

Entrepreneurship Ecosystem in Oman: Current and Potential Factors that Promoting Entrepreneurial Culture: A Literature Review*

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Abstract: In the Arabian Gulf; the neighboring countries to Oman have benefited from providing rewarding entrepreneurship ecosystems that encourage new initiatives and start-ups. During 2020; three Gulf Cooperation Council States; the Kingdom of Saudi Arabia (KSA), United Arab Emirates (UAE), and Qatar; have appeared in the top ten according to the Global Entrepreneurship Monitor (GEM) Index, while Oman was placed 13th in the same index. Many advancements can be made to secure a higher level of Oman in the future. This paper is part of an ongoing study of the entrepreneurship ecosystem in Oman. It will try to review the available literature on EE frameworks and models to propose and evaluate a customized model for Oman. This will help in building a solid background for the expected study and agree on a framework that can be used for it. The study aims to investigate the entrepreneurial ecosystem in Oman to see to what extent it can be improved to encourage new start-ups and ventures.

Key words: entrepreneurship ecosystem, start-ups, new venture, entrepreneurial culture

JEL codes: M130

1. Introduction

The business environment globally has experienced achievements in several domains such as governance, policies, technology and innovations, and so on as a result of technological and digital revolutions. Historically, technological disruptions and discoveries have bounced from established businesses and research institutions. Start-ups have joined the technology and innovation sphere in recent years and have had a substantial impact on the global economy. Start-ups are companies that are young, growth-oriented, and organically formed to solve problems, generally through technical disruptors (Kenton, 2018). Providing a conducive environment where these set-ups can grow and flourish is the main aim of all countries.

The entrepreneurial ecosystem (EE) is defined as a system of converging players, organizations, institutions, and processes that influence the entrepreneurship scene in a certain geographical context (Mason & Brown, 2013). A successful entrepreneurial ecosystem will be critical to Oman's economic growth and to improving its innovation index. Furthermore, the EE has an important influence on the success of the entrepreneurial culture in every country, where it may be both a growth accelerator and an inhibitor.

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This review of the literature on the entrepreneurship ecosystem is driven by Oman's 2040 Strategy, which intends to make the country one of the most innovative in the world by 2040 (Oman Vision 2040). Furthermore, this research aims to offer value to the academic research field, as there is a shortage of supporting literature on the subject of Oman's entrepreneurship ecosystem and relevant environment.

2. Entrepreneurship Ecosystems: An Overview

According to several studies, one of the most significant benchmarks that most governments are devoted to is evaluating the national entrepreneurship environment. Shirazia A. N. and Mohamadib S. (2018) used data from the Global Entrepreneurial Index for 132 nations from 2016 to 2017 to evaluate the entrepreneurial ecosystem using the Global Entrepreneurship Index (GEI) based on the meta-frontier Malmquist approach in their study. According to their findings, East Asia, the Pacific, Middle East, North Africa, and North America continue to have a technical deficit in the field of entrepreneurial ecosystems, but Latin America, the Caribbean, and South Asia have the potential to develop technological standards.

Sedkaoui S. (2019) employed an investigative strategy to investigate the effectiveness of the entrepreneurship ecosystem, surveying various entrepreneurs to evaluate Algeria's national entrepreneurial ecosystem. The study's findings indicate that Algerian efforts still require significant enrichment due to the country's need for environmental and technological reforms. Hattab, Hala Wasef (2023) looked at the ecosystem and whether it discriminates against women. They discovered that some practices are gender-insensitive, posing barriers for women and thereby influencing their presence and activity within the ecosystem. Entrepreneurship culture and the formation of new firms have become major goals in economies all around the world. Karen, Miriam Judit (2018) identified study directions about the entrepreneurial ecosystem and its variables using explanatory research. They emphasized the same and similar factors as the GEM Index.

Abdel-Aziz (2015) researched entrepreneurship in Egypt and gave a theoretical basis on how entrepreneurship might be linked to economic growth and employment creation. According to the report, the primary components of Egyptian entrepreneurs' entrepreneurial activity include access to money, entrepreneurship education, culture, and the legal framework. Astuty E., Yustian O. R., and Ratnapuri C. I. (2022) investigated the university ecology to assist students. They studied the institution's internal environment, external environmental support, student entrepreneurial attitude, student entrepreneurial intents, and student entrepreneurial actions using a quantitative approach.

Ben Hassen T. (2020) investigated the current situation of Qatar's knowledge-based economy, with a focus on the entrepreneurial ecosystem. The report highlighted the fundamental difficulties and characteristics of Qatar's entrepreneurship ecosystem. Coduras A., de la Vega I. and Salman M. B. (2018) offered a thorough overview of the subject of entrepreneurial ecosystem evaluation in a sample of Arabic nations, emphasizing the significance of a country's standing in encouraging high-quality entrepreneurial activity. They explored the existing relationship between each country's current entrepreneurial climate and the characteristics of its entrepreneurial activity. They also consider the state of each country's entrepreneurial ecosystem and its potential impact on the creation of new business activities, identifying strengths and weaknesses and reflecting in depth on the elements that would have to work to progress the modernization of these ecosystems.

Kumar M. (2020) investigated the concept of an entrepreneurial ecosystem and the influence of developing an ecosystem model on the development of entrepreneurship in Pakistan. To understand the entrepreneurship

ecosystem, he used both top-down and bottom-up methodologies at the same time. Entrepreneurial ecosystems are a paradox, according to Wurth B., Stam E., and Spigel B. (2022). They contended that, while it draws on a rich intellectual past and allows for the integration of several lines of inquiry, it is also under-theorized, and the mechanisms that regulate ecosystem change are poorly understood. Their work summarizes recent advances in ecological scholarship and synthesizes the empirical reality of causal pathways. They used these dynamics to situate ecosystems within and outside the realm of entrepreneurship study and to propose a transdisciplinary research agenda for ecosystem research and practice.

Ala Eddin M. I. and Thomas B. J. (2018), prepared a conceptual work where they reviewed existing initiatives of Oman for entrepreneurial growth. Their study focuses on the existing stakeholders of the entrepreneurship ecosystem of Oman, their work, and the potential for viable interventions for further entrepreneurship. The study revealed some information on how entrepreneurs can benefit from the entrepreneurship ecosystem for developing and expanding their existing businesses. They argued that the Oman ecosystem is in a developmental stage with some incorporated organizations in growth.

Stam E. and Van De Ven A. H. (2021), argued that there is a growing interest in ecosystems as an approach to understanding the context of entrepreneurship at the macro level of an organizational community. For them; the entrepreneurship ecosystem; consists of all the interdependent actors and factors that enable and constrain entrepreneurship within a particular territory. For them, the entrepreneurial ecosystem concept remains loosely defined and measured. They showed the value of taking a system view of the context of entrepreneurship which for them includes understanding entrepreneurial economies from a systems perspective. They used a systems framework for studying entrepreneurial ecosystems, developed a measurement instrument of its elements, and used this to compose an entrepreneurial ecosystem index to examine the quality of entrepreneurial ecosystems in the Netherlands. They have found that the prevalence of high-growth firms in a region is strongly related to the quality of its entrepreneurial ecosystem.

3. Concrete Examples of Entrepreneurship Ecosystems

3.1 Sam Erik Model

At the regional level, Stam Erik (2015) argued that regional policies for entrepreneurship are currently going through a transition from increasing the quantity of entrepreneurship to increasing the quality of entrepreneurship. For him, the next step will be the transition from an entrepreneurship policy towards a policy for an entrepreneurial economy. The entrepreneurial ecosystem approach has been indicated as a new framework accommodating these transitions. The most interesting issue raised by Stam is that Entrepreneurship is not only the output of the system, entrepreneurs are important players themselves in creating the ecosystem and keeping it healthy. He provides a framework for analyzing the interactions between the elements within the ecosystem which is shown below:

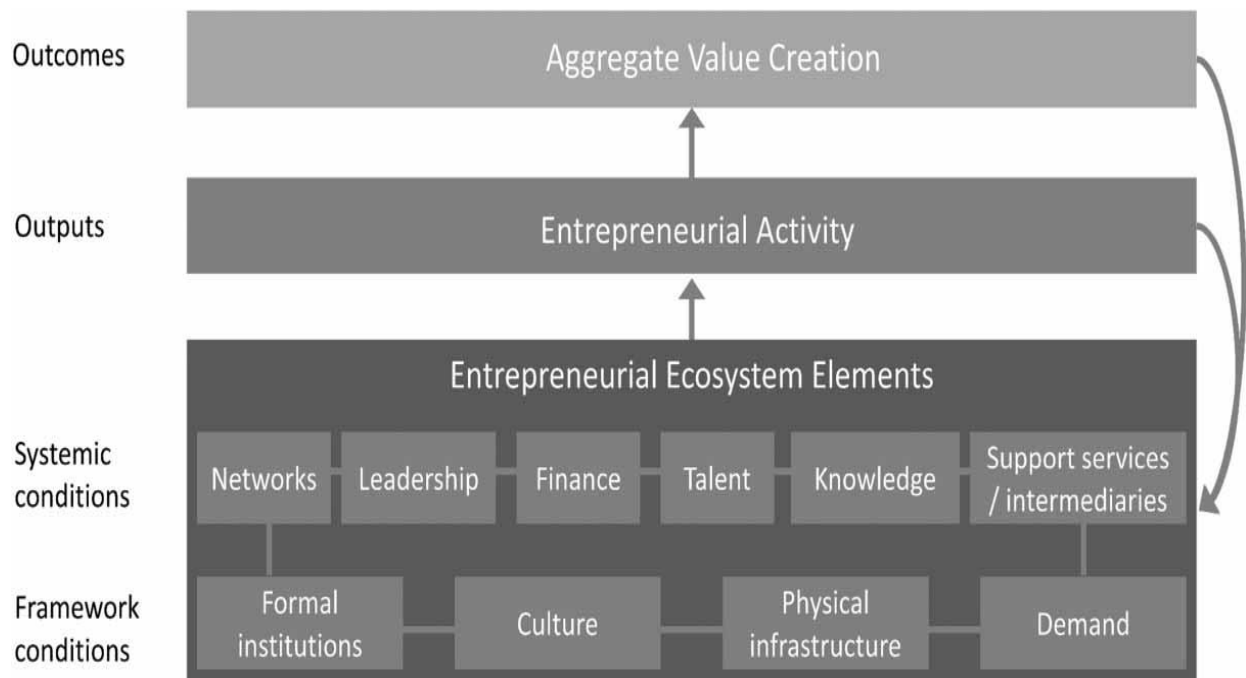


Figure 1 Stam Erik's Framework for Analyzing the Interactions Between the Elements Within the Ecosystem
Source: Stam Erik (2015)

Four years later, Stam and Van de Ven (2019), added the new EE framework with a new viewpoint. They see this dynamic ecosystem as made up of important business owners and entrepreneurs who run, integrate, and carry out all the tasks necessary for entrepreneurship to thrive in a given area. When this system is fully created, its structure is made up of the essential components that allow for specific outputs (productive entrepreneurship). The components of an entrepreneurial ecosystem coevolve and depend on one another within a region. P2, they concentrate on the ways that the context, as determined by the assortment of components that make up a region's entrepreneurial ecosystem, leads to successful entrepreneurship that builds upon these components. The term "upward causation" describes how the structure influences the agency. The levels of entrepreneurial activity in a territory are explained by the ten visible aspects of the entrepreneurial ecosystem.

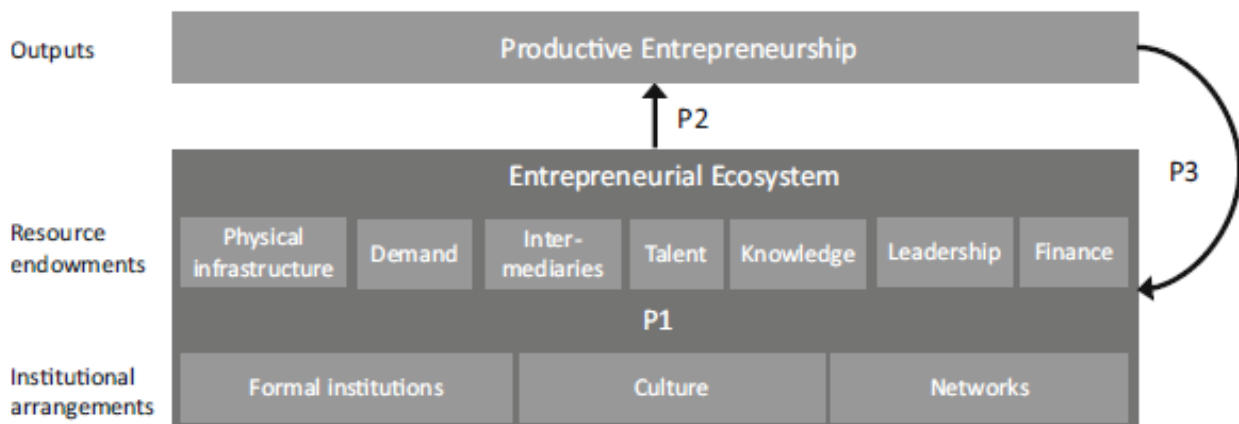


Figure 2 Stam and Van de Ven's New EE Framework
Source: Stam and Van de Ven (2019)

Recently, Wurth B., Stam E., and Spigel B. (2022) have found causative mechanisms in entrepreneurial ecosystems based on the frameworks developed by Stam E. (2015) and Stam and Van de Ven (2019). To better understand entrepreneurial economies, they have employed the aforementioned frameworks to direct their investigation and connect the empirical reality to the entrepreneurial ecosystem approach.

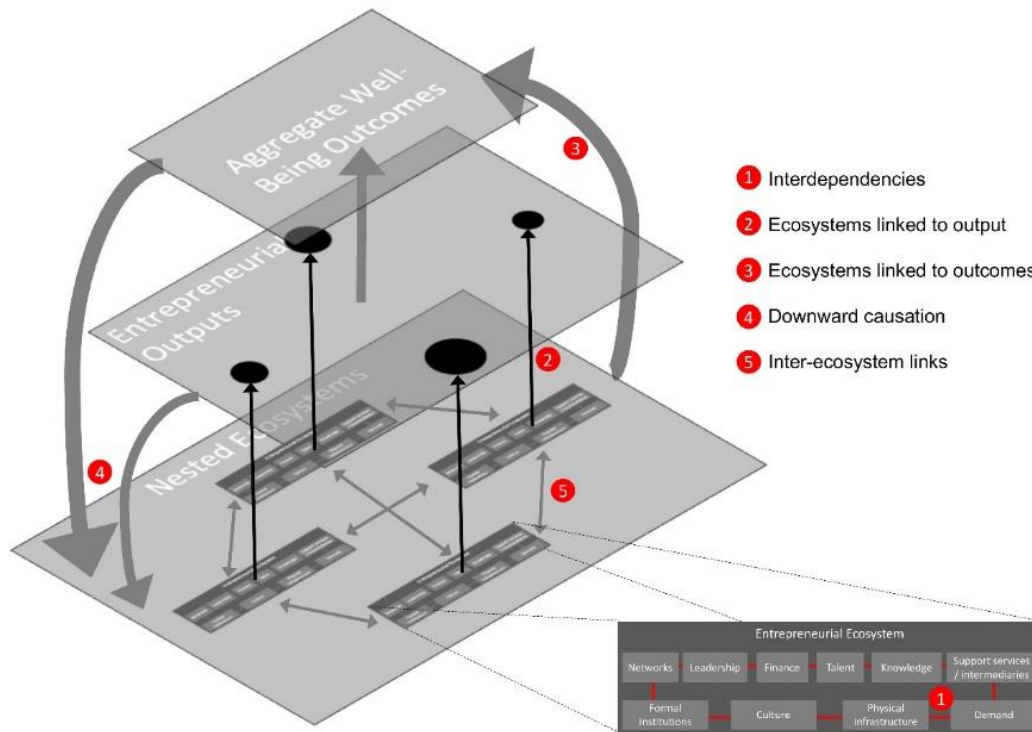


Figure 3 Causative Mechanisms in Entrepreneurial Ecosystems

Source: Wurth B., Stam E., and Spigel B. (2022)

In a recent study prepared by Universiti Tun Abdul Razak Sdn Bhd (UNIRAZAK), entrepreneurship seems to develop better in an “entrepreneurial ecosystem” or “entrepreneurship ecosystem”. By entrepreneurial ecosystem was meant the study, of the social and economic environment affecting local or regional entrepreneurship. The study emphasized that businesses located within places that are incubators for creativity, innovation, and entrepreneurship have a greater chance of success.

Isenberg D. (2010; 2013), advocated that the entrepreneurship ecosystem consists of hundreds of specific elements which, for convenience, can be grouped into six general domains: a conducive culture, enabling policies and leadership, availability of appropriate finance, quality human capital, venture-friendly markets for products, and a range of institutional and infrastructural supports. Drawing from lessons learned in countries such as Rwanda, Chile, Iceland, Ireland, Taiwan, Spain, South Africa, Colombia, Puerto Rico, Argentina, the United States, and other countries, Isenberg D. (2010; 2013) defined nine principles for building a successful entrepreneurship ecosystem:

- Stop emulating Silicon Valley;
- Shape the ecosystem around local conditions;
- Engage the private sector early;
- Favour the high potentials;

- Get a big win on the board;
- Tackle cultural change head-on;
- Stress the roots;
- Don't over-engineer clusters — help them grow organically.
- Reform legal, regulatory, and bureaucratic frameworks.

3.2 Triple Helix Model

American academic Etzkowitz developed a three-helix framework in the 1990s to examine the new dynamics that emerge in the knowledge economy between academia, business, and government. The three primary components of the innovation system environment in the knowledge-based economy society are the government, businesses, and universities. They form three forces and the interactional triple helix relationship with each other based on the particular needs of the market (Cao Z. P. & Zhou M., 2018).

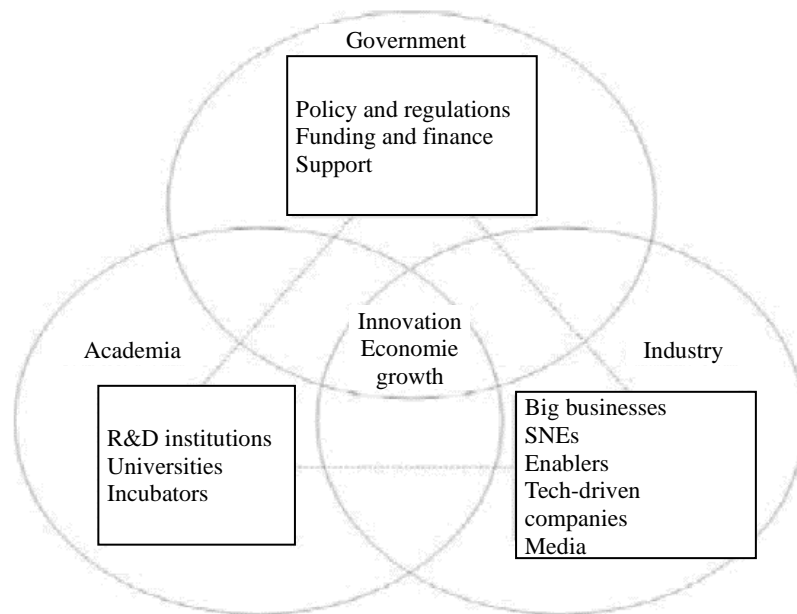


Figure 4 Three-Helix Framework

Source: Rangaa, M., & Etzkowitz, H. (2013)

The idea of Triple Helix systems as an analytical framework combines the salient aspects of university-industry-government (Triple Helix) interactions into a format known as an “innovation system”, which is described as a collection of elements, connections, and functions by systems theory. Five primary types of relationships can be derived from the relationships between components: networking, collaborative leadership, technology transfer, replacement, and cooperation and conflict moderation. A series of actions in the knowledge, innovation, and consensus spaces accomplish the triple helix systems’ overarching role of producing, disseminating, and using knowledge and innovation (Rangaa, M., & Etzkowitz, H., 2013).

3.3 World Economic Framework

Eight pillars are thought to comprise an entrepreneurship ecosystem, and the constituent parts of each pillar are depicted in the Figure 5. Through a combined analysis of the following two questions: (1) What are the global variances in entrepreneurs’ perceptions of the accessibility of the several pillars that comprise an ecosystem, as

they relate to one another? (2) What factors do entrepreneurs believe are most crucial to the expansion and success of their businesses within an entrepreneurial ecosystem? There are two significant ways that the WEF report strengthened the argument for entrepreneurial ecosystems.

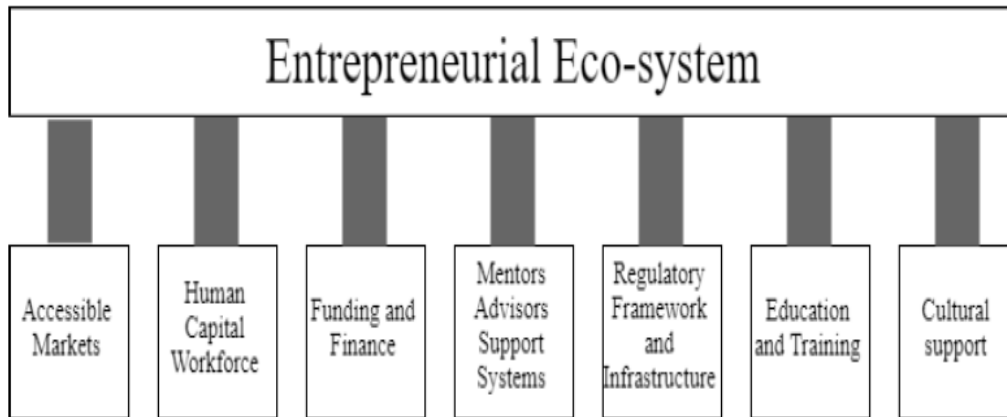


Figure 5 Entrepreneurship Ecosystem

Source: Annual Meeting of the New Champions, 2013, World Economic Forum

3.4 Spiegel and Stam Entrepreneurship Ecosystem Model

Spiegel (2015) characterizes entrepreneurial ecosystems as “combinations of social, political, economic, and cultural elements within a region that support the development and growth of innovative startups and encourage nascent entrepreneurs and other actors to take the risks of starting, funding, and otherwise assisting high-risk ventures”. The level of entrepreneurial activity as the result of entrepreneurial ecosystems is explained by the grouping of these attributes into three categories: cultural (supportive culture and histories of entrepreneurship), social (worker talent, investment capital, networks, mentors, and role models), and material (policy and governance, universities, support services, physical infrastructure, open markets). Crucially, these characteristic categories are not distinct from one another; rather, they are generated and perpetuated through their interactions.

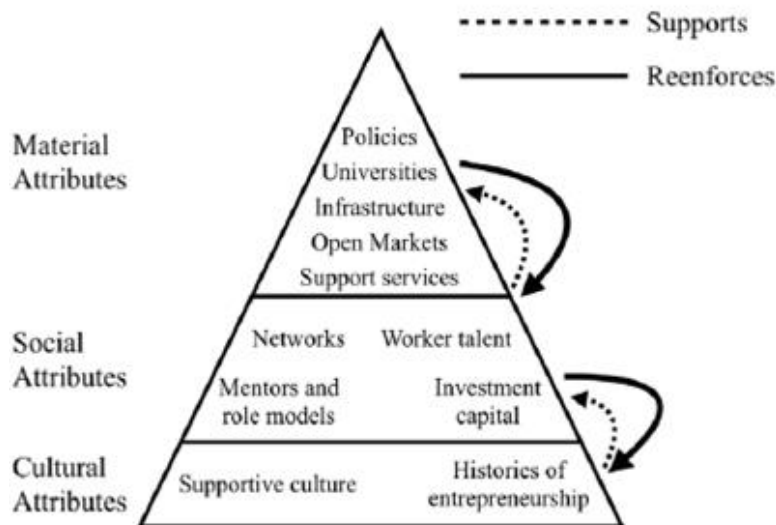


Figure 6 Spiegel and Stam Entrepreneurship Ecosystem Model

Source: Stam E. & Spiegel B. (2016)

3.5 Isenberg Model of an Entrepreneurship Ecosystem

The six essential domains that make up the Isenberg Model of the entrepreneurial ecosystem each have twelve sub-elements that function in a remarkably complex and individualistic manner. The first domain comprised two primary sub-elements: leadership and governance, and it was centered on enabling policies. The institutional, financial, and regulatory framework incentives, research institutes, venture-friendly legislation, and regulatory framework constitute the government sub-element. Unwavering support, social legitimacy, an open-door policy for advocates, an entrepreneurial strategy, and urgency in times of crisis and difficulty make up the leadership sub-element, in the meantime.

Venture-friendly marketplaces for products structured around early customers through early adopters for proof of concept, productizing expertise, reference customers, and initial reviews are covered in the second area. Human capital, or labor through skilled and unskilled labor, serial entrepreneurs, later-generation families, general degrees, and specialized entrepreneurship training, was embraced by the third domain. According to Isenberg's approach, the availability of suitable financing is considered the fourth domain through the use of public capital markets, venture capital funds, angel investors, families, and microloans. A supportive culture that addressed social norms through apparent achievements, money for investors, worldwide recognition, ingenuity, originality, experimentation, the social standing of entrepreneurs, and wealth generation was the fifth domain.

The final domain focuses on various institutional supports found in non-governmental organizations, support professions, and infrastructure. where representatives of the infrastructure operate in clusters, co-working spaces, energy zones, telecommunications, and transportation. Support staff members are standing in for technical, legal, and accounting specialists in the interim. Non-governmental organizations include business plan competitions, associations that support entrepreneurs, and entrepreneurship promotion in non-profits.



Figure 7 Isenberg Model of an Entrepreneurship Ecosystem

Source: Ali et al. (2021)

3.6 United Arab Emirates (UAE) Entrepreneurship Ecosystem

The UAE's EE is depicted here based on the connections between the government, academia, and business (Aljarwan, Aamna A., et al. 2019). Academic-Government Relations: The government requires and finances academic institutions to promote entrepreneurship in their curricula in exchange for the institutions producing human capital with advanced skills necessary for innovation and the modern economy. Rather than being consumed, a sizable amount of this created money is turned into entrepreneurs who generate new jobs.

Government-Industry Relation: The government requires the industry to work with and encourage start-ups and occasionally provides funding for this purpose. Furthermore, through R&D, the industry is required by law to

improve its ties to academia. The mandates may also be rewarded by the government with money, lab space, etc. As a result, the industry expands and diversifies the economy.

Academic-Industry Relationship: The industry links students to startups for internship programs and gives academia insight into future trends and pertinent market demands. In exchange, academia produces intellectual property that can be marketed as well as human capital to enter the industry.

Supporting elements: The survey findings are represented as support elements in this framework. They are especially relevant to the UAE's ecology as a result. It is expected that as the ecosystem expands, it will begin to decentralize and become autonomous, meaning it won't need incentives or mandates to function. When a significant number of business owners are successful, there will be enough competition to push the sector to innovate and work with academic institutions. Furthermore, prosperous businesspeople will later act as mentors and investors, inspiring the next generation of entrepreneurs to pursue similar careers. This will also bring about a paradigm change in the culture and thinking, making people more accepting of failure and tolerant of risk.

The government seems to be the main force behind the present entrepreneurial activity and its most important participant. The government imposes policies on businesses and the private sector, which leads to a dependence on the government to start the ecosystem's expansion. The quickest and most effective way to improve the ecosystem is to employ a top-down strategy, in which the government provides incentives to the other participants to encourage cooperation and mutual assistance. Furthermore, it is determined that because there are few incentives in place for this interaction, industry, and academia have the weakest relationship in the ecosystem.

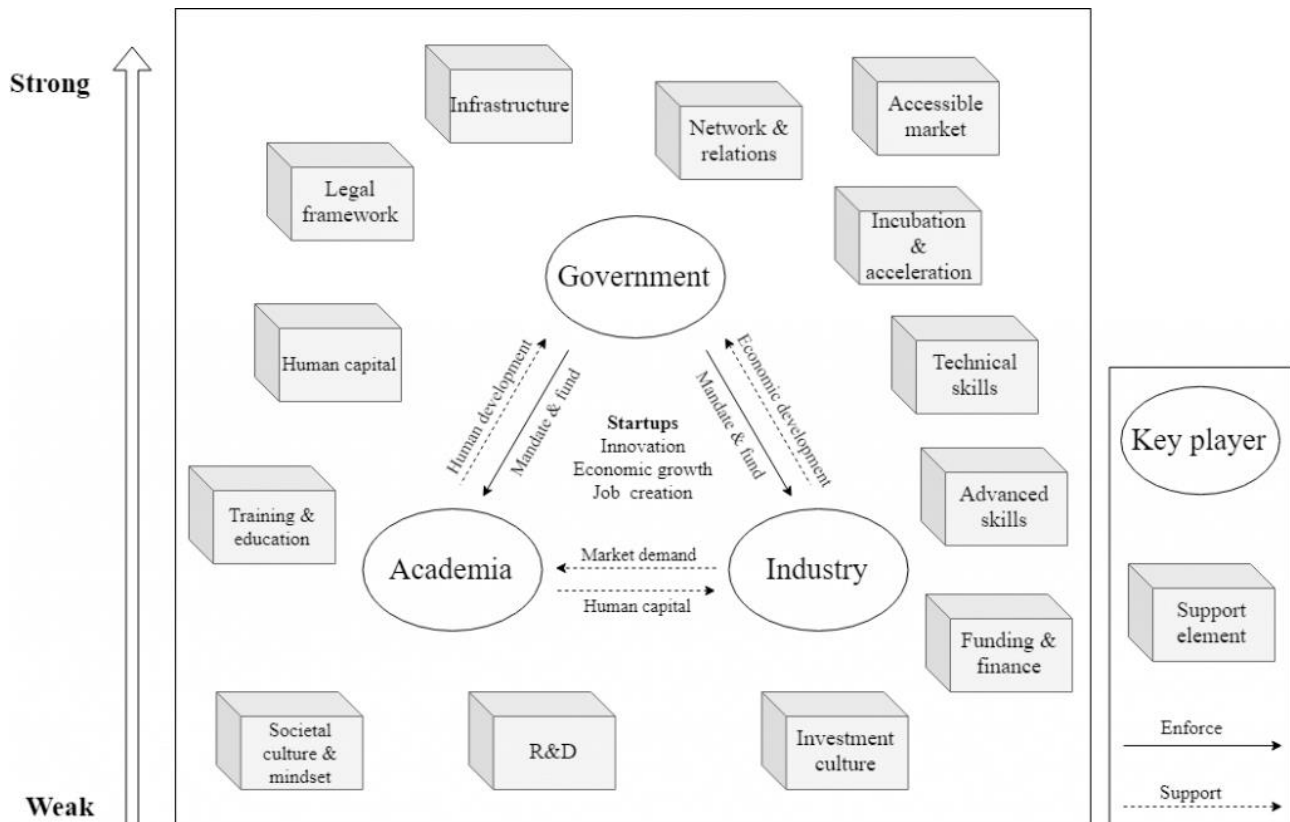


Figure 8 United Arab Emirates (UAE) Entrepreneurship Ecosystem

Source: Aljarwan, Aamna A. et al. (2019)

4. Focus and Concluding Remarks

From the above review, we can conclude that the entrepreneurial ecosystem refers to the community or network of individuals, institutions, and resources that support the creation and growth of new ventures and start-ups. It typically includes startup incubators and accelerators, venture capital firms, angel investors, business mentors and advisors, network events, educational programs, and government support initiatives. A strong entrepreneurial ecosystem can provide startups with access to funding, mentorship, talent, and other resources necessary for growth and success. It is also essential for promoting innovation, creating jobs, and driving economic growth within Oman.

In recent years, Oman has been making significant steps in developing its entrepreneurial ecosystem. The government has been actively promoting entrepreneurship and innovation, and there are now in place; several initiatives and programs, to support startups and small businesses. These initiatives include: incubators and accelerators; where Oman has several incubators and accelerators that provide support and mentorship to startups. These include The National Business Center, Oman Technology Fund, and Riyada Enterprise Development Center. In addition; and concerning funding; there are various funding options available for startups in Oman, including venture capital funds, angel investors, and government-backed financing programs such as the Al-Raffd Fund and the Oman Development Bank.

As far as the legal and regulatory framework is concerned; Oman has a supportive legal and regulatory framework for businesses, which has been designed to encourage entrepreneurship and innovation. The government has implemented several reforms to simplify business registration processes, reduce bureaucracy, and promote foreign investment. These reform practices need to be evaluated to see their impact. In the education and training area; Oman's education system is increasingly focused on entrepreneurship and innovation. Many universities and colleges now offer courses and programs in entrepreneurship, and there are also several training programs available to support aspiring entrepreneurs.

Considering networking opportunities; Oman has several networking events and platforms where entrepreneurs can meet and connect with investors, mentors, and other stakeholders. These include Oman Entrepreneurship Network, Oman Economic Forum, and Startup Oman. Overall, Oman's entrepreneurial ecosystem is evolving and becoming more supportive of startups and small businesses. The government's commitment to promoting entrepreneurship, coupled with the growing interest in entrepreneurship among the country's youth. This attempt is a try to investigate if there are gaps in providing a conducive ecosystem that helps startups and new businesses for the future of Oman's economy.

In conclusion, this review shows that there are possible and existing elements that can support the entrepreneurial culture, which in turn can create and strengthen the Omani Entrepreneurship Ecosystem. The review also presents various Entrepreneurship Ecosystems Frameworks (EEFs), and discusses them, which makes it easy to provide a clear picture of the anticipated EEF for the Omani economy as part of the literature assessment effort. Undoubtedly, the literature review and study improve our knowledge of what is now available and beneficial for the environment, including the Triple Helix, Isenberg, Spigel, and other ecosystem models. To further help develop an understanding of what can be the proposed Omani EE that can be investigated and used for the proposed study and research grant.

5. The Proposed Omani EE Model

As a summary of the above literature review, the study framework and Oman EE can include three sets of variables based on; the Sam Model; (framework and systematic variables, output variables, and outcomes variables). The first set of variables constitutes the EE variables which will help in promoting start-ups in terms of entrepreneurship activities, and the second set of variables. The third set of variables constitutes the aggregate value creation as an outcome of the Omani EE. This by default contains many players based on; other sets of frameworks; (Government, Academia, and Industry) in terms of supporting entrepreneurial culture to promote entrepreneurial activities in the country.

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