Accessibility of Entrepreneurial Ecosystem Elements: A Qualitative Comparative Analysis of Developed and Emerging Economies

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Abstract—The Entrepreneurial Ecosystem construct is gaining widespread popularity due to its holistic approach to enabling entrepreneurship, which in turn fosters economic growth. Consequently, a plethora of studies have been devoted to theorising, examining its attributes, and measuring its impact, with the aim of identifying ways to enhance its contribution. Despite its significance, however, there are challenges associated with identifying suitable measurement instruments that can assess these attributes and determine how they jointly facilitate the survival of new ventures in diverse regions. In this paper, we utilise Qualitative Comparative Analysis to compare 167 ventures in developed and emerging economies, to determine how the various elements of the entrepreneurial ecosystem combine to achieve the desired outcome of new venture survival. Our study adds to the existing literature on ecosystem measurement and provides valuable insights for policymakers and practitioners in identifying potential configurations of ecosystem elements that can support entrepreneurship in different regions. It also represents a novel approach to entrepreneurial ecosystem studies, paving the way for future empirical entrepreneurship research.

Keywords—Entrepreneurial Ecosystem, Measurements, Configuration, Developed and Emerging Economies, Qualitative Comparative Analysis, New Venture Survival

I. INTRODUCTION

Modernism and fast-paced interest in entrepreneurship relates to the growing proof that it is positively linked to socioeconomic development [1, 2, 3], propelling nations to prosperity through product and process innovation [4]. Entrepreneurship success is the far-attaining goal of any nation since it contributes to revenue generation through tax, job creation, increased standard of living and quality of life, and better infrastructure [5, 6]. This has led to consented effort to creating an enabling environment for entrepreneurship success which has also necessitated a research stream that focuses on Entrepreneurial Ecosystems (EE) and its elements necessary to achieve productive entrepreneurship [7, 8]. EE consist of a set of interconnected elements that flourish with the presence of strong mutual interactions [9] and these elements are geographically organised to support entrepreneurial activities [10-12]. Unlike the construct Entrepreneurship Support (ES) which focuses on the "provision of valuable resources to entrepreneurs by individuals or organisations, which carry structured activities to facilitate the imminent establishment of a new independent firm, increase survival chances, or promote long-term growth" [13], such as support from intermediaries, EE deal with the entire environmental conditions that are required for new venture development, survival and growth [8, 14, 15].

Until now most studies have sought to measure EE elements to find their availability, quality and density in different geographies using case studies, observations and data-driven approaches without discussing how much influence each element has in relation to the other elements in the whole ecosystem [16] and these approaches lead to "pale copies of both the realities they attempt to model and the theoretical constructs they aim to study" [17]. This leaves practitioners and policymakers hard choices to make when it comes to the limited resources allocation and reallocation.

Enthused by this gap, our paper aims to advance studies in this direction through a Qualitative Comparative Analysis (QCA) of Sweden as an example for a developed economy and South Africa as an example for an emerging economy. Using data on different EE elements in both countries, we pose the following two research questions:

1. Which EE elements jointly impact new venture survival?
2. Are these EE elements different for developed versus emerging economies?

This study contributes to the discussion on EE especially on policy implication. It provides insight for practitioners and policymakers who are interested in EE to foster better understanding of their environment while organising and influencing their ecosystem with the right policies to support and enhance new ventures survival. This study is organised in the following sections, a literature review on EE is explored, followed by a detailed methodology, data analysis, discussions, and conclusion.
II. LITERATURE REVIEW

There is a growing body of literature that recognises the importance of EE over the last decade [18-22]. Studies on EE represent a flourishing field in entrepreneurship [23, 24] which can be traced back to developments in related literatures such as entrepreneurship context, high-growth entrepreneurship, regional clusters, regional innovation systems, entrepreneurial environments, business ecosystems, industrial district and triple helix [16, 19, 25-38]. Though there seem to be differences in objectives of these concepts and theories, they have a single fundamental notion that indicate there are environmental factors that impact every enterprise within a certain spatial boundary [16, 39].

The extensive study by Stam [40] provides an EE model that espouses ten key environmental factors within an ecosystem necessary for the support of entrepreneurial endeavours, namely: formal institutions, culture, physical infrastructure, demand (framework conditions); network, leadership, finance, talent, knowledge and intermediaries/support services (systemic conditions).

![Fig. 1. The Entrepreneurial Ecosystem [41].](image)

This model has become a foundation stone in EE discussion and has been adopted by studies such as [16, 22, 42, 43] in measuring how well an entrepreneurial action is supported in a particular geography. The availability and accessibility of these elements in specific region determines the effectiveness of achieving venture survival or productive entrepreneurship [42, 44, 45]. The aggregate of a well-balanced EE elements in geographical location (city, regional and national level) result in an out of productive entrepreneurship leading ultimately to the prosperity of that region or nation [16], thus, creating a loop of upward and downward mechanism of economic growth [22, 40, 43]. The model is illustrated in Figure 1. The proposed EE elements are also well discussed in the exiting literature and their expository underpinnings are discussed below:

**Formal institutions** refer to the rules of the game in society. For entrepreneurship, especially their quality and efficiency matter [22]. As laws, economic regulations and contracts, they are introduced by governmental and supervisory authorities and representatives in established procedures [46]. Although scientific studies demonstrate the impact of formal institutions, for example, on the emergence of new businesses [47], on promoting economic growth, employment and facilitating regional innovation [48] as well as their relevance for EE [43], research also highlights their negative effects in some cases [49]. In addition, studies of ecosystems where formal institutions are absent or deficient show how these gaps can be worked around by entrepreneurs [50] or mitigated by knowledge spillovers [51]. As an element, it has been measured using indicators such as the level of perceived corruption, ease of doing business, tax and bureaucracies [22, 43].

The **culture** of entrepreneurship reflects the extent to which entrepreneurship is valued in society [22]. Entrepreneurs can benefit from the cultural values prevalent in an EE if the entrepreneurial process is perceived as a socially accepted and desirable behaviour [52]. The literature on culture in the entrepreneurial context highlights its impact on several areas, for example, innovation [53], entrepreneurial intention [54, 55] or the creation of enterprises [56]. Study by Hofstede [57] on national culture highlights risk-aversion and its impact on entrepreneurial action. Measuring entrepreneurial culture could be challenging but other studies have used social norms, entrepreneurial motivations, risk taking and new venture formation [42, 43].

The networks of entrepreneurs and their companies enable a flow of information that allows for an effective distribution of knowledge, labor and capital. As the social context of actors, they represent the degree of their social connection [22]. According to a systematic literature review by Fernandes and Ferreira [58] there is an increasing number of studies on networks in EE since 2014. They can be divided into four thematic areas dealing with (1) the influence of the regional context on networks and entrepreneurial activity, (2) the emergence and development of networks and their influence on the ecosystem, (3) the dual role of networks in terms of inclusion and exclusion of certain groups, and (4) the influence of entrepreneurial environments that foster and facilitate innovative entrepreneurial endeavours. As argued by Guéneau, et al. [59], cohesiveness among actors is essential for entrepreneurial activities. To measure network, previous studies have used the number of collaborative projects, business associations in a region, number of employees, access to incubators and support organisation, and business to business engagement [43, 60].

The **physical infrastructure** refers to the physical context of actors that enables them to meet other actors in physical proximity [22]. A highly developed physical infrastructure that includes both traditional transportation infrastructure and digital infrastructure plays a pivotal role in enabling economic interaction and entrepreneurship in particular [61]. The elements’ relevance is supported by a number of studies whose findings suggest that physical infrastructure is an important condition for EE [43], that can serve as a stimulant for entrepreneurial behaviour [62], proactively influence university students’ entrepreneurial intention [63] and can have a positive effect on a countries’ total-stage entrepreneurial activity under certain conditions [64].

**Finance** captures the presence of financial means to invest in activities that do not yet deliver financial means. Its supply and accessibility are particularly important for the growth and survival new and small firms [22]. Therefore, the availability of a strong, dense and supportive community of VCs, business angels, seed investors and other forms of funding is desirable [41]. Although the role of finance in the EE perspective has been highlighted [40, 65, 66], it is more or less absent in the current academic literature [67, 68].

**Leadership** provides guidance for and direction of collective action [22] and is characterised by a strong group of visible, accessible entrepreneurs who are committed to a region being a suitable place to start and grow a company [40,
Although conceptually and empirically grounded studies on leadership in regions are still sparse [69], existing research, for example, highlights the role of leadership in facilitating the creation and success of rural EE [70] as well as in shaping ecosystems’ cultural and institutional norms [71] and tries to explain the linkages between ecosystem leadership and coordination [72].

**Talent** includes the skills, knowledge and experience possessed by individuals and is referred to as the most crucial element of an entrepreneurial ecosystem [22, 40]. Topics being discussed in the academic literature on this element are, for example, the role of universities in EE [73], the impact of talent transformation processes on ecosystems’ ability for self-preservation [74] and the negative impact of a talent-in and talent-out mechanism created by the academic system on the entrepreneurial potential of smart cities [75].

**Knowledge**, described by new investments in scientific and technological knowledge creation, is an important source of entrepreneurial opportunities. By enabling better solutions, it can also be a source of prosperity [22]. Topics that are covered by the scientific literature on knowledge and entrepreneurship are, for example, knowledge spillovers [12, 76], knowledge-based entrepreneurship [77, 78] and knowledge-based EE [79].

**Demand** describes the presence of financial means in the population to purchase goods and services [22] and is essential for entrepreneurship to occur at all [43]. Income and purchasing power in a region are both a cause and effect of entrepreneurship in a region [80]. Existing studies emphasise the relevance of regional markets that are easily accessible for start-ups [81, 82] and prove that market growth promotes the entry of firms [83, 84].

**Intermediaries** provide entrepreneurship support (ES) services that can significantly lower the barriers to entry for new entrepreneurial projects and shorten the time to market for innovations [22]. In the form of respected mentors and advisors, as well as effective, visible and well-integrated accelerators and incubators, they are a feature of successful entrepreneurial ecosystems [85]. This is also addressed in the academic literature on intermediaries, which highlights, for example, their impact on overcoming weak network problems [86] and their role for the development of university spin-offs [87] as well as for the EE itself [88].

The dimension of the EE studies specially in developed economies ranges from institutional and system theory [36, 89-91], regional policies and social networks [92, 93], and measurement of EE elements in regions and national levels [15, 22, 43], leading to the understanding of the EE elements that need improvement in specific regions while supporting policies and programmes evaluation and recalibration for growth [90]. In emerging economies however, EE studies have focused on determinants of entrepreneurship [94], how to create a supporting ecosystem, intermediaries and institutionalised incubators [60, 95], the role of universities in fostering entrepreneurial ecosystem and innovation transfer [96-98], effectiveness of government support [99], impact of networks and social capital for venture survival [59, 100, 101], and access to resources and venture survival [102], entrepreneurship policies and digital entrepreneurial ecosystem [103], the role of innovation in national EE [104].

To contextualise the EE perspective, Schrijvers, et al. [15] asked whether there is one way to a successful entrepreneurial ecosystem, or there are different ways. The two underlying logics here are from the conclusions of Ács, et al. [36] and Spigel [42], stating all EE elements ought to be present and the lowest link is the most critical constraint [36], and the other argument that elements are interchangeable [42]. Schrijvers, et al. [15] conclude by stating that high entrepreneurship outputs can be realised with a small variety of entrepreneurial ecosystem configurations. However, the higher the entrepreneurship output, the more convergence there is to an all-round entrepreneurial ecosystem. Despite the numerous studies in developed and emerging economies on EE, there is the need for more research to unravel the mysteries of EE due to the vast dynamics in different regions [105] as there are no comparable studies especially measurement instruments.

### III. METHODOLOGY

#### A. Fuzzy Set Qualitative Comparative Analysis (fsQCA)

We use fuzzy-set Qualitative Comparative Analysis (fsQCA), a method built on the logic of Boolean algebra that uses a combinatorial logic which allows the investigation of how multiple causal conditions jointly produce a given outcome of interest [106]. It combines the logic and empirical intensity of qualitative and quantitative approaches and thereby stands out from traditional methods of quantitative analysis. By using fuzzy-set theory that allows to code variables with values in the interval between 0 and 1, fsQCA enables to fully capture the complexity in cases that naturally vary by level or degree [107, 108]. We chose to use fsQCA to answer our research questions as it enables us to examine new venture survival not as dependent on one single cause, but as an output of certain EE element configurations. This ensures the identification of those sets, both in terms of certain condition combinations and levels of factors, that result in venture survival.

#### B. Sample

Our sample is drawn from the **SEAM database** that contains activity data on over 25,000 entrepreneurial projects from more than 120 countries [109]. This data is collected from entrepreneurs using an Entrepreneurship Management System (EMS), a project management tool based on the Systemic Entrepreneurship Activity Method (SEAM), helping them to develop their businesses, including their purpose, available resources, business idea, business model, objectives, tasks and financials. This EMS is provided as part of structured ES programs, yet there is also an online version freely available for entrepreneurs to use [110].

Our sample comprises 167 entrepreneurial projects that used the EMS between 2017 and 2020. 86 of them are located in South Africa representing an emerging economy and 81 are in Sweden representing a developed economy. We have chosen these countries as the SEAM database contained a similar number of projects in both countries that 1) used the EMS over a time-period of at least three months, leading to rich data on their entrepreneurial activities and 2) included information on venture survival. We moreover find both countries in the global entrepreneurship monitor, where the classification as emerging and developed economies is in line with ours [111].
C. Measures and Data Calibration

The following section outlines which variables are included in our study, explains how they are measured and how the measures are calibrated to ensure well-constructed fuzzy sets. Based on our first research question, we study the impact of intermediaries, network, talent, physical infrastructure, knowledge, and culture (EE elements) on the output variable venture survival. The EE elements formal institutions, leadership, demand, and finance could not be considered in this study, since neither the SEAM database nor external sources available to us and compatible with SEAM could provide suitable data. In addition to the previously mentioned EE elements, planning was defined as an input variable, since previous studies found divergent results analysing its impact on venture performance in different settings [112, 113]. As highlighted by Delmar and Shane [114], the paradoxical nature of planning can be both a tool to help entrepreneurs “overcome limits on their cognitive capacity” and “a distraction from more important firm-organising activity” [114, 115]. Moreover, the country was used as an input variable to enable a distinction between emerging and developed economies.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Components</th>
<th>Set membership</th>
<th>Fully in</th>
<th>Cross over</th>
<th>Fully out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venture survival</td>
<td>Binary component distinguishing ventures that are listed as active in their respective trade registers (Sweden and South Africa) and show economic activity (SEAM and Orbis databases) two years after using the EMS.</td>
<td></td>
<td>1 - 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Infrastructure</td>
<td>Component based on access to physical infrastructure (e.g. water supply, office space, high-speed internet) in the region where the ventures are based (derived from SEAM database)</td>
<td></td>
<td>1 ~ 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermediaries</td>
<td>Binary component based on the participation in a structured support program (SEAM database)</td>
<td></td>
<td>1 - 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network</td>
<td>Component based on the number of network partners (SEAM database)</td>
<td></td>
<td>1 ~ 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talent</td>
<td>Component based on the number of members of the founding team (SEAM database)</td>
<td></td>
<td>1 ~ 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge</td>
<td>Component based on the share of the country's population that can be allocated to the tertiary education tier (overview of the most educated countries, 2023 World Population Review)</td>
<td></td>
<td>1 ~ 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Culture</td>
<td>Component based on the indicator on cultural and social norms (2022/23 Global Report, Global Entrepreneurship Monitor)</td>
<td></td>
<td>1 ~ 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning</td>
<td>Component based on the number of text cards per case (SEAM database)</td>
<td></td>
<td>1 ~ 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country</td>
<td>Binary component based on the country information (SEAM database)</td>
<td></td>
<td>1 ~ 0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To measure the variables, we mainly used data from the SEAM database which was complemented by data from the World Population Review [116] and the Global Entrepreneurship Monitor [111] if data on an EE element was not available in the SEAM database or its operationalisation was not possible. Table 1 provides an overview of the EE elements, indicates whether for each element suitable data is available in the SEAM database or in external sources, and if so, how it is calibrated in fsQCA. Since fsQCA is based on set theory, variables have to be calibrated by converting them in crisp or fuzzy sets [117]. While a crisp set is a conventional binary set with two categories (presence versus absence), a fuzzy set allows calibration of degree of set membership, using scores in the interval from 0 to 1 [118].

Data on the EE elements intermediaries, network and talent was derived from the SEAM database. To capture whether venture support is provided by intermediaries, we use information on whether a project is participating in a structured support program and code it as a binary variable. The density of entrepreneurs' network was operationalised by measuring the number of formal and informal network partners reported by entrepreneurs in the EMS and coded as a continuous variable to be able to capture the network density. As we focused on the size of the founders’ network, the type of network partners was not captured. The amount of talent was measured by means of the number of people belonging to a start-up team and coded as a non-binary variable to ensure that different degrees of the presence of talent could be captured. Here, we did not capture their founding experience or experience in the respective industry. Instead, for reasons of data availability, we refer to the number of the founding team members, assuming that each member plays a specific role in their team. Since the SEAM dataset does not contain suitable data on knowledge, we use the overview of the most educated countries provided by the 2023 World Population Review. Following the International Standard Classification of Education scale [119] it breaks down each country's education level into three tiers, which are below upper secondary (preschool up to high school), upper secondary (high school), and tertiary (college/university onward) and displays the percentage of its population that has achieved each of the three levels of education [116]. Acknowledging the limitations of this procedure, we measure knowledge by using the share of a country's population that can be allocated to the tertiary tier, as comparable data is available for both investigated countries in this regard and code it as a non-binary variable. For physical infrastructure, we derived the region of EMS usage or receiving ES from the SEAM database. This variable is binary-coded. To measure culture, we use the indicator cultural and social norms of the Global Entrepreneurship Monitor. It represents the degree to which culture celebrates and encourages entrepreneurship in a country and enables us to code culture as a non-binary variable. Moreover, Planning was measured based on the total number of activities entrepreneurs carried out using the EMS and coded as a continuous variable. In order to determine whether the country represents an emerging or developed economy, we use the country information (Sweden versus South Africa) in the SEAM database to which a project can be assigned [111]. We binary code it to indicate whether the country is a developed or an emerging one. To measure the output variable new venture survival, we use data from trade registers showing whether or not the venture is listed as active. We then use data from SEAM and Orbis [120] to check for economic activities (e.g. submitted annual reports, achieved revenue) to ensure that we avoid the living dead bias [121]. New venture survival is coded as a binary variable.

IV. FINDINGS

After calibrating our data, we carried out a truth table analysis by setting a consistency threshold of 0.72 and tested if the factor combinations explained the outcome or not.
This led to the production of three solutions. Following the recommendation of Ragin [106], we use the intermediate solution as the main point of reference for interpreting QCA results, as it enables to simplify variables in explaining the outcome [107]. We identified three consistent configurations for the outcome new venture survival, two for emerging economies and one for developed economies. Table II reports the consistencies (SCon) and coverage (SCov) for the overall solutions, as well as for each configuration (RCon and RCov) and marks each condition as present (●), absent (○) or not in presence nor in absence (■).

TABLE II. CONFIGURATIONS FOR NEW VENTURE SURVIVAL

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Emerging</th>
<th>Developed</th>
<th>Emerging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>Intermediaries</td>
<td>■</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Talent</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>Knowledge</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Culture</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Network</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Planning</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Raw coverage</td>
<td>0.103762</td>
<td>0.159901</td>
<td>0.22</td>
</tr>
<tr>
<td>Unique coverage</td>
<td>0.00217819</td>
<td>0.159901</td>
<td>0.118416</td>
</tr>
<tr>
<td>Consistency</td>
<td>0.8</td>
<td>0.731763</td>
<td>0.709904</td>
</tr>
<tr>
<td>Solution consistency</td>
<td>0.720097</td>
<td>0.382079</td>
<td></td>
</tr>
</tbody>
</table>

The results indicate an overall solution consistency of 0.720097, which assesses the degree to which the cases sharing a given condition or combination of conditions agree in displaying the outcome in question [118]. This means that in around 72% of the cases where new venture survival was achieved, one of the solution configurations I-III is present. According to Ragin [106], this is an acceptable value, as the threshold of 0.7 is exceeded. The solution coverage, which describes the extent to which the outcome of interest may be explained by the configurations [107], amounts to 0.382079. Therefore, it can be stated that in 38% of the cases where configuration I-III is present, venture survival is achieved.

Configuration I states that for emerging economies new venture survival can be achieved when infrastructure, intermediaries, knowledge, and culture are present, and network and planning are absent. Configuration II indicates that new venture survival can be achieved in developed economies when infrastructure, intermediaries, knowledge, and culture are present, but talent and planning are absent. Configuration III suggests that for emerging economies new venture survival can be attained when intermediaries and culture are present, but infrastructure, talent, knowledge, network, and planning are absent. When considering the three configurations together, it is evident that the variables intermediaries and entrepreneurial culture are always present, indicating their positive effect on venture survival. This is supported by configuration III in which the presence of only intermediaries and entrepreneurial culture in the emerging economy leads to the survival of new ventures. Moreover, in all three configurations the absence of planning relates to venture survival. Configurations I and III together further reveal that the absence of networks in the sense of a small network size contributes to venture survival in the emerging economy, whereas in the developed economy the input variable network can either be present or absent. Configurations II and III in turn indicate that the absence of talent in terms of small founding team sizes leads to venture survival in both developed and emerging economies.

V. DISCUSSION

In this study, we sought to draw on EE to examine what configurations of EE elements support new venture survival in developed and emerging economies by comparing Sweden versus South Africa as our sample using fsQCA. The study attempted to answer the following research questions: RQ1: Which EE elements jointly impact new venture survival? RQ2: Are these EE elements different for developed versus emerging economies? It is important to mention here that new venture survival rate is generally low in South Africa compared to Sweden [111].

Firstly, our findings suggest that intermediaries or in other words ES always need to be present for new venture survival in our solution. This finding is line with [122], arguing that just being part of an ecosystem does not mean a new venture will interact but rather intermediaries provide a platform that fosters discussion and encourages faster collaboration leading to value co-creation. Intermediaries offer new ventures facilitation role such as working space leading to cost cutting as well as developing culture that shapes their growth [122]. It is important to note that new ventures leverage on intermediary's networks both internal and external to secure relevant resources such as human, social and financial capitals [123] to support their development. This equally reflect in developed and emerging economies.

Surprisingly, our results indicate that a large network is not necessary for achieving venture survival in both emerging and developed economies. Although this contradicts the finding of Peng, et al. [124] that emphasises the positive impact of large networks on venture survival by enabling the access to more information and resources, a study by Batjargal [125] on the other hand states that extensive and diverse networks of entrepreneurs are not conducive to higher revenue growth. A possible explanation of the advantage of small networks for venture survival could be that they enable the entrepreneurs to invest more time and effort in building their relationships, which can contribute to a stronger emotional intensity, intimacy, and more reciprocal services. The strong ties that emerge can in turn significantly encourage the growth of entrepreneurial enterprises [124, 126] that is inextricably intertwined with survival for new ventures [127]. However, it should be noted that we only assume that the reason for the positive effect of small networks on venture survival is due to their higher quality. Moreover, the overall small number of network partners in developing countries in this study may be explained by the nature of our sample which partly includes entrepreneurial projects that participate in township entrepreneurship programs in South Africa. Due to the limited infrastructure, geographic isolation, and low levels of connectivity in those territories [128] entrepreneurs are often not able to make effective contacts that benefit their businesses and rely on the support of their friends and family [129]. The lack of relationships with external actors could lead to increased interactions within their own community, which in turn could strengthen those ties.

Regarding the role of planning, there seems to be a lack of consensus in the academic literature. While some authors
classify business planning as a valuable activity that can reduce the hazard of venture disbanding [114] others criticise it as a distraction that interferes with the efforts of time-constrained founders to undertake other, more valuable activities to develop their new ventures [113]. Similarly to a study by Honig and Samueilsson [130] that failed to show significant positive relationships between business planning and performance we find that extensive planning does not seem to contribute to the survival of new ventures.

Furthermore, our finding suggests that culture fostering and encouraging entrepreneurial activity always need to be present for new venture survival. Culture as discussed by Hofstede [57] is critical determinant of entrepreneurial actions [85], when individuals are encourage and supported to take risk as explained by Krueger, et al. [131], "a supportive culture would lead to social legitimation, making the entrepreneurial career more valued and socially recognised in that culture, thus creating a favourable institutional environment", and echoed by [22] and others. This implies it is important for any country to develop entrepreneurial culture if it wants to grow its economy based on entrepreneurial activities [43]. For emerging ecosystems, Jucevicius, et al. [132] are of the view that culture is the element that can be built stronger by showing good practices with its institutional partners and have the potential to influence other elements [52].

In response to our second research question, our findings for developed countries, infrastructure and knowledge in our sample is always present, so logically it is found to be present for venture survival in our analysis. For emerging economies on the other hand, our findings indicate that venture survival can be achieved both with the presence and absence of infrastructure and knowledge if an entrepreneurial culture is present and support by intermediaries is provided. This finding is particularly relevant as it shows that in emerging economies, where inequalities in accessing education and wider education gaps among the population exist despite an overall raise in education [133], a large infrastructure financing gap is faced and increasing infrastructure connectivity is needed [134], entrepreneurial culture and support can help to promote venture survival despite those obstacles. Other studies prove the relevance of both EE elements for emerging economies and thereby align with our result by highlighting the positive significant influence of entrepreneurial culture on regional economic growth [135] and the great importance of entrepreneurship support for SME performance [136].

In terms of team size, our findings indicate that a small number of founding members is linked to venture survival for developed economies and for emerging economies. In turn both small and either small or big teams can have a positive impact on venture survival. This is in line with Del Sarto, et al. [137], who discovered that small, combined with accelerator support and working in the service sector with no export, have a higher firm survival rate. It is further highlighted by Jin, et al. [138], who found that both small and large teams outperform moderately sized teams in the context of venture performance.

VI. CONCLUSIONS, LIMITATIONS AND FUTURE RESEARCH

In line with Grégoire et al.'s [17] call for novel approaches in entrepreneurship research, and Spigel's [42] perspective on the substitutability of Entrepreneurial Ecosystem (EE) elements in diverse spatial contexts, we employed fuzzy-set Qualitative Comparative Analysis (fsQCA) to investigate the role of EE elements in promoting productive entrepreneurship. Our study confirms the assertion that new venture survival can be achieved even in the absence of certain EE elements, provided that intermediaries and an entrepreneurial culture are present. This finding holds true for both developed and emerging economies. This means that policymakers and practitioners attempting to support the development of EE in their geographical boundaries could focus on promoting these elements while allowing the remaining elements to evolve organically due to the interdependent relationship between EE elements. The fsQCA offers a better measurement to determine which configuration of elements are jointly leading to the expected outcome. Again, as captured in our discussion, intermediaries seem to have links to all other elements such as finance, infrastructure, human capital, networks [122, 139] and therefore it's not surprising that it has such influence in all configurations. By shedding light on the configurational nature of EE elements, our research contributes to the existing literature on entrepreneurship and provides useful insights for policymakers and practitioners seeking to foster entrepreneurship in different contexts.

While this study provides valuable insights, it is important to acknowledge its limitations. Due to resource constraints and data unavailability, we were not able to include all EE elements proposed by Stam [40] in our analysis. This may have impacted our ability to fully capture the complexity of different element configurations impact on the survival of new ventures. Thus, we cannot generalise our findings for all developed and emerging economies. Future studies should aim to include all EE elements when investigating their influence on venture survival. Moreover, our sample was limited to the countries Sweden and South Africa which are not representative for all developed and emerging economies. Future studies could expand upon ours by including a larger and more diverse sample from multiple countries to increase the generalizability of our findings. Finally, we would like to point out that the operationalisation of the constructs of knowledge, network, talent, and planning may not have been optimal. We, therefore, encourage future research to explore the use of alternative measures to capture these variables more accurately.

VII. MATCH AND CONTRIBUTION

Based on the IEEE/TEMS Field of Interest, this paper fits and contributes to the call-for-papers by responding to the ongoing debate in the field of innovation and entrepreneurship, precisely the configuration of entrepreneurial ecosystem elements for entrepreneurship development. It explicitly addresses the conference's call for contributions to the special track on "data-driven and impact-oriented entrepreneurship research".

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