs within the region. The Macro Environment has a strong explanatory power for the Support System (R square = 0.533, f square = 1.143), indicating that the degree of the Macro Environment directly impacts the performance of different EE elements at the regional level. In other words, EE elements represent specific manifestations of the current local Macro Environment in various aspects.

For the second sub-question, we emphasize the important role of Support Received by entrepreneurs. The results of the quantitative analysis demonstrate that the Support System shows a strong and significant positive correlation with the Support Received by entrepreneurs. However, the Macro Environment primarily influences the Support Received by entrepreneurs through the Support System as a mediating factor.

Additionally, the Macro Environment and Support System have a strong explanatory power for the Support Received by entrepreneurs (R square = 0.456), with the Support System's f square for Support Received by entrepreneurs being 0.311, indicating a moderate explanatory effect. The reason for this result is that the Support Received by entrepreneurs is not solely related to the lower-level structure of the EE or the local EE. We consider the following response:

> *"HK needs to collaborate with other ASEAN countries such as Vietnam, Thailand and Malaysia to develop more practical technologies for larger markets."* (Comment A51)

The Support Received by entrepreneurs comes from various sources, including cross-EE communication, as demonstrated in Comment A47 mentioned earlier: under the conditions of social stability (not during the pandemic), cross-EE communication in the Greater Bay Area compensates for the inadequacy of support provided by the local EE. However, the support provided by the local EE is considered the primary source of support for entrepreneurs.

Then, we examine the impact channels of different EE structures on Entrepreneurship Performance at the entrepreneurs' level. First, the upper-level structure of the EE, specifically the Macro Environmental factors, has a significant direct impact on Entrepreneurship Performance, and its indirect effect on Entrepreneurship Performance is mainly achieved through ME -> SS -> SR -> EP. Given the disparity between the two effects, the impact of the Macro Environment on Entrepreneurship Performance is believed to be primarily realized through direct effect.

Second, for the lower-level structure of the EE, specifically the Support System, there is no sufficient evidence to show its direct effect on Entrepreneurship Performance, but an indirect effect through Support Received by entrepreneurs as a mediating factor. In fact, we also examine the correlation only between the Support System and Entrepreneurship Performance (path = 0.429, t = 7.785, $p < 0.001$), and the significant positive correlation between them is consistent with previous research on the EE element index and Macro-Level entrepreneurship performance (e.g., Leendertse et al., 2022). However, after considering the Macro Environment and supplementing Support Received as a mediating variable, there is not enough evidence to prove that the direct effect of the Support System on Entrepreneurship Performance is significant, but rather mainly has an indirect impact through Support Received as a mediating variable. This finding aligns with the results of the qualitative research, where participants emphasize the need for more entrepreneurship support. However, they do not explicitly indicate that an increase in the support provided by the region could directly enhance their entrepreneurship performance.

6. Discussion

Now, it is time to answer the initial question: Why do entrepreneurship support efforts fail? First, we examine constraints from the Macro Environment. Entrepreneurship policies can directly impact the Support System, which is the lower-level structure of the EE. Meanwhile, the Macro Environment, as the upper-level structure of the EE and the primary goal for EE research (Spigel, 2020), represents the inherent attributes shaped by factors such as geography and history, making it difficult to be directly influenced by entrepreneurship policies. The extent of the Macro Environment determines the level of EE elements, explaining why similar entrepreneurship policies may yield different results in different EE and why successful EE are difficult to replicate (Smallbone, 2020; Spigel, 2017; Stam, 2015). Additionally, the stability of the Macro Environment is a prerequisite for the EE elements to effectively support the entrepreneurial process. For instance, when there is high political uncertainty or lack of fully developed institutions, legal and financial support for entrepreneurs tends to be low (Harrison et al., 2018; Wang et al., 2023). This highlights the helplessness of entrepreneurship policies during crises; despite the introduction of many entrepreneurship policies, an unfavorable Macro Environment renders them ineffective in achieving their goals of addressing economic and employment crises (c.f. Román et al., 2013). On the other hand, the path coefficient of the Macro Environment on Entrepreneurship Performance is greater than that of Support Received on Entrepreneurship Performance. This suggests that even with effective support, entrepreneurs may still be constrained by the Macro Environment. In other words, although a small number of enterprises with specific advantages may perform well during a crisis, the majority of enterprises, even with sufficient entrepreneurship support, may still fall short of expected performance. Therefore, attempting to promote entrepreneurship through policies in a Macro Environment with potential dangers may not be a wise decision.

Second, the gap between supply and demand for entrepreneurship support results in entrepreneurship policies falling short of expectations. The support efforts provided for entrepreneurs through entrepreneurship policies do not directly impact Entrepreneurship Performance. Instead, they indirectly influence it through the mediating factor of the actual Support Received by entrepreneurs. The former represents the supply of entrepreneurship support in a region, which can be seen as its quantity, while the latter shows the demand for entrepreneurship support from entrepreneurs. The gap between the two reflects the quality of the support efforts. We refer to the responses below.

> *"There are professional companies that assist in applying for startup funds, but there are problems with resource abuse due to split accounting."* (Comment A01)

> *"Reimbursement-based fundings have two major drawbacks: 1. For those without savings (especially students and fresh graduates), reimbursement means they need to get part-time job or borrow money just to get anything started, and both of these are huge distraction and pressure. 2. After submitting claim form, it can take months before the funding actually arrives, destroying the cash flow."* (Comment A41)

The comments illustrate that, despite various organizations such as the government and banks in the region providing sufficient funding for entrepreneurs, losses caused by split accounting and limitations on funding lead to inadequate actual Support Received by entrepreneurs. Consequently, entrepreneurship support efforts that focus solely on quantity rather than quality often fail to meet expectations. This conclusion is also supported by existing research, such as the study by Hung and Effendi (2011), which demonstrates that complex financing application procedures compel entrepreneurs to rely more on private sponsors or self-funding.

In short, from the entrepreneurs' perspective, two main reasons lead to the ineffectiveness of entrepreneurship policies. The first reason stems from the inherent characteristics of the Macro Environment and the EE itself, which are challenging to address through a series of improvement measures. The second reason arises from the policies themselves and requires focused attention, as it is improvable. For instance, promoting entrepreneurship support efforts and simplifying application processes can effectively enhance policy quality and improve its effectiveness.

6.1. Practical Implications

Our study's practical implications align with the two main reasons that contribute to the ineffectiveness of entrepreneurship policies. First, attempting to resolve macro crises through entrepreneurship policies may not meet the expected results. While the correlation between entrepreneurship and economic development is acknowledged (Arshed et al., 2016; Dahlstrand & Stevenson, 2010), it is impractical to try to resolve macro crises through entrepreneurship policies (cf. Román et al., 2013) because policies can only impact the Support System, which relies on a stable Macro Environment to function effectively. Furthermore, the influence of the Macro Environment on Entrepreneurship Performance surpasses the support that policies can provide. This implies that more resources are needed to counteract the impact of crises, which may not always be worthwhile.

Second, the quality of the entrepreneurship policy requires focused attention. There is a gap between supply and demand for entrepreneurship support in a region. The quantity of support provided in a region is not the key factor influencing entrepreneurship performance, but rather its quality. Although the impact of the quantity and quality of entrepreneurship policies on entrepreneurs is evident, there is limited research focusing on policy quality. A notable example is the current evaluation methods of the EE, which often concentrate on the supply of entrepreneurship support in a region (e.g., Corrente et al., 2019; Liguori et al., 2019; E. Stam & Van de Ven, 2021; and EE rating agencies like Startup Genome and StartupBlink) while lacking measurement from the entrepreneurs' perspective regarding the actual support they receive. As a result, although the weaknesses in the quantity of EE elements can be identified, the quality of the EE cannot be directly measured (Bruns et al., 2017). This limits traditional measuring tools in providing satisfactory or actionable insights and an operational framework for policymakers (Leendertse et al., 2022; Rocha et al., 2021). Therefore, we advocate for an evaluation model that focuses on the support received by entrepreneurs to provide insights for policymakers to enhance policy effectiveness.

6.2. Theoretical Contributions

Our study makes two contributions to the entrepreneurship literature. First, we provide the voice of entrepreneurs regarding the ineffectiveness of entrepreneurship policies. Existing research mainly focuses on the macro perspective and policymaker's viewpoint (e.g., Arshed et al., 2014; Arshed et al., 2016; Arshed & Carter, 2016; Bennett, 2008; Niska & Vesala, 2013; Shane, 2009), providing valuable insights for policy formulation. However, policies are closely intertwined with their beneficiaries. Hence, we provide the voice of entrepreneurs, enabling us to understand what they truly need and supplementing aspects that the macro perspective and policymakers' viewpoint may overlook. Our study emphasizes that policymakers should focus not only on the quantity of support provided in the region but also on its quality as reflected in the support received by entrepreneurs.

Second, we enhance the understanding of the metaphorical EE. Academic discourse has yet to fully leverage the potential of its metaphors (Kuckertz, 2019). Therefore, there have been calls for understanding the microfoundations of the EE (Felin & Foss, 2023; Roundy & Lyons,

2023). Many studies have delved into this from the entrepreneurial alertness perspective (Roundy & Im, 2024), the institutions perspective (Sun et al., 2020) and the systemic value-based perspective (Cosenz et al., 2023). We follow these discussions and elucidate the causal and mediating mechanisms that link entrepreneurs with their local EE from the entrepreneurs' perspective (c.f. Wurth et al., 2022). Our study highlights the pathways through which different EE structures impact entrepreneurship performance at the entrepreneurs' level. In addition, we complement policy-oriented dimension and use empirical research findings to advance the ecosystem concept theoretically (c.f. Nordling, 2019).

6.3. Future Research

Our study provides a framework for future research. First, there is a need to measure the entrepreneurship support received by entrepreneurs. Existing research primarily focuses on evaluating the provision of entrepreneurship support within regions. However, we highlight that it is not only the quantity of entrepreneurship support that is crucial but also its quality. Therefore, measuring the actual entrepreneurship support received by entrepreneurs within regions will provide more effective insights for evaluating the quality of entrepreneurship support.

Second, it is necessary to explore ways to improve the quality of entrepreneurship support. Despite many studies revealing the reasons for policy ineffectiveness, few effective recommendations have been proposed. The quality of entrepreneurship support offers a new insight, suggesting that there are numerous reasons for wastage during the supply and demand of entrepreneurship support. These losses lead to the inputs into entrepreneurship supports not yielding the expected outcomes. Hence, exploring how to enhance the efficiency of entrepreneurship support becomes even more meaningful.

Lastly, further research is needed on cross-EE communications. The ESP model primarily focuses on the impact of the local EE. However, environmental influences originate not only from the local EE but also from other EEs. Especially when significant changes occur in the local Macro Environment or when the imperfect Support System hinders entrepreneurial activities, the cross-EE support provided by other EEs becomes crucial.

6.4. Limitations

Our study has the following limitations. First, our study involves a retrospective measurement of entrepreneurs' entrepreneurial experiences at a single point in time, but tracking a group of entrepreneurs for longitudinal research is still needed for more evidence. Second, the firm size and industry are not considered. As our study primarily focuses on the general types of entrepreneurship support efforts and does not specifically target support policies for a particular industry, it does not test the differences between SMEs and large enterprises, nor does it explore variations across different industries. Therefore, the discussion on the ineffectiveness of entrepreneurship policy in our study does not encompass strong government intervention or industry-specific policies that provide strong support to a particular sector. Lastly, we focus on measuring the Macro Environment, Support System, and Support Received as variables, but not their inside factors. This makes our study unable to explain which specific elements or factors would have different effects on different industries and firm sizes.

7. Conclusions

Through the sequential exploratory methodology, we provide insights into the reasons entrepreneurship support efforts fail from the entrepreneurs' perspective. Specifically, we focus on two key sub-questions within the EE paradigm. First, we clarify the two-level structure within the EE based on whether it can be directly influenced by entrepreneurship

policies and explore their relationship. Second, we illustrate the channels through which these two EE structures impact entrepreneurship performance at the entrepreneurs' level. Our study also refines the EE Microfoundation theory, particularly the causal and mediating mechanisms linking entrepreneurs to their EE.

Author Contributions: Conceptualization, R.X. and H.S.; writing—original draft preparation, R.X.; writing—review and editing, H.S.; supervision, H.S. All authors have read and agreed to the published version of the manuscript.

Funding: The research reported in this paper was supported by a research project at the City University of Hong Kong (9229166).

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data presented in this study are available on request from the corresponding author. The data are not publicly available for business reasons.

Conflicts of Interest: The authors declare no conflicts of interest.

Appendix A. Qualitative Analysis

Table A1. Results of open coding.

Categories	Codes (Concepts)
Economic Environment	A29 Now Hong Kong is gradually losing its international status. (International positioning as a financial centre.) A21 High living costs in Hong Kong hinder international talents from developing startups here. (Living cost.) B02 I believe that as long as the overall economy improves, it will promote entrepreneurship. (Economic environment.)
Social Environment	A47 Production capacity in GBA is sufficient to support HK innovators' needs only under good weather (pre-COVID days). (Epidemic.) A54 The current political environment in Hong Kong is too turbulent to attract talent. (Politics.) B04 Regarding the impact of the pandemic, I think those involved in export trade and local trade in Hong Kong will face significant challenges. (Epidemic.)
Culture Environment	A48 In Hong Kong, culture is critical to accepting that failure is a norm in startups. The environment must facilitate startup and be willing to encourage/support failures. (Acceptance of entrepreneurial failure) A52 ..., the general public has a skeptical attitude towards new entrepreneurs. (Public attitudes toward entrepreneurs.) B11 I am not optimistic about Western countries prioritizing white people. (Entrepreneurial discrimination.)
Technology Support in the EE	A20 Effective and timely policies from the government to support entrepreneurs in not just technologies but also rental and taxation with talent import convenience. (Technology support through policy.) A36 There is a need for more government support in terms of ... knowledge transfer and exchange. (Technology support through government.) B05 The most important is cloud resources because we are CS students and we will consider it. Like cloud computing, and rent servers. (Technology support.)
Professional Support in the EE	A01 There are professional companies that assist in applying for startup funds. (Professional support through companies.) A45 HK universities focus too much on research and lack development capabilities. Suggest opening the PolyU Industrial Center for all universities or helping universities set up their own development arm to fill the gap. (Knowledge commercialization lacks professional support.) B06 I plan to use a one-stop agency service, which can help me solve the problem of office location registration. (Professional support.)
Supply Chain Support in the EE	A44 The current entrepreneurial environment in Hong Kong (mainly due to the unsmooth entrepreneurial supply chain and lack of related talents) is still insufficient. (Supply chain in the EE.) A47 HK lacks the most basic prototyping capacity for entrepreneurs working on hardware solutions (mechatronics, physical products, etc.). (R&D.) B07 Hong Kong has a well-developed logistics system, but logistics is just a part of the supply chain. (Logistics system.)
Market Support in the EE	A08 Create a platform to line up upstream and downstream companies to work together from market need to product commercialization. (Platform to give market support.) A48 One needs to consider/address ..., and (4) market size. (Market size.) A50 Bridging Tech Startups and user adoption and support. (Technology commercialization.)

Table A1. *Cont.*

Categories	Codes (Concepts)
Human Resources Support in the EE	A07 ..., including encouraging childbirth and introducing professionals. (Human resources through policy.) A30 Cultivating technology talents and facilitating the introduction of mainland technology professionals. (Lack of talent.) B08 Currently, the manufacturing industry is facing a severe shortage of workers, both ordinary and skilled. (Shortage of workers.)
Finance Support in the EE	A05 The Hong Kong government should have better resources for funding startups. (Financial support through government.) A26 Give tax incentives for private enterprises to adopt locally invented products or services. (Tax policy.) B09 Compared to mainland China, the situation is better in Hong Kong because I participated in many competitions, including entrepreneurship and business competitions, during my undergraduate studies. Competitions in mainland China only offer certificates without any funding, whereas Tech 300 seed funding is a true opportunity to help realize my idea and start a business. (Financial support through entrepreneurial project.)
Governance Support in the EE	A03 The government can take the lead in applying new startups to enterprises. (Government leadership.) A13 The government should be actively involved, rather than bureaucratic propaganda. They must change the current attitude of slogan-style propaganda and bureaucrats doing things according to rules! (Government attitude.) B10 I think that the government is only focused on following rules and procedures, and not solving problems or promoting business and social development. (Solve the entrepreneur's problem.)
Technology Support Received by Entrepreneurs	B12 There are no restrictions on instrument and equipment support in the laboratory. (Technical restrictions.) B13 However, many products are not available in mainland China, such as Google being banned, and Baidu.com not being able to search for many things, so I have to use Bing.com instead. (Technical restrictions.) B14 However, obtaining medical data in Hong Kong is extremely difficult, posing a significant technological barrier. (Data problem.)
Professional Support Received by Entrepreneurs	A19 They need more mentors to guide them on the right track, and save time. (Entrepreneurs face a lack of professional support from entrepreneurial mentors.) B15 Generally, it is necessary to find a professional company to help with it. (Entrepreneurs need professional support.) B16 However, there may be situations where I am not fully informed about other costs and details in Hong Kong due to unclear consultations. (Entrepreneurs do not get enough information support.)
Supply Chain Support Received by Entrepreneurs	B23 It is difficult to develop the manufacturing industry in Hong Kong as building and debugging production lines require customization. (The upstream supply chain deficiency leads to insufficient support.) B24 ..., and parts were scarce, so no one could manufacture them (infrastructure). (Insufficient support for raw material supply.)
Market Support Received by Entrepreneurs	A35 Govt should take the lead to be buyers of startups's products or services. (Market support from the government.) B22 The best help the government can provide now is to expedite cross-border collaboration with mainland China because we lack many mainland clients. (Policies hinder market support for entrepreneurs.)
Human Resources Support Received by Entrepreneurs	A05 It is extremely strange that there are people who cannot find jobs, and we as startups cannot hire people. (Hard to hire workers.) B17 I am currently looking for an industrial engineer who can build a GMP production line, but I cannot find one even in mainland China. (Cannot find talent.) B18 While finding people to hire is not difficult due to the availability of students. (Ways of hiring.)
Finance Support Received by Entrepreneurs	A17 Need more direct subsidies in cash instead of matching funds. (Ways of funding.) A55 Fundraising in Hong Kong is always difficult compared with the states. (Feasibility of financing.) B19 Regarding taxes, I believe that reducing taxes to 8% for small and medium-sized enterprises that have not yet made a profit would not help much. (Effect of tax cuts.)
Governance Support Received by Entrepreneurs	B20 In Guangzhou, ..., which ... allows entrepreneurs to register their companies. In Hong Kong, there is Tech 300 program, which provides free entrepreneurial spaces but does not allow entrepreneurs to register their companies. But if it were not for Tech 300, there would be no free entrepreneurial spaces available. (Enterprise registration support.) B21 The replies from government officials actually confuse me more, as they respond with a lot of legal provisions. For example, when I asked the drug bureau about the use of certain medicines, they replied with very long legal provisions that were not helpful at all and only made me more confused. (Government help for entrepreneurs.) B22 However, even now, many industry regulations in Hong Kong are incomplete, and officials and the government do not pay enough attention to them, resulting in many industries being unregulated. (Regulation support for entrepreneurs.)

Note: A** represents the original statement (partially) provided by the ** respondent in the survey messages. B** represents the original statement (in order of coding) provided by the interviewees in the three in-depth interviews. The words in parentheses at the end of each sentence indicate the initial concepts derived from the coding of the original statements.

Appendix B. Quantitative Analysis

Table A2. Construct measurements and results of reliability and validity test.

Multi-Item Measures	Item Description		Loadings	Loadings to the Second-Order Factor	CR (rho_c)	AVE
Entrepreneurship Ecosystem	Macro Environment (ME)				0.879	0.646
	ME1	I think the local economic environment is suitable for entrepreneurship in recent years.	0.839			
	ME2	I think the local social environment is stable in recent years, which is suitable for entrepreneurship.	0.877			
	ME3	I think the local cost of entrepreneurship (such as taxes, rent, and labor costs) is suitable for starting a business in recent years.	0.774			
	ME4	Young people who start their own businesses are respected in this area.	0.716			
	Support System (SS)				0.928	0.616
	SS1	The local government actively seeks to formulate and promote laws and regulations that are favorable to entrepreneurship.	0.821			
	SS2	The local government can efficiently solve problems encountered by entrepreneurs.	0.852			
	SS3	The local area provides various professional supports for entrepreneurs, such as legal, accounting, management, technology, and financing assistance.	0.821			
	SS4	There are many financing projects in the local area.	0.776			
	SS5	Newly established companies in this area can easily enter the market.	0.755			
	SS6	For startups, it is easy to find sufficient human resources in this area.	0.701			
	SS7	In this area, the supply chain provides good support for enterprises.	0.786			
	SS8	I think the local technology has provided good support for emerging enterprises (such as university research technology, laboratories, cloud computing servers) in recent years.	0.76			
Support Received by entrepreneurs	Professional Supports (PS)			0.880	0.937	0.751
	PS1	When registering my own company, I received assistance with the registration process and documentation.	0.736			
	PS2	During my entrepreneurship, I received professional legal support, including knowledge in intellectual property law, company law, tax law, labor law, and more.	0.921			
	PS3	During my entrepreneurship, I received professional accounting support, including assistance with tax filing, managing assets and liabilities, and preparing financial statements.	0.898			
	PS4	During my entrepreneurship, I received professional management support, including human resources management, project management, decision-making management, and more.	0.9			
	PS5	During my entrepreneurship, I received information support, such as accessing government policies and market conditions.	0.865			
	Financial Support (FS)			0.744	0.856	0.665
	FS1	During my entrepreneurship, I received financial support for rent reduction.	0.848			
	FS2	During my entrepreneurship, I received financial support for tax reduction.	0.824			
	FS3	During my entrepreneurship, I received financial support from banks, such as preferential loans.	0.773			
	Technical Support (TS)			0.833	0.935	0.743
	TS1	When designing our product, we received technological support from university research achievements (commercialization of research outcomes).	0.801			
	TS2	During my entrepreneurship, I received technological support related to product manufacturing.	0.887			
	TS3	During my entrepreneurship, I received technological support related to product development, such as access to laboratories.	0.901			

Table A2. *Cont.*

Multi-Item Measures	Item Description		Loadings	Loadings to the Second-Order Factor	CR (rho_c)	AVE
	TS4	During my entrepreneurship, I received technological support related to cloud computing servers.	0.853			
	TS5	During my entrepreneurship, I received technological support related to data.	0.865			
Entrepreneurship Performance	Personal Performance (PP)			0.902	0.93	0.728
	PP1	Entrepreneurship has given me a great sense of accomplishment.	0.902			
	PP2	Starting my own business has made me more confident.	0.907			
	PP3	Entrepreneurship has elevated my social status.	0.829			
	PP4	Starting my own business has allowed me to realize my personal value in life.	0.885			
	PP5	Entrepreneurship has helped me to meet many new friends.	0.729			
	Company Performance (CP)			0.693	0.911	0.719
	CP1	Our company's financial indicators are currently performing well.	0.832			
	CP2	Our sales are gradually increasing.	0.906			
	CP3	Our company has a good development prospect.	0.795			
	CP4	The number of employees in our company is gradually increasing.	0.855			
chi-square 1.768	CFI 0.931	RMSEA 0.056	TLI 0.924	IFI 0.932		

Table A3. Control variable data description.

Control Variables		N = 244	%
City	Tianjin	26	10.7
	Hangzhou	25	10.2
	...	193	79.1
	High GDP Cities	166	68
	Low GDP Cities	78	32
Age	18–25	23	9.4
	26–35	99	40.6
	36–45	89	36.5
	Above 45	33	13.5
Gender	Male	186	76.2
	Female	58	23.8
Firm Age	1–42 months	164	67.2
	More than 42 months	80	32.8
Educational Level of Entrepreneurs	Below bachelor degree	29	11.9
	Bachelor degree	119	48.8
	Master degree	87	35.6
	Doctorate	9	3.7
Entrepreneurial Education	Yes	145	59.4
	No	99	40.6

Table A4. Cross-loading.

Second-Order Factor	First-Order Factor	Item	ME	SS	SR	PS	FS	TS	EP	PP	CP
	Macro Environment (ME)	ME1	**0.716**	0.668	0.416	0.468	0.364	0.199	0.357	0.354	0.254
		ME2	**0.839**	0.545	0.39	0.408	0.216	0.289	0.414	0.338	0.389
		ME3	**0.877**	0.604	0.439	0.454	0.262	0.321	0.383	0.305	0.371
		ME4	**0.774**	0.513	0.457	0.47	0.358	0.292	0.352	0.252	0.377
	Support System (SS)	SS1	0.628	**0.821**	0.556	0.573	0.398	0.374	0.342	0.32	0.269
		SS2	0.662	**0.852**	0.568	0.583	0.435	0.369	0.352	0.302	0.311
		SS3	0.557	**0.821**	0.605	0.675	0.451	0.34	0.334	0.277	0.31
		SS4	0.519	**0.776**	0.486	0.514	0.314	0.328	0.24	0.231	0.18
		SS5	0.59	**0.755**	0.555	0.601	0.417	0.329	0.311	0.307	0.224
		SS6	0.511	**0.701**	0.458	0.47	0.312	0.32	0.316	0.287	0.26
		SS7	0.618	**0.786**	0.435	0.481	0.322	0.249	0.424	0.417	0.308
		SS8	0.478	**0.76**	0.531	0.521	0.319	0.421	0.319	0.277	0.279

Table A4. *Cont.*

Second-Order Factor	First-Order Factor	Item	ME	SS	SR	PS	FS	TS	EP	PP	CP
Support Received by entrepreneurs (SR)	Professional Supports (PS)	PS1	0.435	0.526	**0.553**	**0.736**	0.319	0.221	0.223	0.22	0.16
		PS2	0.487	0.591	**0.823**	**0.921**	0.503	0.52	0.378	0.316	0.346
		PS3	0.465	0.627	**0.773**	**0.898**	0.492	0.438	0.317	0.297	0.249
		PS4	0.511	0.623	**0.807**	**0.9**	0.479	0.519	0.374	0.341	0.307
		PS5	0.536	0.686	**0.813**	**0.865**	0.581	0.517	0.369	0.338	0.301
	Financial Support (FS)	FS1	0.273	0.391	**0.598**	0.42	**0.848**	0.402	0.178	0.147	0.165
		FS2	0.328	0.432	**0.631**	0.505	**0.824**	0.39	0.266	0.236	0.226
		FS3	0.316	0.338	**0.591**	0.433	**0.773**	0.414	0.26	0.269	0.172
	Technical Support (TS)	TS1	0.255	0.293	**0.646**	0.362	0.437	**0.801**	0.217	0.189	0.189
		TS2	0.304	0.386	**0.743**	0.482	0.423	**0.887**	0.301	0.232	0.301
		TS3	0.251	0.323	**0.708**	0.412	0.4	**0.901**	0.26	0.185	0.28
		TS4	0.298	0.429	**0.734**	0.488	0.434	**0.853**	0.245	0.179	0.257
		TS5	0.36	0.428	**0.75**	0.508	0.433	**0.865**	0.282	0.202	0.301
Entrepreneurship Performance (EP)	Personal Performance (PP)	PP1	0.353	0.355	0.314	0.311	0.232	0.221	**0.805**	**0.902**	0.446
		PP2	0.328	0.302	0.265	0.261	0.234	0.169	**0.816**	**0.907**	0.46
		PP3	0.345	0.325	0.279	0.311	0.223	0.148	**0.746**	**0.829**	0.42
		PP4	0.376	0.385	0.351	0.356	0.223	0.258	**0.836**	**0.885**	0.528
		PP5	0.257	0.271	0.27	0.264	0.232	0.176	**0.621**	**0.729**	0.302
	Company performance (CP)	CP1	0.407	0.351	0.335	0.302	0.236	0.277	**0.678**	0.4	**0.832**
		CP2	0.369	0.295	0.276	0.296	0.176	0.184	**0.746**	0.45	**0.906**
		CP3	0.38	0.314	0.315	0.271	0.2	0.289	**0.695**	0.459	**0.795**
		CP4	0.309	0.205	0.293	0.222	0.175	0.308	**0.703**	0.424	**0.855**

Note: The bold number indicates the largest value in the column, which means they belong to the same construct.

Table A5. Fornell–Lacker criterion.

	ME	SS	PS	FS	TS	PP	CP
ME	**0.804**						
SS	0.73	**0.785**					
PS	0.562	0.706	**0.867**				
FS	0.375	0.476	0.556	**0.816**			
TS	0.342	0.434	0.525	0.493	**0.862**		
PP	0.391	0.386	0.353	0.267	0.229	**0.853**	
CP	0.432	0.343	0.322	0.231	0.31	0.512	**0.848**

Table A6. Multi-group test.

Path	City (High GDP and Low GDP)	Age (26–35 and 36–45)	Age (Younger than 35 and Elder than 36)	Gender	Firm Age	Educational Level of Entrepreneurs	Entrepreneurial Education
Direct effect							
ME -> SS	0.314	0.888	0.476	0.166	0.818	0.922	0.477
ME -> SR	0.267	0.86	0.703	0.503	0.313	0.541	0.399
SS -> SR	0.175	0.506	0.393	0.789	0.137	0.215	0.733
ME -> EP	0.963	0.439	0.301	0.19	0.22	0.754	0.531
SS -> EP	0.844	0.473	0.387	0.729	0.771	0.798	0.527
SR -> EP	0.87	0.933	0.873	0.86	0.654	0.473	0.379
Specific indirect effect							
ME -> SS -> SR -> EP	0.964	0.922	0.871	0.972	0.434	0.866	0.482
ME -> SS -> SR	0.508	0.567	0.312	0.524	0.209	0.273	0.606
ME -> SS -> EP	0.883	0.47	0.398	0.74	0.766	0.794	0.544
ME -> SR -> EP	0.347	0.811	0.655	0.512	0.487	0.428	0.346
SS -> SR -> EP	0.949	0.914	0.926	0.875	0.417	0.866	0.443
Total indirect effect							
ME -> EP	0.946	0.415	0.338	0.627	0.572	0.505	0.224
ME -> SR	0.508	0.567	0.312	0.524	0.209	0.273	0.606
SS -> EP	0.949	0.914	0.926	0.875	0.417	0.866	0.443
Total effect							
ME -> EP	0.994	0.825	0.617	0.13	0.18	0.185	0.595
ME -> SR	0.427	0.68	0.531	0.824	0.952	0.713	0.480
SR -> EP	0.87	0.933	0.873	0.86	0.654	0.473	0.379
SS -> EP	0.782	0.426	0.343	0.668	0.434	0.681	0.260
SS -> SR	0.175	0.506	0.393	0.789	0.137	0.215	0.733

Note: The table displays the *p*-values of the differences between two groups under the same path. The results indicate that in the ESP model, City, Age, Gender, Firm Age, Educational Level of entrepreneurs and Entrepreneurial Education show no evidence of differences, suggesting that the model results are generalizable.

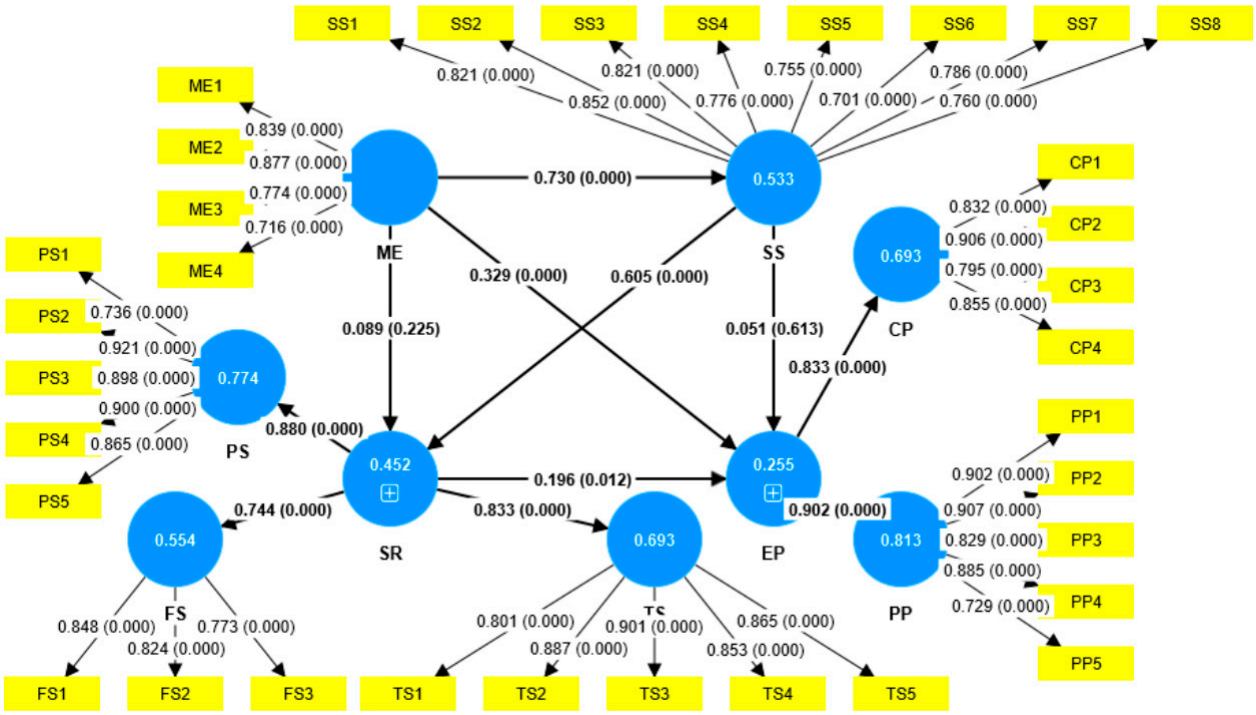

Figure A1. Results of PLS-SEM analysis. Notes: The R-square is displayed inside the constructs. The path coefficients and *p* values are displayed in the inner model. The outer loadings and *p* values are displayed in the outer model.

References

Acs, Z. J., Autio, E., & Szerb, L. (2015). National systems of entrepreneurship: Measurement issues and policy implications. In *Global entrepreneurship, institutions and incentives* (pp. 523–541). Edward Elgar Publishing.

Acs, Z., Åstebro, T., Audretsch, D., & Robinson, D. T. (2016). Public policy to promote entrepreneurship: A call to arms. *Small Business Economics*, *47*, 35–51. [CrossRef]

Andrews, R. J., Fazio, C., Guzman, J., Liu, Y., & Stern, S. (2022). Reprint of "The startup cartography project: Measuring and mapping entrepreneurial ecosystems". *Research Policy*, *51*(9), 104581. [CrossRef]

Arshed, N., & Carter, S. (2016). Enterprise policymaking in the UK: Prescribed approaches and day-to-day practice. In *Government, SMEs and entrepreneurship development* (pp. 61–74). Routledge.

Arshed, N., Carter, S., & Mason, C. (2014). The ineffectiveness of entrepreneurship policy: Is policy formulation to blame? *Small Business Economics*, *43*, 639–659. [CrossRef]

Arshed, N., Mason, C., & Carter, S. (2016). Exploring the disconnect in policy implementation: A case of enterprise policy in England. *Environment and Planning C: Government and Policy*, *34*(8), 1582–1611. [CrossRef]

Arzubiaga, U., Kotlar, J., De Massis, A., Maseda, A., & Iturralde, T. (2018). Entrepreneurial orientation and innovation in family SMEs: Unveiling the (actual) impact of the Board of Directors. *Journal of Business Venturing*, *33*(4), 455–469. [CrossRef]

Azoulay, P., Jones, B. F., Kim, J. D., & Miranda, J. (2020). Age and high-growth entrepreneurship. *American Economic Review: Insights*, *2*(1), 65–82.

Bacq, S., & Alt, E. (2018). Feeling capable and valued: A prosocial perspective on the link between empathy and social entrepreneurial intentions. *Journal of Business Venturing*, *33*(3), 333–350. [CrossRef]

Bennett, R. (2008). SME policy support in Britain since the 1990s: What have we learnt? *Environment and Planning C: Government and Policy*, *26*(2), 375–397. [CrossRef]

Bentahar, O., & Cameron, R. (2015). Design and implementation of a mixed method research study in project management. *Electronic Journal of Business Research Methods*, *13*(1), 15–15.

Bruns, K., Bosma, N., Sanders, M., & Schramm, M. (2017). Searching for the existence of entrepreneurial ecosystems: A regional cross-section growth regression approach. *Small Business Economics*, *49*, 31–54. [CrossRef]

Corrente, S., Greco, S., Nicotra, M., Romano, M., & Schillaci, C. E. (2019). Evaluating and comparing entrepreneurial ecosystems using SMAA and SMAA-S. *The Journal of Technology Transfer*, *44*, 485–519. [CrossRef]

Cosenz, F., Noto, G., & Cavallo, A. (2023). Understanding the microfoundations of Entrepreneurial ecosystems: Toward a value-based method and theory. *IEEE Transactions on Engineering Management*, *71*, 7298–7310. [CrossRef]

Curran, P. G. (2016). Methods for the detection of carelessly invalid responses in survey data. *Journal of Experimental Social Psychology*, *66*, 4–19. [CrossRef]

Curry, L., & Nunez-Smith, M. (2014). *Mixed methods in health sciences research: A practical primer* (Vol. 1). Sage publications.

Dahlstrand, A. L., & Stevenson, L. (2010). Innovative entrepreneurship policy: Linking innovation and entrepreneurship in a European context. *Annals of Innovation & Entrepreneurship*, *1*(1), 5602.

de Villiers Scheepers, M. J., Mealy, E., Clements, M., & Lawrence, A. (2018). Regional entrepreneurship ecosystems support: South East Queensland as case study. *Entrepreneurial Ecosystems: Place-Based Transformations and Transitions*, *38*, 101–130.

Edelman, L., & Yli-Renko, H. (2010). The impact of environment and entrepreneurial perceptions on venture-creation efforts: Bridging the discovery and creation views of entrepreneurship. *Entrepreneurship Theory and Practice*, *34*(5), 833–856. [CrossRef]

Edmonds, W. A., & Kennedy, T. D. (2016). *An applied guide to research designs: Quantitative, qualitative, and mixed methods*. Sage Publications.

Elert, N., Andersson, F. W., & Wennberg, K. (2015). The impact of entrepreneurship education in high school on long-term entrepreneurial performance. *Journal of Economic Behavior & Organization*, *111*, 209–223.

Falahat, M., Lee, Y. Y., Soto-Acosta, P., & Ramayah, T. (2021). Entrepreneurial, market, learning and networking orientations as determinants of business capability and international performance: The contingent role of government support. *International Entrepreneurship and Management Journal*, 1–22. [CrossRef]

Feldman, M., & Lowe, N. (2018). Policy and collective action in place. *Cambridge Journal of Regions, Economy and Society*, *11*(2), 335–351. [CrossRef]

Felin, T., & Foss, N. (2023). Microfoundations of ecosystems: The theory-led firm and capability growth. *Strategic Organization*, *21*(2), 476–488. [CrossRef]

Fischer, E. M., Reuber, A. R., & Dyke, L. S. (1993). A theoretical overview and extension of research on sex, gender, and entrepreneurship. *Journal of Business Venturing*, *8*(2), 151–168. [CrossRef]

Fiss, P. C. (2011). Building better causal theories: A fuzzy set approach to typologies in organization research. *Academy of Management Journal*, *54*(2), 393–420. [CrossRef]

Fotopoulos, G., & Storey, D. J. (2019). Public policies to enhance regional entrepreneurship: Another programme failing to deliver? *Small Business Economics*, *53*, 189–209. [CrossRef]

Fuentelsaz, L., Maícas, J. P., & Mata, P. (2018). Institutional dynamism in entrepreneurial ecosystems. *Entrepreneurial Ecosystems: Place-Based Transformations and Transitions*, *38*, 45–65.

Fuller, C. M., Simmering, M. J., Atinc, G., Atinc, Y., & Babin, B. J. (2016). Common methods variance detection in business research. *Journal of Business Research*, *69*(8), 3192–3198. [CrossRef]

Gilbert, B. A., Audretsch, D. B., & McDougall, P. P. (2004). The emergence of entrepreneurship policy. *Small Business Economics*, *22*, 313–323. [CrossRef]

Gnyawali, D. R., & Fogel, D. S. (1994). Environments for entrepreneurship development: Key dimensions and research implications. *Entrepreneurship Theory and Practice*, *18*(4), 43–62. [CrossRef]

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24. [CrossRef]

Harrison, R., Scheela, W., Lai, P. C., & Vivekarajah, S. (2018). Beyond institutional voids and the middle-income trap: The emerging business angel market in Malaysia. *Asia Pacific Journal of Management*, *35*(4), 965–991. [CrossRef]

Heesen, R., Bright, L. K., & Zucker, A. (2019). Vindicating methodological triangulation. *Synthese*, *196*, 3067–3081. [CrossRef]

Huggins, R., Morgan, B., & Williams, N. (2015). Regional entrepreneurship and the evolution of public policy and governance: Evidence from three regions. *Journal of Small Business and Enterprise Development*, *22*(3), 473–511. [CrossRef]

Hung, D. K. M., & Effendi, A. A. (2011). A preliminary study of top SMEs in Malaysia: Key success factor vs government support program. *Journal of Global Business & Economics*, *2*(1). Available online: https://scholar.google.com/scholar?hl=en&as_sdt=0,5&q=(Hung+&+Effendi,+2011)+Hung,+D.+K.+M.,+&+Effendi,+A.+A.+(2011).+A+preliminary+study+of+top+SMEs+in+Malaysia:+Key+success+factor+vs+government+support+program.+Journal+of+Global+Business+&+Economics+2(1).&btnG= (accessed on 25 December 2024).

Isenberg, D. (2011). The Entrepreneurship Ecosystem Strategy as a New Paradigm for Economic Policy: Principles for Cultivating Entrepreneurships. *The Babsos Entrepreneurship Ecosystem Project*, *1*(781), 1–13.

Johnson, E., Hemmatian, I., Lanahan, L., & Joshi, A. M. (2022). A framework and databases for measuring entrepreneurial ecosystems. *Research Policy*, *51*(2), 104398. [CrossRef]

Kaya, B., Abubakar, A. M., Behravesh, E., Yildiz, H., & Mert, I. S. (2020). Antecedents of innovative performance: Findings from PLS-SEM and fuzzy sets (fsQCA). *Journal of Business Research*, *114*, 278–289. [CrossRef]

Kee, D. M. H., Yusoff, Y. M., & Khin, S. (2019). The role of support on start-up success: A PLS-SEM approach. *Asian Academy of Management Journal*, *24*, 43–59.

Kock, N., & Hadaya, P. (2018). Minimum sample size estimation in PLS-SEM: The inverse square root and gamma-exponential methods. *Information Systems Journal*, *28*(1), 227–261. [CrossRef]

Kuckertz, A. (2019). Let's take the entrepreneurial ecosystem metaphor seriously! *Journal of Business Venturing Insights*, *11*, e00124. [CrossRef]

Leendertse, J., Schrijvers, M., & Stam, E. (2022). Measure twice, cut once: Entrepreneurial ecosystem metrics. *Research Policy*, *51*(9), 104336. [CrossRef]

Lerner, J. (2013). The boulevard of broken dreams: Innovation policy and entrepreneurship. *Innovation Policy and the Economy*, *13*(1), 61–82. [CrossRef]

Levie, J., & Autio, E. (2008). A theoretical grounding and test of the GEM model. *Small Business Economics*, *31*, 235–263. [CrossRef]

Liguori, E., Bendickson, J., Solomon, S., & McDowell, W. C. (2019). Development of a multi-dimensional measure for assessing entrepreneurial ecosystems. *Entrepreneurship & Regional Development*, *31*(1–2), 7–21.

Lussier, R. N., & Halabi, C. E. (2010). A three-country comparison of the business success versus failure prediction model. *Journal of Small Business Management*, *48*(3), 360–377. [CrossRef]

Miller, D. (1986). Configurations of strategy and structure: Towards a synthesis. *Strategic Management Journal*, *7*(3), 233–249. [CrossRef]

Muñoz, P., Naudé, W., Williams, N., Williams, T., & Frías, R. (2020). Reorienting entrepreneurial support infrastructure to tackle a social crisis: A rapid response. *Journal of Business Venturing Insights*, *14*, e00181. [CrossRef]

Nicotra, M., Romano, M., Del Giudice, M., & Schillaci, C. E. (2018). The causal relation between entrepreneurial ecosystem and productive entrepreneurship: A measurement framework. *The Journal of Technology Transfer*, *43*, 640–673. [CrossRef]

Niska, M., & Vesala, K. M. (2013). SME policy implementation as a relational challenge. *Entrepreneurship & Regional Development*, *25*(5–6), 521–540.

Nordling, N. (2019). Public policy's role and capability in fostering the emergence and evolution of entrepreneurial ecosystems: A case of ecosystem-based policy in Finland. *Local Economy*, *34*(8), 807–824. [CrossRef]

Omerzel Gomezelj, D., & Kušce, I. (2013). The influence of personal and environmental factors on entrepreneurs' performance. *Kybernetes*, *42*(6), 906–927. [CrossRef]

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*(5), 879. [CrossRef] [PubMed]

Porter, C. O., Outlaw, R., Gale, J. P., & Cho, T. S. (2019). The use of online panel data in management research: A review and recommendations. *Journal of Management*, *45*(1), 319–344. [CrossRef]

Prasannath, V., Adhikari, R. P., Gronum, S., & Miles, M. P. (2024). Impact of government support policies on entrepreneurial orientation and SME performance. *International Entrepreneurship and Management Journal*, 1–63. [CrossRef]

Rocha, A., Brown, R., & Mawson, S. (2021). Capturing conversations in entrepreneurial ecosystems. *Research Policy*, *50*(9), 104317. [CrossRef]

Román, C., Congregado, E., & Millán, J. M. (2013). Start-up incentives: Entrepreneurship policy or active labour market programme? *Journal of Business Venturing*, *28*(1), 151–175. [CrossRef]

Roundy, P. T., & Im, S. (2024). Combining cognition and context: Entrepreneurial alertness and the microfoundations of entrepreneurial ecosystems. *Asia Pacific Journal of Management*, 1–19. Available online: https://link.springer.com/article/10.1007/s10490-024-09951-7 (accessed on 25 December 2024). [CrossRef]

Roundy, P. T., & Lyons, T. S. (2023). Where are the entrepreneurs? A call to theorize the micro-foundations and strategic organization of entrepreneurial ecosystems. *Strategic Organization*, *21*(2), 447–459. [CrossRef]

Roundy, P. T., Bradshaw, M., & Brockman, B. K. (2018). The emergence of entrepreneurial ecosystems: A complex adaptive systems approach. *Journal of Business Research*, *86*, 1–10. [CrossRef]

Shane, S. (2009). Why encouraging more people to become entrepreneurs is bad public policy. *Small Business Economics*, *33*, 141–149. [CrossRef]

Smallbone, D. (2020). Entrepreneurship policy: Issues and challenges. *Understanding the Development of Small Business Policy*, 6–23. Available online: https://www.taylorfrancis.com/chapters/edit/10.4324/9781351020343-2/entrepreneurship-policy-issues-challenges-david-smallbone (accessed on 25 December 2024).

Spigel, B. (2017). The relational organization of entrepreneurial ecosystems. *Entrepreneurship Theory and Practice*, *41*(1), 49–72. [CrossRef]

Spigel, B. (2020). *Entrepreneurial ecosystems: Theory, practice and futures*. Edward Elgar Publishing.

Spigel, B., Kitagawa, F., & Mason, C. (2020). A manifesto for researching entrepreneurial ecosystems. *Local Economy*, *35*(5), 482–495. [CrossRef]

Stam, E. (2015). Entrepreneurial ecosystems and regional policy: A sympathetic critique. *European Planning Studies*, *23*(9), 1759–1769. [CrossRef]

Stam, E. (2018). Measuring entrepreneurial ecosystems. *Entrepreneurial Ecosystems: Place-Based Transformations and Transitions*, 173–197. Available online: https://link.springer.com/chapter/10.1007/978-3-319-63531-6_9 (accessed on 25 December 2024).

Stam, E., & Van de Ven, A. (2021). Entrepreneurial ecosystem elements. *Small Business Economics*, *56*(2), 809–832. [CrossRef]

Stam, W., & Elfring, T. (2008). Entrepreneurial orientation and new venture performance: The moderating role of intra-and extraindustry social capital. *Academy of Management Journal*, *51*(1), 97–111. [CrossRef]

Sun, S. L., Shi, W., Ahlstrom, D., & Tian, L. (2020). Understanding institutions and entrepreneurship: The microfoundations lens and emerging economies. *Asia Pacific Journal of Management*, *37*(4), 957–979. [CrossRef]

Suresh, J., & Ramraj, R. (2012). Entrepreneurial ecosystem: Case study on the influence of environmental factors on entrepreneurial success. *European Journal of Business and Management*, *4*(16), 95–101.

Szerb, L., Lafuente, E., Horváth, K., & Páger, B. (2019). The relevance of quantity and quality entrepreneurship for regional performance: The moderating role of the entrepreneurial ecosystem. *Regional Studies*, *53*(9), 1308–1320. [CrossRef]

Van Burg, E., Cornelissen, J., Stam, W., & Jack, S. (2022). *Advancing qualitative entrepreneurship research: Leveraging methodological plurality for achieving scholarly impact*. SAGE Publications Sage CA.

Van der Sluis, J., Van Praag, M., & Vijverberg, W. (2008). Education and entrepreneurship selection and performance: A review of the empirical literature. *Journal of Economic Surveys*, *22*(5), 795–841. [CrossRef]

Wang, J., Chen, S., & Scheela, W. (2023). Foreign venture capital investing strategies in transition economies: The case of China. *Asia Pacific Journal of Management*, *40*(4), 1481–1524. [CrossRef]

Wellman, N., Tröster, C., Grimes, M., Roberson, Q., Rink, F., & Gruber, M. (2023). Publishing multimethod research in AMJ: A review and best-practice recommendations. *Academy of Management Journal*, *66*(4), 1007–1015. [CrossRef]

Wurth, B., Stam, E., & Spigel, B. (2022). Toward an entrepreneurial ecosystem research program. *Entrepreneurship Theory and Practice*, *46*(3), 729–778. [CrossRef]

Yeh, C. -H., Lin, H. -H., Wang, Y. -M., Wang, Y. -S., & Lo, C. -W. (2021). Investigating the relationships between entrepreneurial education and self-efficacy and performance in the context of internet entrepreneurship. *The International Journal of Management Education*, *19*(3), 100565. [CrossRef]

Zahra, S. A., Neubaum, D. O., & El–Hagrassey, G. M. (2002). Competitive analysis and new venture performance: Understanding the impact of strategic uncertainty and venture origin. *Entrepreneurship Theory and Practice*, *27*(1), 1–28. [CrossRef]