Building an Entrepreneurial Ecosystem: Factor Analysis of Abu Dhabi's Attempt to Promote an Innovation, Knowledge-Based Economy

Ana Capuder

Dissertation written under the supervision of Professor Peter V. Rajsingh

Dissertation submitted in partial fulfillment of requirements for the MSc in International Management, at Universidade Católica Portuguesa and for the MSc in Strategy, Innovation and Management Control at WU University of Economics and Business, 31.05.2024.

Abstract

This thesis examines the factors shaping entrepreneurial ecosystems, comparing Silicon Valley and Abu Dhabi. While Silicon Valley benefits from an established innovation culture, Abu Dhabi is a rapidly developing ecosystem, driven by its aim to transition from an oil to a knowledge-based economy. Despite significant investment and government support, Abu Dhabi faces challenges including risk aversion, a preference for public sector jobs, and talent shortages.

Using a mixed methods approach with expert interviews and a literature review, this study identifies gaps in Abu Dhabi's innovation framework. It recommends enhancing ecosystem efficiency by promoting a risk-taking culture, better-integrating universities, and supporting B2B cooperation to elevate Abu Dhabi as a global innovation leader.

Keywords: Entrepreneurial Ecosystem, Dynamic Capabilities, Ambidexterity, Knowledge-Based Economy, Abu Dhabi, Silicon Valley, Innovation

Title: Building an Entrepreneurial Ecosystem: Factor Analysis of Abu Dhabi's Attempt to Promote an Innovation, Knowledge-Based Economy

Author: Ana Capuder

Sumário

Esta tese examina os factores críticos que moldam os ecossistemas empresariais, comparando Silicon Valley e Abu Dhabi. Enquanto Silicon Valley beneficia de uma cultura de inovação estabelecida, Abu Dhabi é um ecossistema em rápido desenvolvimento, impulsionado pelo seu objetivo de transição de uma economia baseada no petróleo para uma economia baseada no conhecimento. Apesar do investimento significativo e do apoio governamental, Abu Dhabi enfrenta desafios, incluindo a aversão ao risco, a preferência por empregos no sector público e a escassez de talentos.

Utilizando uma abordagem de métodos mistos que inclui entrevistas a peritos e análises da literatura, este estudo identifica lacunas no quadro de inovação de Abu Dhabi. Recomenda o reforço da eficiência do ecossistema através da promoção de uma cultura de assunção de riscos, de uma melhor integração das universidades e do apoio à cooperação B2B para elevar Abu Dhabi a líder mundial da inovação.

Palavras-chave: Ecossistema Empresarial, Capacidades Dinâmicas, Ambidestria, Economia Baseada no Conhecimento, Abu Dhabi, Silicon Valley, Inovação

Título: Construir uma Economia Empresarial: Análise fatorial da tentativa de Abu Dhabi de promover uma economia baseada no conhecimento e na inovação

Autor: Ana Capuder

Acknowledgments

First and foremost, I want to express my deepest gratitude to my supervisor, Professor Peter V. Rajsingh, for his unwavering support and invaluable guidance throughout this journey. His encouragement has been a constant source of motivation.

I am profoundly grateful to the interviewees for sharing their insights and offering practical perspectives that greatly enriched my research. Furthermore, I deeply admire their enthusiasm and proactive approach to life.

I am deeply grateful to CLSBE and WU Vienna for providing me with the opportunity to explore and embrace new challenges.

Finally, I would like to thank my family and friends, without whom none of this would have been imaginable. Thank you for always being there for me and encouraging me. I am forever indebted to you

Table of Contents

List of Figures

List of Abbreviations

ADGM	Abu Dhabi Global Market
B2B	Business to Business
B2G	Business to Government
EFC	Entrepreneurship Framework Conditions
FDI	Foreign Direct Investment
FSRA	Financial Services Regulatory Authority
GEM	Global Entrepreneurship Monitor
GPA	Grade Point Average
IPO	Initial Public Offering
KFED	Khalifa Fund for Enterprise Development
M&A	Mergers and Acquisitions
MBRIF	Mohammed Bin Rashid Innovation Fund
MENA	Middle East and North Africa
NECI	National Entrepreneurial Context Index
R&D	Research and Development
RBV	Resource Based View
SMEs	Small and Medium-sized Enterprises
UAE	United Arab Emirates
US	United States
VC	Venture Capital

1. Introduction

Startups are an important driver in economies in ecosystems characterized today by rapid technological advances and evolving market dynamics. Thus, companies and countries embrace innovation as a fundamental strategy (Chen et al. 2021; Whelan, 2015). Success stories are often associated with innovation ecosystems, which provide resources, guidance, and initiatives that facilitate the rapid development and implementation of innovative ideas. These ecosystems enhance business sector dynamism and competitiveness (Bakry et al., 2024; Wang, 2021).

Investment in private capital markets is increasing, leading to the expansion of established innovation ecosystems and the emergence of new ones globally. Despite significant expansion in the venture capital market over the past decade, the landscape has shifted dramatically in the last 18 months as funding has become scarcer. As a result, investors are now much more selective about where they place their money, and entrepreneurs are similarly meticulous in choosing locations to start their businesses (Sanders, 2023).

San Francisco, home to Silicon Valley, tops the charts in fundraising count (Sanders, 2023). The ecosystem is renowned as a vibrant innovation hub, naturally evolving around prestigious universities and a dynamic business environment. The close interaction between students and growing companies, enriched by hands-on business experiences and expert insights, has cultivated a robust entrepreneurial culture. It has led to the development of leading firms that continue to draw global talent and propel technological progress (Ilie and Budac, 2023). While many regions strive to replicate Silicon Valley's success, few have succeeded (Adams, 2005).

We apply our analysis to the innovation ecosystem in Abu Dhabi, a high-income nascent economy (Cherian and Pech, 2017) actively carving its niche as an emerging innovation powerhouse (Hallami et al., 2013). Abu Dhabi was selected for its proactive government-led innovation strategies and its abundant resources to develop a robust innovation ecosystem (Low, 2012). This positions the Emirate as a potential model for other oil-based economies seeking to diversify.

This paper investigates the factors that contribute to the success of innovation ecosystems, focusing on economic, social, and cultural elements, and poses the following research question.

RQ: What factors contribute to a successful innovation ecosystem?

The research project is motivated by two hypotheses: Hypothesis 1 asserts that Abu Dhabi's international environment stimulates innovation, while Hypothesis 2, proposes that Abu Dhabi's high standard of living dampens entrepreneurial drive.

The thesis structure commences with a literature review on innovation ecosystems, dynamic capabilities, and ambidexterity, setting the theoretical groundwork. Following this, the methodology section details the qualitative research design used to gather insights, which includes semi-structured interviews with key stakeholders in Abu Dhabi's innovation ecosystem and an analysis of secondary data to explore the region's innovation drivers. Subsequent chapters link these findings to established theoretical concepts, assessing their impact on ecosystem performance. The conclusion synthesizes these findings, discusses their implications, and suggests future research directions, providing insights to help Abu Dhabi enhance its global market position.

2. Literature Review

2.1. Key Concepts of Entrepreneurial Ecosystems

2.1.1. Entrepreneurial Ecosystem

An entrepreneurial ecosystem is defined as a collaborative network that integrates diverse contributions from various participants to create unified and customer-oriented solutions (Adner, 2006). Although similar to a business ecosystem, which emphasizes value capture (Adner and Kapoor, 2010; Gawer, 2014; Gomes et al., 2018), an entrepreneurial ecosystem focuses predominantly on value creation (Gomes et al., 2018). This is particularly critical in startups, where value creation must precede value capture (Feng et al., 2019). Entrepreneurial ecosystems are instrumental in supporting the creation and evolution of new ventures (Zahra and Nambisan, 2011) and in shaping dynamic capabilities that drive significant economic and social value (Guerrero and Siegel, 2024).

The development of an entrepreneurial ecosystem relies on dynamic capabilities (Feng et al., 2019), as organizations within the ecosystem need these capabilities to acquire, reconfigure, and integrate resources to adapt to market changes. This ensures they remain competitive and successful (Teece et al. 2016), fostering the entrepreneurial ecosystem's growth (Feng et al., 2019).

2.1.2. Dynamic Capabilities

Dynamic capabilities are the abilities of organizations to integrate, build, and reconfigure internal and external competencies to respond to rapidly changing environments (Teece, 2007). These capabilities extend the Resource Based Theory (RBV). While RBV posits that valuable, rare, inimitable, and non-substitutable resources are the source of a firm’s competitive advantage (Barney, 1991; Helfat and Peteraf, 2009), it is an inherently static theory. Teece & Pisano (1994) introduced a non-static perspective to explain how firms maintain their edge in changing environments. Accordingly, Barreto (2010) frames dynamic capabilities as “the firm's potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely and market-oriented decisions, and to change its resource base.

Rooted in Schumpeterian ideas of creative destruction and innovation-driven competition (Guerrero and Siegel, 2024), dynamic capabilities are processes that strategically reconfigure

resources to adapt to and drive market changes (Eisenhardt and Martin, 2000). They align organizational routines and resources with strategic goals (Zahra et al., 2006) and enhance organizational learning and effectiveness (Zollo and Winter, 2002).

Research shows that organizations with well-developed dynamic capabilities are more innovative and sustain competitive advantage (Salunke et al., 2011). They excel in adapting to technological shifts (Hill and Rothaermel, 2003) and significantly impact innovation on individual, firm, and network levels (Rothaermel and Hess, 2007).

2.1.3. Ambidexterity

While dynamic capabilities focus on a firm's ability to adapt to changes, organizational ambidexterity balances the demands of innovation and efficiency. Therefore, ambidexterity can be seen as a dynamic capability (O'Reilly and Tushman, 2008). Initially introduced by Duncan (1976), ambidexterity refers to an organization's ability to integrate and balance the demands of exploring new opportunities and exploiting existing capabilities. Duncan suggested that organizations employ a sequential dual approach that alternates between organic structures for exploring new opportunities and mechanistic structures for exploiting existing capabilities.

Tushman and O'Reilly (1997) later argued that organizations must pursue exploration and exploitation simultaneously due to rapid change and complexity in modern markets. This approach requires organizations to maintain separate business models, subunits, and alignments for each activity, coordinated by a senior management team that ensures these distinct competencies, cultures, incentives, processes, and systems work toward a unified vision (O'Reilly, C. A. & Tushman, M. L., 2004). This coordination is crucial for achieving long-term success, as emphasized by Rotemberg and Saloner (2000) and Lubatkin et al. (2006), who noted the critical role of management teams in fostering collaboration across subunits.

2.2. Silicon Valley – The Global Entrepreneurial Ecosystem

2.2.1. Economic Factors

2.2.1.1. Government Support

Entrepreneurial ecosystems thrive on a supportive governmental framework, which includes policies and programs, robust R&D infrastructure, incentives for R&D investments, and substantial intellectual property rights (Guerrero and Siegel, 2024). Silicon Valley is a prime example of this synergy, where dynamic, entrepreneur-led growth has been significantly bolstered by targeted government initiatives to foster innovation (Ilie and Budac, 2023).

The government actively funds research programs, often collaborating with the military and aerospace sectors, to advance scientific and technological capabilities. This support is crucial for many startups, enabling them to develop and market innovative products. On top of that, the government frequently acts as a significant customer for these startups, purchasing their products and services. This symbiotic relationship between the government and startups is instrumental in maintaining Silicon Valley's position at the forefront of global innovation (Ilie and Budac, 2023).

Furthermore, regulatory reforms, such as reducing taxes on capital gains and easing pension fund regulations, have made investment more attractive, thereby bolstering financial inputs into innovation. Strategic adjustments in immigration policies have also played a crucial role, attracting top global talents and enhancing Silicon Valley's reputation as a global innovation hub with a diverse and skilled workforce (Ilie and Budac, 2023).

However, a growing body of literature challenges the extent of government intervention, suggesting that non-interventionist policies might also be significant drivers of entrepreneurship and innovation. The effectiveness of these governmental measures in promoting innovation and entrepreneurship is not clearly established, indicating that the balance between government intervention and market freedom may be crucial (Guerrero and Siegel, 2024).

2.2.1.2. Technological and Corporate Base

Technology and knowledge transfer are critical for enhancing capabilities and performance. Entrepreneurial ecosystems are crucial in developing and shaping dynamic capabilities for entrepreneurial innovations (Guerrero and Urbano, 2019). Silicon Valley exemplifies this by

providing access to the newest technologies and innovative solutions and serving as a base for many prominent corporations (Adams, 2021). This technologically rich environment supports ambidexterity by enabling companies to simultaneously explore new frontiers and exploit established technologies (Tushman and O'Reilly, 1997).

2.2.1.3. Venture Capital Market

Silicon Valley boasts one of the most competitive and supportive venture capital arenas worldwide. Venture capitalists offer more than just substantial financial investments; they bring expertise, access to professional networks, staffing resources, customer connections, and monitoring mechanisms. Typically, venture capitalists cash out their investments through mergers and acquisitions or publicizing the company through initial public offerings (IPOs). This strategy often leads to substantial returns for both the founding entrepreneurs and the early employees, who may have joined the company from larger firms lured by the offer of stock options (Ilie and Budac, 2023).

The venture capital market in Silicon Valley exemplifies ambidexterity by supporting both the exploration of innovative ideas and the exploitation of scalable business models (Tushman and O'Reilly, 1997).

2.2.1.4. Business Infrastructure

Driving economic development through entrepreneurial ecosystems requires more than merely business expansion. It is essential to build a supportive infrastructure and advanced production systems that maximize the potential of individuals, firms, and communities (Guerrero and Siegel, 2024). A vital component of this infrastructure in Silicon Valley is the specialized business services tailored to startups. For instance, law firms and accounting companies provide mentoring, incubation, and acceleration programs to support emerging companies. According to Kushida (2015), these service providers often defer payment until the assisted startups become profitable, selectively engaging with clients they believe have the highest potential for success. This specialized infrastructure ensures startups receive the needed support to navigate early-stage challenges and reach sustained growth.

2.2.2. Sociological Factors

2.2.2.1. Knowledge Infrastructure

Knowledge infrastructure, which includes research centers and universities, is pivotal to entrepreneurial ecosystems (Jiang et al., 2022). These institutions facilitate research and invention and foster collaboration among skilled teams, enhancing human development and entrepreneurial opportunity recognition (Guerrero and Siegel, 2024). Silicon Valley, in particular, benefits significantly from its proximity to top-tier educational institutions like Stanford University and the University of California. These universities supply a steady stream of highly skilled talent, contributing to academic research and industry innovations. The students benefit immensely from direct industry access, receiving valuable feedback on their university projects that often evolve into commercial ventures. Strong partnerships with leading industry players ensure these institutions remain at the forefront of technological and business advancements (Kushida, 2015).

This integration of academic brilliance and industry expertise exemplifies Baumol's (2010) observations on innovation. He noted that radical or breakthrough innovations often emerge from small entrepreneurial firms, frequently originating from universities. The collaboration between these small entrepreneurial firms and multinational corporations with extensive research facilities enhances innovation and efficiency (O'Reilly and Tushman, 2008). Moreover, the prestigious universities attract leading researchers and faculty members, enriching Silicon Valley's workforce with technical specialists and innovative professionals. This influx of expertise sustains the region's reputation as a hub of innovation and entrepreneurship (Ilie and Budac, 2023).

2.2.2.2. Labor Mobility

Labor mobility in Silicon Valley is notably higher than in other regions, facilitating the recruitment process for startups while posing retention challenges for larger firms. As startups grow and sometimes become large firms through expansion or acquisition, they face the same retention challenges. To address this, wages in the region have risen considerably to attract and maintain top-tier talent. Moreover, this high mobility is not limited to lower or mid-level positions; even top executives from well-known companies frequently switch to competing firms, illustrating the pervasive flow of talent across all levels within the industry (Kushida, 2015).

2.2.2.3. Reputational Assets

Reputational assets also play a significant role in entrepreneurial ecosystems. A positive reputation is a rare resource and an essential source of competitive advantage (Barney, 1991). When a company joins an ecosystem with a positive reputation, this perception of trustworthiness, quality, and credibility transfers to it (Galbreath, 2005). This enhances the firm's ability to attract customers, secure partnerships and financial support, and achieve sustained growth, as seen in the case of Silicon Valley (Trunina et al., 2019).

2.2.3. Cultural Factors

2.2.3.1. Competitive Environment

Entrepreneurial ecosystems encompass cultural aspects influencing entrepreneurial and innovative behaviors (Guerrero and Siegel, 2024). Silicon Valley is renowned for its intensely competitive culture, where startups are constantly vying for dominance. They meticulously guard their business models and technologies from potential competitors (Kushida, 2015).

In contrast, larger regional firms advocate for open innovation, supporting the startup ecosystem by providing avenues to market innovations and fostering beneficial partnerships (Kushida, 2015). These large companies are crucial to the economic health of Silicon Valley as they provide a substantial market for startup products and services, leading many startups to prioritize business-to-business (B2B) transactions. Moreover, these firms frequently engage in mergers and acquisitions, incorporating startups into their operations and perpetuating a cycle of growth and innovation (Ilie and Budac, 2023).

2.2.3.2. Open Innovation

Open innovation enhances dynamic capabilities by enabling continuous renewal and asset modification (Guerrero and Siegel, 2024). Historically, large companies kept their research, development, and commercialization processes internal. However, they have increasingly adopted open innovation strategies, especially in Silicon Valley (Aftab Alam et al., 2022). This approach involves actively sourcing external ideas and knowledge to enhance internal innovation and broaden the opportunities for utilizing innovations outside the company (Chesbrough, 2003).

Partnerships with universities and other entities have become essential for basic research (Howells et al., 2012). These collaborations provide access to cutting-edge research and foster

knowledge exchange, crucial for developing foundational technologies (Chesbrough, 2003). In addition, corporate venture capital has become indispensable for applied research (Waites and Dies, 2006).

Mergers and acquisitions (M&A) are pivotal in the commercialization phase. Through M&A, companies can swiftly integrate innovative elements from the acquired entities into their business models, gaining access to new technologies and intellectual resources that might not be developed in-house (Dezi et al., 2018). This shift towards greater openness ensures companies stay innovative and responsive in a competitive market (Chesbrough, 2003).

2.2.3.3. International Talent

As mentioned, Silicon Valley benefits immensely from its steady flow of immigrants who maintain robust economic ties to their countries of origin, enriching the region with vast international connections. For instance, the movement of people from the Chinese diaspora and mainland China has helped establish a transnational production network. At the same time, connections with India have enabled business process outsourcing and software development. The significant presence of a high-performing, foreign-born workforce in Silicon Valley means the region is a gateway to global talent. Companies often find that leveraging Silicon Valley's networks provides significant international advantages (Saxenian, 2000).

2.3. Attempts to Replicate Silicon Valley

Many regions have identified innovation as a critical factor in economic growth and have consequently begun to develop supportive entrepreneurial ecosystems. Various initiatives and policies have been implemented to facilitate and enhance the effectiveness of these ecosystems. These measures are essential because they significantly shape entrepreneurial activities and foster innovation. For example, tax incentives, financial support, adaptable labor regulations, and robust intellectual property protections are crucial strategies. These context-specific policies, as highlighted by Guerrero and Siegel in their 2024 study, play a pivotal role in encouraging and sustaining innovation within regional ecosystems.

Government efforts often include promoting university-based startups (Feldman et al., 2019), and facilitating technology transfer, as technology and knowledge infrastructure are crucial components of entrepreneurial ecosystems and play a key role in shaping dynamic capabilities (Jiang et al., 2022). Governments also establish incubators and science parks, implement

programs to foster entrepreneurship and innovation and reform intellectual property regulations to enable faculty to launch startups (Guerrero and Siegel, 2024).

Due to the complexity of ecosystems and the lack of systematic information, empirical research has not yet developed adequate measures to assess the impact of ecosystems on company performance and economic growth (Autio et al., 2014). However, examining global venture capital distribution statistics can provide insights into entrepreneurial ecosystems' success worldwide (Sanders, 2023).

2.3.1. Statistics on Venture Capital Distribution Globally

PitchBook's global VC Ecosystem Ranking evaluates and compares locations based on their venture capital ecosystem development and growth rates. This framework scores each ecosystem by size, maturity, and growth rates to assist founders, operators, and investors in identifying promising locations for expansion or investment to achieve exceptional long-term returns (Sanders, 2023).

The Development Score in PitchBook's global VC Ecosystem Ranking is calculated based on the size and maturity of a region's venture capital activities. Size is measured by analyzing the volume and value of VC deals, exits, and fundraising in an area, with high activity levels indicating a robust ecosystem. The latter has numerous startups actively seeking and securing funding, suggesting a well-resourced environment conducive to making deals. High deal activity also implies that investors are keenly interested in the region, seeing it as ripe with viable investment opportunities. Phases of maturity define the ability of startups to attract funding, grow, achieve successful exits through IPOs or sales, and generate significant returns. Startups that consistently secure substantial capital are likely more mature, which indicates they are increasing their valuations, attracting talent, and significantly offering substantial returns to investors (Sanders, 2023).

2.3.1.1. San Francisco as a Leading Ecosystem

Together, the dimensions of size and maturity provide a comprehensive view of the development status of venture capital ecosystems, aiding stakeholders in pinpointing strategic opportunities for investment and expansion. Leading in both these areas, San Francisco is recognized as the most developed VC ecosystem in the world, with $364.5 billion invested in local startups over a recent six-year period, significantly outpacing other locations, including

the second-ranked New York. The city's exceptional lead stems from its integration with Silicon Valley, establishing it as a hub for technology startups, significant venture capital funding, and a thriving network of entrepreneurs and innovators. The global venture capital landscape is primarily driven by the US and Asia, which together account for seventeen of the top 20 cities, with nine from the US and eight from Asia. Europe's representation is more modest, with only London and Berlin featured. Additionally, Tel Aviv completes the top 20 list (Sanders, 2023).

2.3.2. Growing Ecosystem

Growth Scores in the PitchBook global VC Ecosystem Ranking also spotlight emerging VC markets, with Dubai leading, followed by Detroit and Berlin, indicating their potential. Raleigh and Houston round out the top five, reflecting a trend where startups and investors explore new locations beyond traditional, saturated hubs. Regarding geographic distribution, 65% of the top 20 fastest-growing VC ecosystems are in Europe and the US. Notable European cities showing high growth include Madrid, Milan, Tallinn, and Vienna, while Indianapolis, Miami, and Philadelphia are highlighted from the US. Asia has less representation in growth, with only three cities in the top 20, contrasting with its more substantial presence in development rankings (Sanders, 2023)

Like San Francisco, cities with elevated Development Scores often exhibit lower Growth Scores. This phenomenon is anticipated as it arises from the inherent challenge of achieving substantial growth in well-established VC ecosystems (Sanders, 2023).

Growth potential can be limited by market saturation, heightened competition, and diminishing investment opportunities. Conversely, more miniature ecosystems may possess more potential for rapid growth relative to their size. The top 50 overall rankings highlight a worldwide array of VC hubs, with 40% located in North America, 32% in Asia, and 24% in Europe. Notably, Dubai stands out as the singular representative from the Middle East, earning its place on the list due to its significant growth scale despite a lower development score (Sanders, 2023).

2.4. Abu Dhabi – Developing an Entrepreneurial Ecosystem

2.4.1. Business Landscape of Abu Dhabi

Abu Dhabi is rapidly emerging as a leading innovation hub, showcasing impressive economic credentials across various metrics and offering valuable insights and lessons that other dynamic

cities can utilize to bolster their own growth and innovation capabilities. Recognized as the most livable city in the Middle East and North Africa (MENA) for the fifth consecutive year by the 2023 Global Liveability Index, Abu Dhabi excels across critical dimensions such as stability, cultural availability, environmental quality, education, infrastructure, and healthcare services (Tan and Kaur, 2016).

The city's vibrancy and competitiveness are particularly evident in its socio-cultural factors, including domestic security and stability. The "Plan Abu Dhabi 2030" policy initiative also underscores a strategic vision for the city's sustainable long-term growth. Through significant government-driven investments in infrastructure, urban planning, and real estate development, Abu Dhabi has enhanced its livability, continuing to set benchmarks for urban excellence worldwide (Tan and Kaur, 2016).

Furthermore, Abu Dhabi has become a prime destination for foreign investment within its region, drawing $4.48 billion in FDI inflows in 2023 alone (Mayed, 2024). These inflows are central to the UAE government's strategy to reduce oil dependency and shift towards a knowledge-based, technologically advanced economy. Greenfield FDI, in particular, plays a crucial role in this transition by initiating brand-new operations, such as building factories and offices. This strategic investment creates extensive job opportunities and facilitates significant technology and expertise transfer from international to local entities. This enhancement in local skills and capabilities fosters innovation and elevates business practices across industries (Shadab and Alam, 2024). The Abu Dhabi Innovation Index further highlights the city's efficiency in integrating and leveraging knowledge, new technologies, products, and services throughout its economy. All these aspects make the city attractive to global talents searching for career or entrepreneurial opportunities (Tan and Kaur, 2016).

Moreover, greenfield FDI introduces vigorous competition within the local market, compelling both foreign and domestic firms to enhance their efficiency and innovate continually to stay competitive (Shadab and Alam, 2024).

2.4.2. Motivation for Becoming an Innovation Economy

2.4.2.1. Transition to a Knowledge-Based Economy

To broaden its economic base beyond the oil sector and secure a competitive advantage in future economic developments, Abu Dhabi's Economic Vision 2030, unveiled in 2008 following a significant government reorganization in 2007, provides a comprehensive

framework for transforming the Emirate from an oil-dependent economy to a knowledge-based one. It positions the private sector as the main driver of economic development. As part of this vision, Abu Dhabi is leveraging its ample resources to engage in strategic asset investment, foreign direct investment, and foreign acquisitions to promote economic diversification. Moreover, the Emirate is focusing on developing high-value-added, capital-intensive, and energy-intensive exports while gradually moving away from industries that add less value and rely heavily on low-skilled labor (Low, 2012).

While Vision 2030 emphasizes diversification, the hydrocarbon sector remains critical to Abu Dhabi's economy. The Emirate is also making strategic moves into nuclear energy, reinforcing its status as a significant global energy hub. This dual approach ensures that while new sectors are being developed, the traditional energy sector remains a strong economic foundation, demonstrating Abu Dhabi's ambidexterity (Low, 2012). This capability to explore and exploit enables Abu Dhabi to reconfigure existing assets and capabilities to identify and capitalize on new opportunities (O'Reilly and Tushman, 2008).

Abu Dhabi is shifting its economic focus from oil dependence to a knowledge-based economy, aiming to cultivate dynamic capabilities that allow for the integration, development, and reconfiguration of competencies to adapt to rapidly changing conditions. This strategic transformation draws on the framework proposed by Teece (2008), emphasizing the need for flexibility and innovation in the face of evolving economic landscapes. Central to this strategy is the acquisition of technology, which is vital for generating wealth beyond the oil industry and ensuring the long-term competitiveness of the Emirate (Cetindamar et al., 2009; Low, 2012). Furthermore, significant investments in human capital development are needed, as intellectual capital is the key driver of wealth creation in an emerging knowledge-based society (Ewers, 2017; Low, 2012).

Organizations in transitioning economies often face innovation challenges due to inadequate human, financial, and technological resources and capabilities (Dixon et al., 2010). Therefore, policymakers implement numerous government initiatives to boost innovation and entrepreneurship, such as subsidies and support programs (Guerrero and Siegel, 2024).

2.4.3. Economic Factors

2.4.3.1. Supportive Governmental Framework

Successful ecosystems thrive under leaders who provide a clear vision for the future, which motivates participants to collaborate effectively. This kind of leadership fosters a competitive advantage (Moore, 1993) and exemplifies dynamic capabilities—constantly adapting and innovating to enhance the ecosystem's overall performance (Feng et al., 2019).

The UAE's consistent top ranking in the Global Entrepreneurship Monitor (GEM) and its record-breaking National Entrepreneurial Context Index (NECI) score demonstrate these dynamic capabilities in action, reflecting effective governance and a forward-thinking approach to nurturing an entrepreneurial environment (Hill et al., 2023). The GEM has affirmed the UAE as the leading global destination for launching and managing new business ventures. This success is integral to the broader strategy outlined in the "Project of 50," aimed at fostering an environment conducive to entrepreneurial activities (Hill et al., 2023).

GEM's annual report is the most extensive study on entrepreneurship globally, analyzing global economies and assessing the development of their entrepreneurship landscapes. It evaluates thirteen Entrepreneurship Framework Conditions (EFCs), with the UAE excelling in 12 out of 13 indicators. These factors include the availability and accessibility of financing for entrepreneurial projects, cultural attitudes and social support towards entrepreneurship, supportive government programs and policies, and the impact of government taxes and bureaucratic processes on entrepreneurship. Other areas assessed are entrepreneurial programs, entrepreneurial education within school curriculums, post-school entrepreneurial education, the transfer of research and development from institutions to the market, the availability of professional services and commercial infrastructure to support new businesses, ease of market entry in terms of market dynamics and regulatory burdens, as well as the quality of physical infrastructure (Hill et al., 2023).

The NECI, which averages Entrepreneurial Framework Conditions scores across various economies, comprehensively evaluates countries' entrepreneurial landscapes. Since 2019, when the UAE was ranked fifth with a NECI score of 5.8, the country has shown steady improvement, advancing to a score of 7.2 in 2022 and further elevating to 7.7 in 2023. This demonstrates the transformative effect that government initiatives can have on an entrepreneurial environment. Additionally, it is noteworthy that the UAE emerged as one of

the top five countries supporting women entrepreneurs, providing exceptional social support and resource access. The only area where the country was ranked third in 2023 is the Physical Infrastructure, which scored 7.6 (Hill et al., 2023).

2.4.3.2. Incubator and Accelerator Initiatives

The Abu Dhabi government is committed to facilitating technology transfer from multinational corporations to smaller local entities, including family-owned businesses, to ensure that the benefits of innovation permeate through all levels of the economy, strengthening the workforce (Low, 2012).

Abu Dhabi has made significant strides in fostering innovation through key incubator and accelerator initiatives, notably The Innovation Centre at Masdar City and Hub71, each serving distinct sectors and contributing to the Emirate's broader economic diversification goals (Madar City, 2024)

The Innovation Centre at Masdar City is an innovative ecosystem that acts as a platform for hundreds of startups focused on sustainable projects and clean technology. Situated in the Masdar City Free Zone, this hub collaborates with multinational companies, research organizations, and educational institutions to advance the UAE's net-zero vision. It is also home to The Catalyst, the region's sole investor dedicated to technology, which is pivotal in advancing environmentally sustainable innovations (Madar City 2024; Hub71 2024).

Hub71 is a dynamic component of Abu Dhabi's tech ecosystem, dedicated to accelerating global growth for startups in the technology and digital sectors. With a robust network of investors and corporate partners, it provides essential support for startups to scale and access markets. Notable partners include industry giants such as Mastercard, Microsoft, and Siemens Energy, as well as significant government entities like the UAE Ministry of Economy, the Abu Dhabi Department of Economic Development, and the Abu Dhabi Investment Office. This extensive network underscores Hub71's influential role in fostering innovation and demonstrates its commitment to nurturing a collaborative environment for over 260 startups that have collectively raised more than $1.3 billion (Hub71 2024).

2.4.3.3. Financial Initiatives for SME

Financial initiatives for SMEs are pivotal in fostering the growth and competitiveness necessary for achieving Vision 2030's goals.

The Khalifa Fund for Enterprise Development (KFED) provides extensive support to enhance local employment and entrepreneurship among Emiratis. It offers business incubation services, funding, and counseling, waives government fees, and facilitates networking with market stakeholders (Ministry of Economy UAE, 2024). Despite significant strides, there is still a need to enhance these enterprises' productivity and competitiveness. For the success of Vision 2030, it is imperative that these companies not only prosper locally but also aspire to evolve into multinational corporations. This transformation should prioritize sectors such as manufacturing and tech services, moving beyond traditional focuses like retail and franchises (Low, 2012). KFED is proactively boosting the efficiency of these SMEs by cultivating a culture of innovation and promoting Emiratization (Ministry of Economy, UAE 2024).

Another example of an initiative to support the UAE's entrepreneurial ecosystem is the Mohammed bin Rashid Innovation Fund (MBRIF), launched by His Highness Sheikh Mohammed Bin Rashid Al Maktoum. This fund accelerates the country's transition to a knowledge-based economy (Ministry of Economy, UAE 2024).

2.4.3.4. Privatization Strategies

Abu Dhabi Inc. is actively embracing public-private partnerships and joint ventures to enhance business operations and foster collaboration, moving beyond simply owning and overseeing businesses. The partnership between the public and private sectors is strengthened through privatization efforts that commercialize government assets and inject capital via initial public offerings. These actions have increased the presence of Abu Dhabi-based companies on the stock exchange and cultivated a culture of shareholding. This privatization strategy is led by the Abu Dhabi Water and Electricity Authority, General Holding Company, and Mobadula (Low, 2012).

2.4.4. Social Factors

2.4.4.1. Knowledge Infrastructure

Social capital — the networks and relationships within a community — is essential in the development of entrepreneurial ecosystems. It helps to build dynamic capabilities, which are

crucial for innovating effectively (Feng et al., 2019). Universities and academic institutions in the UAE are pivotal in developing this social capital, enhancing collaborative networks, and facilitating knowledge exchange, which is critical for innovation (Ewers, 2017; Low, 2012). Abu Dhabi particularly attracted top international universities, like New York University and Sorbonne University (Ewers, 2017). As central hubs for innovation, these institutions are equipped with advanced research facilities that may support significant advancements in science and technology and foster international collaborations. These partnerships could enhance local and global projects, contributing to the Emirate's reputation as a leader in knowledge-based industries. Furthermore, recruited graduates, many of whom are foreign, are valuable assets to the UAE's workforce (Low, 2012).

2.4.4.2. Special Economic Zones

Free zones are designated multidisciplinary areas that operate under specific regulations and offer various advantages, including full foreign ownership of companies, tax exemptions, and streamlined company setup procedures. They serve as a base for multiple startups, SMEs, multinationals, and major industrial companies. These zones host a variety of businesses ranging from startups and SMEs to multinationals and major industrial companies, all benefiting from efficient infrastructure and a conducive business environment that encourages collaboration among like-minded enterprises. Each free zone is tailored to support distinct sectors and industries.

For instance, the Abu Dhabi Global Market is a financial hub with a unique dual licensing system for financial institutions. It provides strong access to capital from some of the world's largest sovereign wealth funds. It collaborates with leading academic and technology institutions, the global accelerator Plug and Play, government bodies, and other stakeholders. ADGM has introduced several initiatives to foster innovation within the UAE's financial sector. For example, the ADGM DigitalLab provides a virtual space for businesses to collaborate, test, and promote their solutions (Abu Dhabi Global Market, 2024).

Similarly, the ADGM RegLab offers a regulatory sandbox tailored for fintech startups. The ADGM Tech Startup License also supports entrepreneurs with guidance from ADGM's experienced advisors. It gives access to the Entrepreneurship Support Program, which offers opportunities for collaboration, mentorship, and participation in skills workshops (Abu Dhabi Global Market 2024).

Twofour54 in Abu Dhabi is another dynamic hub that fosters connectivity and innovation within the creative and media industries. This free zone offers substantial benefits such as zero percent corporate and income tax, full business ownership, and waived license fees for the first two years, facilitating more straightforward setup and expansion for companies. It provides real estate options, customizable office spaces, and extensive business support. It is committed to talent development and enhancing the skills of media and entertainment professionals through various training initiatives. Twofour54 also streamlines production activities by offering comprehensive facilities and assisting with permissions, visa arrangements, and bookings. Additionally, it supports freelancers by helping them navigate administrative procedures and promoting their profiles at community events, aiding them in launching successful careers within the UAE's vibrant media landscape (The Government of Abu Dhabi 2008).

2.4.5. Cultural Factors

2.4.5.1. Workforce Development

Cultural factors significantly influence entrepreneurial and innovative behaviors within entrepreneurial ecosystems (Guerrero and Siegel, 2024). In line with this, Abu Dhabi has implemented various funds and institutions to support human resource development. These initiatives aim to integrate nationals into the workforce, bolster national companies, and attract foreign talent, further enhancing the Emirate's entrepreneurial ecosystem. However, the Emirate still struggles with a high rate of voluntary unemployment among Emiratis (Low, 2012; Ewers, 2017). The local skill gap can be attributed partly to the absence of a robust industrial mindset within the private sector, as highlighted by Low (2012). Additionally, Emirati nationals are often attracted to the stability and benefits provided by public sector ministries, leading them to overlook opportunities in the private sector, as Ewers (2017) noted. Addressing this requires attracting foreign workers to vacant positions and implementing innovative strategies to change cultural mindsets and enhance work-related behaviors, aligning with Vision 2030's goals (Low, 2012).

Various initiatives have been implemented to support this transformation. For instance, in collaboration with the Abu Dhabi Education Council, the Technology Development Committee has developed a policy centered on innovation, science, and technology. By prioritizing mathematics and science in education and workforce development, these efforts

aim to enhance human resource capabilities, which have been a notable area of weakness up until now (Low, 2012).

2.4.5.2. International Talent Acquisition

Abu Dhabi has successfully attracted expatriates and cultivated highly internationalized economies to address the workforce shortage. Ewers (2017) contends that there are insufficient mechanisms to ensure the absorption of international knowledge by local firms and workers, indicating a need for effective training systems and policies to enhance local skills and ensure sustainable integration of global expertise.

Abu Dhabi's attractiveness to foreign talents is multifaceted. Its streamlined immigration processes and easy acquisition of work permits make it an appealing destination for skilled workers seeking employment opportunities abroad. Secondly, the absence of income tax, property tax (The Government of Abu Dhabi, 2008), and a low VAT rate of only 5% (pwc, 2024) contribute to higher wages than many other countries, bolstering its financial appeal. Additionally, foreign talent is enticed by competitive remuneration packages, which often include education allowances for their children, provided housing, and employer-covered health insurance. This comprehensive approach draws skilled individuals and supports them in establishing long-term commitments to the region (The Government of Abu Dhabi, 2008).

To further support international talent integration, international talents from various fields, such as investors, entrepreneurs, scientists, exceptional students, and graduates, can obtain the Abu Dhabi Golden Visa without requiring a sponsor, which was previously the employer. This visa is valid for ten years, granting long-term residency, and allows visa holders to sponsor their family members. Furthermore, entrepreneurs with businesses based in Abu Dhabi can apply for the Entrepreneur Golden Visa, which provides sponsorship to family and the applicant's employees (Abu Dhabi Residents Office, 2024).

2.4.5.3. Emiratization

Expatriates currently comprise 89% of the workforce, and considering the size of the national population, this ratio is unlikely to shift significantly in the foreseeable future. However, beyond attracting skilled workers, the Emirate's labor policies aim to incentivize Emirati nationals to participate in the private sector. The federal and local governments have integrated training programs with market-driven incentives to ensure they possess the required

qualifications and work ethic. Additionally, they've set minimum standards for workforce nationalization, necessitating companies in certain sectors to meet specific quotas for their national workforce, a practice commonly known as 'Emiratisation' (The Government of Abu Dhabi, 2008).

3. Research Methodology

This chapter outlines the research methodology, covering the research design and the data collection.

3.1. Research Design

Our research design sought to identify factors contributing to a successful entrepreneurial ecosystem (refer to Figure 1). Both primary and secondary data were gathered.

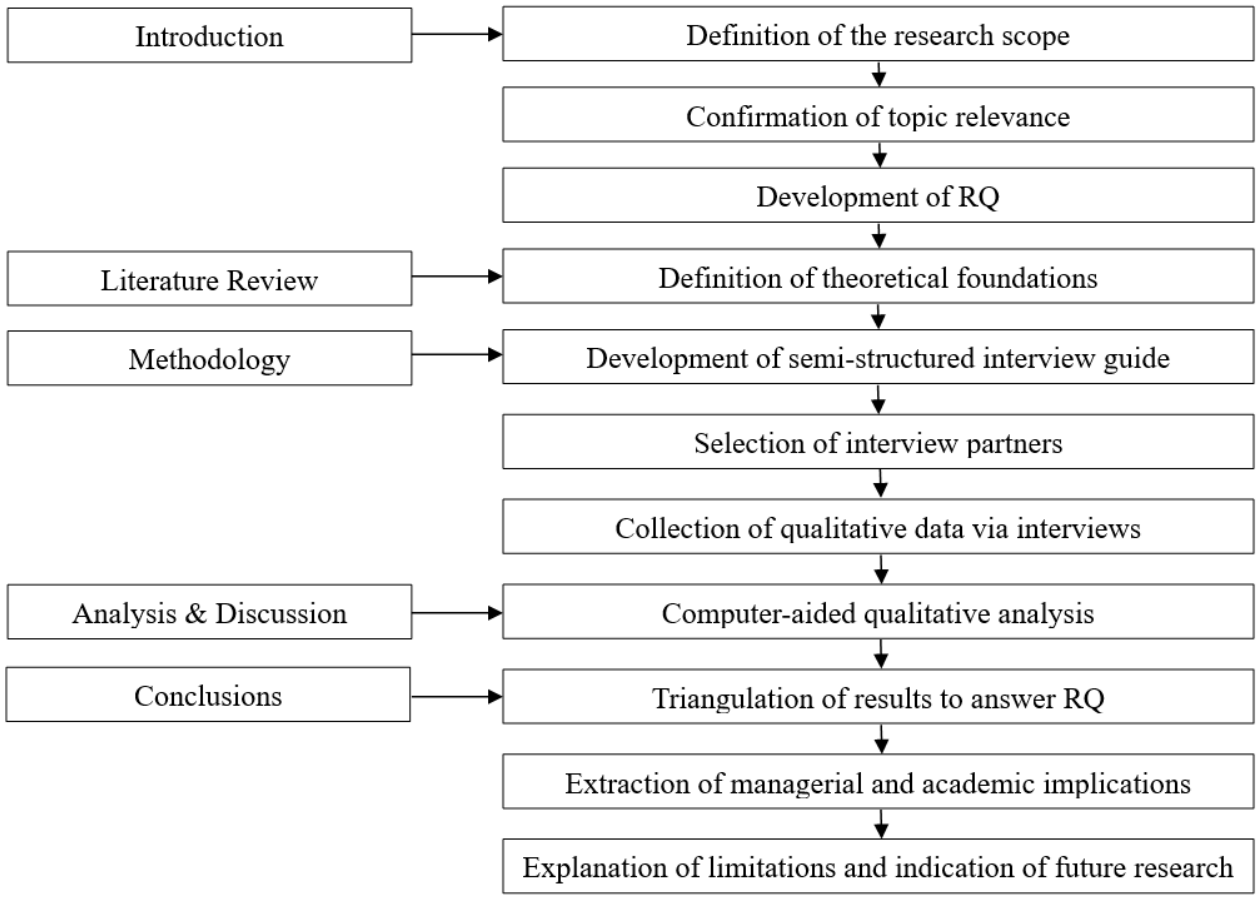

Figure 1 Research Design

Triangulation was used, combining primary and secondary data and inductive and deductive thinking (Bougie, 2016). First, the topic was narrowed by collecting secondary data on entrepreneurial ecosystems from academic journals accessible via Scopus, EBSCO Business Source Premier, ProQuest, industry reports, and official government websites. This helped us understand the baseline of the subject. Then, further secondary data was collected from Silicon

Valley and Abu Dhabi using the funnel approach. Official government documents and websites were also utilized as key sources of information to ensure the data was current and reliable.

The aggregated results of the research were validated with primary data from semi-structured expert interviews (Jamshed, 2014). Such an approach expands the range, detail, and reliability of the methods used (Flick, 2009).

These interviews helped us gain practical insights and identify nuanced challenges and opportunities in the entrepreneurial ecosystem of Abu Dhabi that might not be evident from published material alone. Expert interviews were an ideal qualitative method to obtain in-depth insights (Weiss, 1995; Qu and Dumay, 2011). Both expert interviews and the literature reviews were used as data sources to validate the Research Question qualitatively.

3.2. Data Collection

3.2.1. Primary Data Collection

According to Rowley (2012), interviews are typically utilized for qualitative research aimed at gathering ”facts” or understanding ”opinions, attitudes, experiences, processes, behaviors, or predictions” (p. 261). Semi-structured interviews allow a degree of flexibility to pursue various topics during the conversation and are commonly used in business research (Rowley, 2012). These interviews follow general guidelines but provide room for exploration as discussions progress (Magaldi and Berler, 2020).

A diverse range of professional perspectives was sought to gain a comprehensive understanding of Abu Dhabi's entrepreneurial ecosystem. Potential interviewees were identified using LinkedIn Sales Navigator with "Innovation" and "Entrepreneurial Ecosystem" as the search keywords. The target group included experts from various strategic roles within Abu Dhabi’s entrepreneurial ecosystem, such as financial experts, policy advisors, development managers, entrepreneurial ecosystem advisors, founders, students, investors, consultants, and legal professionals.

This search initially yielded over 18,000 potential leads, which were refined by filtering for alumni of Vienna University of Economics and Business, Católica Lisbon School of Business & Economics, or Queen's University Canada—universities the researcher had attended. This criterion was aimed at establishing a personal connection to enhance response rates. After applying the filters, 17 individuals were identified, and their LinkedIn profiles were screened

to confirm they met the target criteria. Qualified leads received a connection request with a brief message highlighting the shared educational background to foster trust and credibility.

After receiving only a few responses from the initial search, a second search was executed using "Innovation" as the keyword and filters for Abu Dhabi as the location, "Founder" as the job title, and "More than five years" as the minimum years of experience, resulting in 66 potential leads. These profiles were similarly reviewed, and upon meeting the criteria, connection requests were sent. Those who accepted were then invited to participate in an interview.

The interview invitation included a brief overview of the study's topic, introduced the researcher, and emphasized the study's importance. It also detailed what participants could expect, including guaranteed anonymity, the scope of the questions, and the estimated interview duration.

In total, 53 individuals were approached with interview invitations. Seven of them participated and subsequently referred the researcher to 8 other experts, leading to 5 more interviews, thus completing 12 interviews in total. Two invitees declined, and 39 did not respond, resulting in an overall response rate of 26.4 percent and an interview participation rate of 22.6 percent. After conducting these 12 interviews, further outreach was deemed unnecessary as the responses had begun to repeat the same themes, suggesting that saturation had been achieved.

The semi-structured interview was guided by a questionnaire (see Appendix A) created using an inductive approach, building on existing knowledge of the subject (Rowley, 2012). The questionnaire was designed to obtain a comprehensive view of the current state and the future potential of Abu Dhabi's entrepreneurial ecosystem, drawing on the personal insights of professionals actively engaged in the local innovation scene.

The questionnaire was organized into several distinct sections, beginning with demographic questions. It then progresses through four thematic areas: Background, Entrepreneurial Ecosystem, Abu Dhabi's Entrepreneurial Ecosystem, and Future Outlook. It concludes with questions that invite additional comments, inquire if interviewees are interested in receiving a summary of the research findings, and ask for referrals to other experts who could offer valuable insights. This methodology, known as a "pyramiding approach" (Ciesielska et al., 2018), was employed to expand the pool of interviewees. Participants were also encouraged to

share any additional insights throughout the interview freely. The questionnaire includes 13 qualitative open-ended questions and one quantitative yes/no question.

The Background section gathered basic information on the interviewees, such as their professional experiences and roles within Abu Dhabi's entrepreneurial ecosystem, along with their motivations for working in Abu Dhabi. The Entrepreneurial Ecosystem section explored the interviewees' views on what constitutes an efficient entrepreneurial ecosystem and what factors contribute to Silicon Valley's status as a global innovation hub. In Abu Dhabi's Entrepreneurial Ecosystem section, the focus shifted to identifying the drivers of innovation in Abu Dhabi, delving into specifics like government initiatives, social influences, and psychological attitudes that may distinguish Abu Dhabi's ecosystem. The Future Outlook section discussed enhancements needed for Abu Dhabi to become a global innovation hub. It asked interviewees to hypothesize where they would establish a startup and why they would choose that location if given the opportunity. The last question probed factors they would consider when choosing a location, exploring whether Abu Dhabi would be selected and, if not, what other places offer that Abu Dhabi might currently lack. This opened up a dialogue about the comparative advantages and possible shortcomings of Abu Dhabi's entrepreneurial ecosystem.

After scheduling the interviews, participants were sent an online meeting link. The interviews were conducted using Zoom or MS Teams and varied from 25 minutes to 1 hour and 7 minutes. The total number of participants was 12, comprising eight men and four women.

After the interviews were conducted, they were transcribed with the software tool, except where the interviewer took notes while conducting the interview. In the next step, the interviews were analyzed.

Expert interviewee	Current position, relevant experiences, and expertise	Years of experience	Years of experience in Abu Dhabi
Interviewee 1	• CFA at a sovereign wealth fund, specializes in energy transition and strategic asset allocation. • Expert in financial and operational restructuring, strategy formulation, M&A, financial reporting, performance management, and business development.	31	9

	• Former roles include: director at an energy company, non-executive director at a bank, founder advisor, and business analyst at a leading consultancy.		
Interviewee 2	• Development manager with a focus on energy markets and the financial industry, specializing in trading operations and market analysis. • Previous roles include director at two financial companies, senior associate, and senior analyst at a bank.	12	2
Interviewee 3	• Policy advisor and associate director at a think tank, with a focus on energy affairs and investments. • Former advisor to a board member at an international financial institution, senior economist at an investment authority, and analyst at the Ministry of Finance. • Expertise in mergers and acquisitions (M&A) and oil and gas equity research.	19	8
Interviewee 4	• Program officer at an intergovernmental organization focused on renewable energy. • A legal professional specializing in energy policy, regulation, climate change, and sustainability. • Experienced in governmental relations, stakeholder engagement, and project management. • Former director of an energy company.	24	2
Interviewee 5	• Founding partner of a financial advisory firm and head of ecosystem development at a venture capital and private equity company. • Serves as an entrepreneurial ecosystem advisor, angel investor, startup mentor, and global information services company council member. • Expert in venture capital, strategy consulting, and innovation policy, dedicated to supporting corporates, entrepreneurs, investors, and academia to enhance startup ecosystems.	21	13
Interviewee 6	• Entrepreneur in residence, consultant, and managing partner at an investment company. • Serves on advisory boards for a venture capital, private equity, and financial services company. • Manages family offices and holds a key role in investor relations and business development at a venture capital and private equity company.	15	3
Interviewee 7	• Partner at a venture capital and private equity firm and an active angel investor.	31	17

	• Holds advisory and director roles across various industries, including software solutions, financial services, motor vehicle manufacturing, e-mobility, and innovative environmental technologies. • Entrepreneur and managing director of an IT services and consulting company. • Former COO and operations director at an oil and gas company, CEO of a telecommunications company, and vice president at an engineering services company, with significant experience in leading major oil and gas projects.		
Interviewee 8	• Vice president of institutional sales at a company that graduated from an accelerator in Abu Dhabi, specializing in the financial service and commodity industries. • Focuses on accelerating the transition to a low-carbon economy. • Former director at a global financial services company and former head of a freight brokerage company.	14	1
Interviewee 9	• Principal at a venture capital firm, leading value creation and investment strategies. • Supports founders in fundraising, strategic planning, talent management, and operational improvements. • Specializes in identifying and evaluating investment opportunities in the EMEA region, managing portfolio companies, and collaborating with founders to foster growth and innovation.	13	3
Interviewee 10	• Head of Legal at a venture capital firm, specializing in venture capital and startups. • Serves as external legal counsel and is a member of the legal advisory committee at a venture capital and private equity principals company.	14	4
Interviewee 11	• Student at a top-ranking university and founder of a nonprofit company promoting global networking and entrepreneurship among young individuals. • Advisor at a student organization that supports founders and entrepreneurs. • Former academic major representative and assistant for a business program faculty at a top-ranking university. • Has experience in investment analysis, conference organizing, and fostering entrepreneurship within academic settings.	4	1,5

Interviewee 12	• Business developer at a company that graduated from an accelerator in Abu Dhabi, focused on developing sustainability initiatives and the transition from fossil fuels. • Previous experience in sales, marketing, partnerships, and strategic development.	6	3

Figure 2 Overview of Interviewees

Figure 3 below illustrates the distribution of interviewees by years of experience, highlighting the group's diversity.

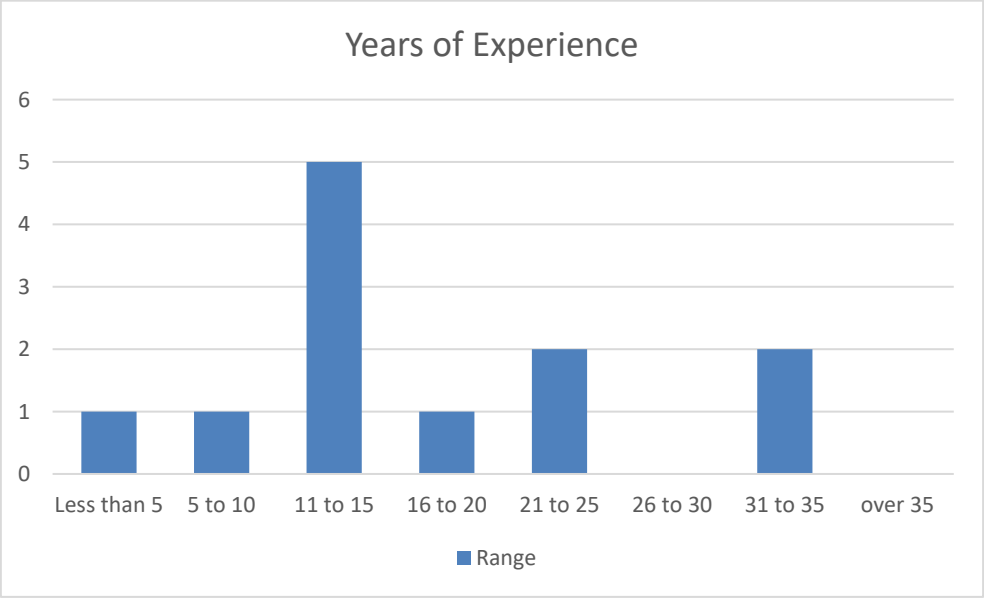

Figure 3 Years of Experience

The group was also diverse across nationalities, enabling us to capture varied perspectives on the factors driving innovation in Abu Dhabi. The interviewees came from nine countries, primarily from Europe, each bringing distinctive points of reference.

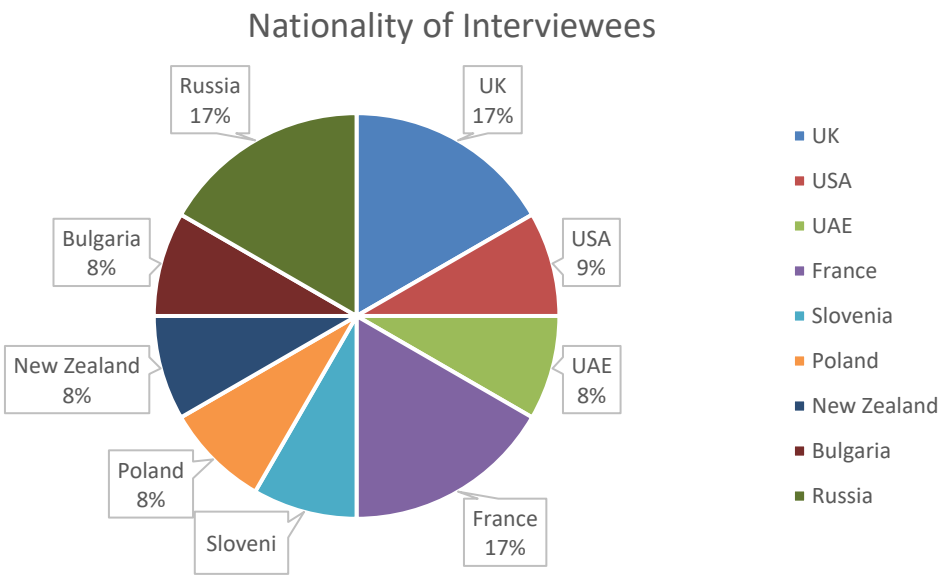

Figure 4 Nationality of Interviewees

The responses were analyzed using open coding and recurring thematic analysis to identify themes (Krippendorff, 2004) using MAXQDA. Initially, the transcripts and notes were uploaded to the software. Categories were then established using a mixed method approach: a deductive method guided by the questions from the questionnaire and an inductive method focused on identifying recurring themes in the interviewees' answers. This mixed method was proposed by Rädiker and Kuckartz (2019).

4. Analysis & Discussion

4.1. Efficient Entrepreneurial Ecosystem

After gathering the initial insights, we directed the conversation towards Abu Dhabi in the second part of the interview. This allowed us to assess whether the factors deemed essential by the interviewees were indeed present and impactful within Abu Dhabi's entrepreneurial ecosystem.

The following section (Chapter 4.1.) outlines the factors most commonly cited by interviewees as crucial for the success of an entrepreneurial ecosystem. Our analysis revealed that Abu Dhabi possesses many of the essential factors. However, it currently lacks a broad startup base, a deep talent pool, and a strong reputation. The chapter also discusses some unique characteristics and additional considerations specific to Abu Dhabi.

There are various factors crucial for success in the entrepreneurial ecosystem:

4.1.1. Funding

All interviewees agreed that funding is one of the most crucial factors. They said an efficient entrepreneurial ecosystem covers various funding stages, from the initial pre-seed to more substantial investments. Among others, it has enough angel investors and grants capital available. Interviewees also mentioned that founders often require "ignition capital" before they are ready to approach venture capital funds for institutional rounds. This initial capital, often provided by FFF (Friends, Family, and Fools), is vital for getting startups off the ground.

4.1.2. Talent Pool

The interviewees identified the availability of a talented pool of professionals as another critical factor for an effective entrepreneurial ecosystem. This talent pool should consist of innovative and technically skilled individuals, such as engineers, developers, and researchers, who are essential for generating and developing new ideas and technologies.

Beyond technical expertise, the ecosystem requires skilled business, sales, and marketing professionals. These individuals are crucial for translating technical innovations into

marketable products and strategies, ensuring that inventive ideas are also commercially viable (Ilie and Budac, 2023).

Furthermore, the interviewees emphasized the importance of a risk-taking mindset within this talent pool. The ecosystem should promote a culture that encourages risk-taking and supports a trial-and-error process. This includes providing safety nets that enable entrepreneurs to innovate without fear of catastrophic consequences. Interviewee 10 noted that attracting the right talent creates a flywheel effect, perpetuating a cycle of innovation and growth within the ecosystem.

4.1.3. Legal Framework

According to our interviewees and corroborated by Guerrero and Siegel (2024), an efficient entrepreneurial ecosystem features supportive legislation and policies, including tax incentives, grants, and intellectual property protections. It also prioritizes a low barrier to entry, simplifying visa procedures and company registration processes to attract local and foreign entrepreneurs.

4.1.4. Physical Infrastructure and Tech

Furthermore, interviewees unanimously highlighted that technology must be available, and a robust physical infrastructure must be provided, including incubators and accelerators that provide critical resources and guidance. Additionally, a network of experienced advisors and service providers is crucial to support new founders.

4.1.5. Broad Startup Base

Interviewees explained that a self-sustaining entrepreneurial ecosystem thrives on a high influx of startups entering the pipeline. This volume compensates for the typically high failure rates seen in early startup stages. With more startups participating, the likelihood increases that some will successfully progress through various funding stages, potentially reaching unicorn status. Such success stories create a positive feedback loop, setting an example to other startups and drawing attention from global investors, enhancing the region’s reputation as a fertile ground for new ventures.

This, in turn, increases the number of startups at the entry-level and encourages the growth of service providers who support these startups with essential services and funding, further strengthening the ecosystem.

4.2. Factors Shaping Abu Dhabi's entrepreneurial ecosystem

This chapter outlines the key factors shaping Abu Dhabi's entrepreneurial ecosystem. Expert interviews were analyzed using open coding and thematic analysis (see Chapter 3). The findings were then triangulated with secondary data from academic papers, published reports, websites, and industry data (see Chapter 2). This approach enhances the scope, depth, and reliability of the project (Flick, 2002).

4.2.1. Economic Factors

4.2.1.1. Government Initiatives

The UAE governance has created a leading entrepreneurial environment (Hill et al., 2023). Interviewees unanimously agreed that the government has played a critical role in accelerating the development of Abu Dhabi's entrepreneurial ecosystem by implementing initiatives beyond simply funding startups. These initiatives include revamping the legal framework to ease business operations, establishing free zones with specific legal jurisdictions, removing the requirement for majority local ownership, and allowing full foreign ownership of companies. Interviewee 5,6,7,11 highlighted the significant role of the Abu Dhabi Investment Office (ADIO) in promoting partnerships between the public and private sectors by offering subsidies and various incentives, including collaborations with entities like Plug and Play.

Furthermore, the government made significant changes to the immigration system, such as introducing the Golden Visa (Abu Dhabi Residents Office, 2024), which interviewees recognized as an important advantage for investors, entrepreneurs, engineers, and other technical talent, attracting them to the region.

Sovereign wealth funds such as ADQ have been pivotal in ecosystem development by nurturing private companies through venture capital (1, 7, 9) and sponsoring accelerators like Hub71. Interviewees 6, 10, and 11 emphasized that the private sector is expected to flourish in the coming years and also noted that without the government's endorsement of entrepreneurship, this burgeoning ecosystem would not have emerged. Interviewee 10 pointed out, "The region

is striving to leapfrog traditional development phases to quickly establish itself as a highly developed ecosystem," highlighting the critical need for ongoing government initiatives.

Interviewee 3 reinforced the importance of the government's involvement in the ecosystem but also noted its potentially negative impact as a direct competitor in the private sector, mentioning Mubadala's involvement in managing hotels. The interviewee observes such government entities often have competitive advantages due to favorable legislation and access to substantial capital, making it difficult for startups to compete with them. The interviewee argued that the government should avoid crowding out the private sector to prevent stifling innovation and entrepreneurship.
Interviewee 10 noted that the government has already started progressively phasing out its involvement in favor of private actors, but this cannot happen immediately.

4.2.1.2. Forward-Looking Leadership

The UAE's success in innovation can be attributed to its leadership, which is highly educated and forward-looking (3,4,6,8,9,11). Interviewee 4 clarified a common misconception: "It's a common misconception that the country's prosperity relies solely on its oil and gas resources; in reality, its achievements are extensive. The progressive governance has enabled diversified economic development beyond natural resources, establishing the UAE as a global hub for business, technology, and innovation." Further emphasizing this point, Interviewee 6 noted that the leadership's belief in human ingenuity is a critical factor in this success. Interviewee 11 added, "I truly believe in the vision and leadership of this country. What they have achieved in the past 30 years is remarkable and beyond any measure."

4.2.1.3. Technology

Abu Dhabi's leadership actively promotes technological advancements, a commitment frequently emphasized at public events (Abu Dhabi Residents Office, 2024). They advocate strongly for integrating technologies such as AI and are pushing for advances in renewable energy and electric vehicles (7,10).

Interviewees agree that this initiative reflects a clear strategy for economic diversification, moving away from reliance on oil and gas and towards building a sustainable and innovative future. The leadership is committed to fostering a culture of innovation among the populace.

“We don’t want to depend on oil and gas in the future,” said Interviewee 7, “we want our people to have innovations, and we also want to build the sense of innovation in them.”

4.2.1.4. Accelerators

Interviewees mentioned that local entrepreneurs are encouraged to engage with government accelerators, programs, incentives, and funding. To tap into these resources, entrepreneurs must meet specific criteria. Once part of a government accelerator such as StartAD, Hub71, or the Khalifa Innovation Center, they progress through the program, graduate, and seek further funding.

The Abu Dhabi Global Market (ADGM) was highlighted as a pivotal part of this infrastructure. Operating under a legal framework that aligns closely with standard law practices, ADGM is highly favored by venture capitalists (5).

Interviewees 9 and 11 emphasized that accelerators are crucial in attracting new international talent, introducing fresh ideas that help grow local companies, and fostering regional innovation.
Interviewee 8, whose startup graduated from Hub71, mentioned that the accelerator significantly helped the company in various aspects. ADGM, where Hub71 is located, fosters a business-friendly environment, particularly for new environmental startups and tech companies. The ecosystem is highly proactive; it helped the company set up, facilitated introductions to critical regulators like the Financial Services Regulatory Authority (FSRA), and connected them with other complementary companies. This assistance was crucial for establishing a supportive network and accelerating the startup process.

4.2.1.5. Mentorship

Interviewees 5 and 9 highlighted that mentorship plays a significant role in all major hubs. However, because the entrepreneurial ecosystem of Abu Dhabi is relatively young and not fully established, there is not yet a high number of experienced mentors who are founders with successful exits.

4.2.1.6. Free zones

Free zones in the UAE significantly simplify starting a business due to relaxed regulations and tax exemptions, primarily focusing on fostering entrepreneurship and efficient operations (Ministry of Economy UAE, 2024). These zones attract foreign direct investments (FDIs) and serve as hubs for many company headquarters (3, 6, 7, 11). Interviewee 7 highlighted that the government's commitment to renewable energy technologies led to the establishment of the Catalyst in Masdar City Free Zone, which specifically targets this sector. Similarly, G42 provides substantial funding to startups, focusing heavily on climate tech and practical, business-oriented innovations (1,2,3).

Interviewees concurred that the legislation in the UAE's free zones promotes entrepreneurship by simplifying the process of starting and innovating businesses. They also concurred that Abu Dhabi's legislation, particularly the simplified visa procedures and the removal of the local sponsor requirement for setting up businesses, significantly attracts international talent. Additionally, Interviewee 8 highlighted the recent introduction of the Blue Visa policy, which grants a ten-year visa to individuals making substantial contributions to sustainability. This policy underscores the government's commitment to attracting skilled talent and fostering regional sustainability.

Interviewee 9 highlighted the differences between Abu Dhabi's legislative environment and Europe's, noting that in Europe, excessive regulations often hinder startup growth and stifle innovation, prompting talent to seek opportunities in less regulated countries.

4.2.1.7. Funding

Interviewees pointed out that innovation in the region is primarily driven by substantial funding from major investors. Entities like IDQ, Mubadala, TeraVC, and the Tachnun family possess significant financial resources, particularly notable given the region's relatively small population of about 1 million inhabitants. These funds are actively invested in various ventures. As Interviewee 12 succinctly put it, "Access to capital - that's something they have an awful lot of here."

4.2.1.8. International Investors

Interviewees 9, 11, and 12 highlighted a gap in capital availability for medium-scale companies, making transitioning from startups to fully self-sufficient businesses difficult. Interviewees explained that there's ample support for startups, but as companies grow beyond that stage without being profitable, they lack resources. This contrasts with places like Silicon Valley, where a different set of investors might step in at this stage.

Interviewee 9 further explained that local sovereign funds like Mubadala and ADQ typically invest in larger, more established companies because they seek a guaranteed return on investment (ROI), a criterion less mature enterprises often struggle to meet. Consequently, companies in Abu Dhabi frequently need to seek funding from international investors (9, 11,12).

Moreover, Interviewee 9 added that while a few venture capitalists are active in the seed stages, there is room for more. However, maintaining a balance where the demand for capital slightly exceeds the supply is crucial to avoid funding unsustainable business ideas.

4.2.1.9. International Market

In line with Vision 2030, the government of Abu Dhabi is actively supporting companies to evolve into multinationals that deliver solutions appealing to international markets (Low, 2012). This strategy is particularly vital given the relatively small size of the local market, which several interviewees acknowledged (2, 5, 9, 12). Interviewee 5 noted that this market size constraint could benefit startups by preventing them from becoming overly specialized for local demands, thereby maintaining their global competitive edge.

Local startups are encouraged to think globally and many successful startups in Abu Dhabi have found inspiration from international markets. Interviewee 11 highlighted that these businesses often imitate and adapt successful foreign ideas to meet local needs. Despite this trend, Interviewee 2 pointed out a general lack of innovation in the banking sector, with 'Payypl' being a notable exception, showcasing genuine innovation.

Interviewees 9 and 10 observed that while consumer companies in the UAE face challenges in achieving unicorn status due to the small market, some have succeeded, significantly

influencing the local ecosystem. Notable examples include Careem, which Uber acquired for $3 billion, and Souq, purchased by Amazon for $4 billion. However, these companies have not yet made exits through initial public offerings (IPOs). The availability of IPOs is crucial to enable investor exits to occur which, in turn, attracts capital. This creates a virtuous cycle where successful exits inspire more individuals to pursue entrepreneurial ventures, thereby invigorating the business sector and fostering innovation (5,9,10).

Further discussions with interviewees revealed that the most innovative sectors in Abu Dhabi are AI and cryptocurrency. Yet, Interviewees 2, 8, and 10 pointed out that the city's primary focus is on revolutionizing business models to enhance efficiency and environmental sustainability and not so much on radical innovation. According to Interviewee 10, although not immediately apparent, these innovations significantly impact global industries such as oil and gas, shipping, and manufacturing supply chains.

4.2.1.10. Strategic Location

Interviewees 4, 8, 11, and 12 emphasized Abu Dhabi's strategic location, noting that all major business regions are within an eight-hour flight. This proximity also makes it convenient for residents to hop on a plane for a long weekend in Europe, facilitating easy visits home, as mentioned by Interviewee 12.

However, Interviewee 8 highlighted a downside to managing a global role from Abu Dhabi, noting that accommodating early morning and late evening calls is necessary, which can lead to very long and draining workdays.

4.2.2. Social Factors

Interviewees pointed out different aspects when asked about social factors shaping the entrepreneurial ecosystem. Most commonly discussed were academia, networks, an international environment, and lifestyle.

4.2.2.1. Academia

According to interviewees, Abu Dhabi is very young and hasn't had the time to establish research and academic institutions like those in Europe, resulting in a comparatively shallower research base.
To address this gap, Abu Dhabi is actively introducing university entrepreneurial programs to develop its talent base and attract international talents (Low, 2012), thus enhancing its academic and innovation capabilities (4,5,7,9,10). Interviewees added that notable institutions driving innovation include NYU Abu Dhabi, Khalifa Innovation Center, G42, and Mohamed bin Zayed University of Artificial Intelligence.

Interviewee 11 and Ewers (2017) highlighted NYU Abu Dhabi as a pivotal institution within the ecosystem, noting its comprehensive support for talent development. The university provides scholarships covering tuition, living expenses, and personal stipends and is also affiliated with the Hub71 accelerator, creating synergies that enhance the educational experience. Furthermore, interviewees noted a growing interest among international students in pursuing education here, which is significant as they bring entrepreneurialism and adventurism that influence the general student mindset (5,11).

Interviewees 7 and 10 observed a shift in academia in Abu Dhabi. Where once local students secured good jobs immediately after graduation, the increasingly saturated job market now prompts universities to encourage students to explore business and entrepreneurship. Contrastingly, one interviewee suggested that academic institutions tend to follow innovation trends set by the government rather than leading them (1).

The findings support Hypothesis 1, which asserts that Abu Dhabi's international environment stimulates innovation. We assume that many people come to Abu Dhabi to create a better life for themselves, which drives them to be proactive and entrepreneurial. They spread this entrepreneurial spirit as well as external knowledge, which positively impacts the entrepreneurial ecosystem of Abu Dhabi. This trend is expected to strengthen as the job market is getting saturated, and many nationals started seeking jobs in the private sector. We expect an increase in the number of startups as more local students develop entrepreneurial skills at universities and collaborate with international students. We assume that the influx of expatriates seeking better opportunities in Abu Dhabi fosters a culture of proactivity and

entrepreneurship. This enhances the local entrepreneurial ecosystem through the infusion of external knowledge and pushes more nationals towards private-sector employment, as the job market is becoming saturated. Additionally, we expect an increase in unicorns as many locals have started developing entrepreneurial skills and collaborating with international peers, uniting expertise with tacit knowledge about the local market.

4.2.2.2. Partnerships between ecosystem players

Interviewees 5 and 9 added that partnerships between ecosystem players in Abu Dhabi are less common than in mature markets like the USA or Europe. Local corporates are often reluctant to work with early-stage companies due to unfamiliarity with startup operations, making B2B interactions challenging.

They marked this as a crucial challenge, as B2B is essential for driving innovation. Effective collaboration between startups and established businesses can transform business operations and significantly impact the economy.
However, interviewee 9 pointed out that some entities, like Plug and Play, successfully manage collaborations in sectors like healthcare.

Additionally, Interviewee 5 highlighted that selling to businesses or government entities in Abu Dhabi involves a time-consuming and complex procurement process. Extended invoicing and payment cycles can critically restrict cash flow, posing a significant risk to startup survival.

4.2.2.3.Networking

Networking is universally acknowledged by Interviewees 2, 4, 6, 7, 8, 10, and 11 as a fundamental component of Abu Dhabi's entrepreneurial ecosystem. Interviewee 2 emphasized the importance of personal interactions for entrepreneurs, noting that in-person pitches are more effective than remote presentations for garnering support. Building on this, Interviewee 4 pointed out the critical role of trust in business relationships, explaining that investors evaluate the business proposal and the credibility and character of the individual behind it.

Abu Dhabi's conducive environment for networking is further supported by the numerous events that facilitate meaningful connections. Interviewees 6, 7, and 8 highlighted the government-sponsored LINK Networking Series held monthly at ADGM, which is pivotal in

bringing people together. Major UAE events like ADSW, ADIPEC, and WETEX also contribute to this ecosystem by featuring startup sections where small businesses can economically pitch to potential investors and attendees, thus driving innovation.

Additionally, Interviewee 7 noted that while the networking dynamics in Abu Dhabi mirror those in other global ecosystems, a distinctive feature in Abu Dhabi is the access to "dry powder"—extensive cash reserves maintained by local families. These family offices are keen on diversifying their investments and routinely support local SMEs, providing a unique financial advantage to the region's business landscape.

4.2.2.4. International talent

Abu Dhabi is attracting international talent which is pivotal for fostering knowledge exchange within the ecosystem (Ewers, 2017) and is important for an economy with a small local population (1,2,4,6,7,11). Furthermore, interviewees mentioned that the Golden Visa is a actor in attracting foreign talent. They explained that visas used to be tied to employment, causing uncertainty and investment reluctance due to potential expulsion after job loss. The 10-year Golden Visa eliminates the need for a corporate sponsor, enhancing stability and boosting private investments (1,3,4,6,9).

Interviewees 2, 3, 4, and 6 pointed out that the influx of foreign workers, especially from India, who often provide cheap labor, has led to the formation of a caste-like system and highlighted pronounced disparities in wealth distribution. This reliance on cheap labor has shaped a service-oriented society, influencing innovation. Interviewee 4 emphasized the importance of customer-centric innovation, stating, "When innovating, you need to constantly ask yourself, How do I make my customer's life better?" People will most likely adopt innovations that meet personal needs and enhance comfort.

Interviewee 9 observed that although international entrepreneurs contribute valuable experience and expertise, they frequently lack a cultural fit or a thorough understanding of the local market needs. Building on the insights from Chapter 4.2.2.1, which emphasized academic institutions teaching entrepreneurial skills to local students, we can anticipate that these students, who are also well-acquainted with the market, will collaborate effectively with

international entrepreneurs. This collaboration will likely enhance entrepreneurship activities and ensure new ventures are better tailored to meet market demands.

4.2.2.5. Emiratization

Emiratization was also mentioned as affecting the development of Abu Dhabi's entrepreneurial ecosystem. Historically, young Emiratis favored government jobs over private sector positions due to advantages like lower stress, fewer responsibilities, better work environments, and higher pay. Recognizing that this preference hinders economic diversification and private sector growth, the government has launched initiatives to make private sector employment more appealing to Emiratis (3,5,6,7,10,11).

Interviewee 3 mentioned the Nafis initiative, which seeks to bridge the salary gap between the public and private sectors, encouraging Emiratis to consider private employment and supporting the growth of the private sector. This shift in employment preferences is complemented by a broader change in societal attitudes, with Emiratis becoming more productive and ambitious, a trend noted by Interviewees 5, 6, and 10. Furthermore, the impact of these changes is visible in the rising number of Emiratis occupying senior positions within the private sector. This is crucial for integrating more nationals into diverse industries and enhancing the competitive environment within the country, as highlighted by interviewees 6, 7, 8, 10, 11, and 12.

Despite these strides, challenges remain, particularly in aligning educational outputs with the needs of the private sector. Interviewees 2 and 5 pointed out that many locals hold academic degrees that are not well-suited to the needs of the private sector, reflecting the traditional expectation of public-sector employment among locals.

Furthermore, Abu Dhabi's cultural openness to progression is another defining feature of its entrepreneurial ecosystem (12). The interviewee emphasized that projects are executed swiftly in Abu Dhabi- a stark contrast to Europe's slower pace of project development. This efficiency sets a high standard locally, leading to discontent when solutions to problems are not immediate, giving air pollution as an example.

4.2.2.6. Lifestyle

The interviewees provided valuable insights into the lifestyle in Abu Dhabi, enriching the understanding of factors discussed in the literature review with personal observations and experiences.

Interviewees unanimously agreed that Abu Dhabi provides an appealing lifestyle and a frictionless, high standard of living. The Emirate is known for its service-based society, where it is common for families to employ domestic helpers such as nannies, drivers, cooks, and cleaners to assist with household duties (2,3,4,6,10,12). All the women interviewees who discussed this aspect highlighted that such support significantly eases their daily lives, enabling both parents to pursue their careers effectively.

As noted by interviewees, another critical advantage of Abu Dhabi is its exceptional safety. They reported virtually zero crime, allowing residents to live without fear of harm. Interviewee 6 described that "this place feels like an oasis," adding that people often don't lock their houses even when leaving for months.

Additionally, the interviewees mentioned that the city offers a variety of activities. Interviewees 6 and 10 noted that the community is very sporty and that the government promotes a healthy and active lifestyle, offering free sports classes as part of its wellness and longevity initiatives. However, the city misses cultural activities and walking zones (2, 4,6,12).

4.2.2.7. Supporting Women Entrepreneurs

As detailed in the literature review and highlighted by Hill et al. (2023), the government's active promotion of women entrepreneurs is clearly manifested in Abu Dhabi's business landscape. Interviewee 4 pointed out the tangible outcomes of these initiatives, observing that many women now hold high positions and lead companies.

4.2.2.8. Political stability

Interviewee 7 and Interviewee 11 emphasized the crucial role of geopolitical stability in the country, praising its excellent legal system and overall safety and security. These factors facilitate the integration of newcomers, who find it relatively easy to blend in, navigate, and learn.

4.2.2.9. Weather

Interviewees agreed that Abu Dhabi has a vibrant and dynamic ecosystem that attracts many people and continuously grows yearly. However, the most frequently mentioned disadvantage regarding liveability was the weather, particularly the high temperatures and UV index during the summer. Consequently, many people move to Europe during these months, working remotely—a practice that has become increasingly convenient and popular (1,4,6,8,9). Furthermore, interviewees 2, 8, and 12 noted poor air quality and lack of nature. Interviewee 2 mentioned that these conditions are unsuitable for families with small children.

During the rest of the year, interviewees said they enjoy the consistently warm and sunny weather. Interviewee 6 mentioned that this reliable weather makes planning outdoor activities and sports easy. Additionally, Interviewees 10 and 12 noted that the abundant sunshine positively influences mood and mentality, preventing "winter depression", though the summers are also extremely warm.

Hypothesis 2 proposes that Abu Dhabi's high standard of living dampens entrepreneurial drive. Our analysis found this hypothesis to be inconclusive, as evidence both supports and contradicts it. While a comfortable lifestyle may decrease motivation, other factors such as household assistance and efficient infrastructure facilitate business operations, enhancing efficiency, support, and confidence among residents to innovate and start their ventures.

4.2.3. Psychological Factors

Interviewees also helped us close the gap in the literature about the psychological factors that influence Abu Dhabi's business community.

4.2.3.1. Risk Aversion

Interviewees expressed different opinions on the presence of risk-taking attitudes. One group argued that the population is entrepreneurial, open to new ideas, and not risk-averse. They highlighted that an entrepreneurial mindset is prevalent among the national workforce(1,4,8,11). Interviewee 1 explained that Emiratis are family-oriented and benefit from well-developed social safety nets that encourage investment and innovation. Their natural inclination towards trade and entrepreneurship enhances their willingness to explore new

ventures and establish businesses, contributing significantly to the region's success in innovation.

Interviewees also pointed out that the younger generations of Emiratis are highly entrepreneurial, often asking their elders to allocate a portion of the family's capital to venture investments. These young individuals are also more willing to try new things and engage with different trends, striving to innovate and establish themselves (4).

Some interviewees focused on the negative side of social safety nets (5, 6), pointing out that while they reduce opportunity costs and facilitate the initiation of businesses, they also create a comfort zone that can diminish people's drive. Interviewee 3 mentioned that in Abu Dhabi, many people establish side businesses as an additional source of income that are not innovative and do not contribute to diversifying the economy.

Furthermore, interviewees supported both perspectives (3,11), noting that the region is very entrepreneurial, with numerous policies that support these initiatives. They acknowledged that while many nationals are entrepreneurial and driven, it is also common, as in other economies, for many to prefer traditional employment paths. Interviewees 6 and 12 noted a significant disparity in commitment levels between private and public sector employees.

Additionally, Interviewee 3 stated that the culture does not encourage trial and error as a learning method and that there is little acceptance of failure in the region.

4.2.3.2. Competitiveness

Interviewee 3 noted that society values non-confrontational approaches and prioritizes relational harmony over engaging in fierce competition. However, this cultural trait also means there is a lack of appreciation for the competitive dynamics essential for driving innovation and economic progress.

4.2.3.3. The Role of Status Symbols in Social Identity

Interviewee 4 argued that for innovation to succeed in this region, it must align with the local culture and mentality. For example, employing domestic help such as cooks, cleaners, and

drivers is expected not just for convenience but as a status symbol. Innovations should serve a practical purpose and fit into societal norms and perceptions of status.

4.2.3.4. Hospitality

Interviewees unanimously agreed that Abu Dhabi is very welcoming and accommodating to internationals, with supportive legislation and the openness of the nationals facilitating the settlement of new talent. Interviewee 7 said that this shaped the mentality in the ecosystem, often leading to collaborations where locals and internationals create businesses together.

Further emphasizing the community aspect, interviewees highlighted that Abu Dhabi fosters a sense of belonging, making it easy for people to feel at home. They emphasized the ease of navigation and communication facilitated by the widespread use of English. Additionally, they observed that children from mixed international backgrounds feel well-integrated rather than feeling like outsiders, allowing them to experience the true meaning of diversity (10,11,12).

Interviewee 8 specifically noted that this inclusivity makes the region unique compared to other entrepreneurial ecosystems. For instance, in Singapore, expatriates often feel unwelcome and are perceived as job-stealers, whereas Abu Dhabi embraces all, making everyone feel like they belong.

Interviewee 4 concluded the discussion by highlighting that the government respects local traditions while adapting to Western standards. For example, they adjusted the workweek to run from Monday to Friday, designating Friday as a half work day to accommodate time for mosque visits, thus balancing work commitments with cultural practices.

4.3. Comparative Analysis of Entrepreneurial Ecosystems: Abu Dhabi and Silicon Valley

Interviewees benchmarked Abu Dhabi against Silicon Valley, highlighting significant differences and similarities. Silicon Valley's organic growth, risk-tolerant culture, and dense startup environment contrast with Abu Dhabi's top-down development, government-driven initiatives, and evolving market. These insights lead to suggestions for enhancing Abu Dhabi's entrepreneurial ecosystem (see Chapter 5.1.).

4.3.1. Funding

Silicon Valley provides easily accessible capital at all stages of a company's growth. Conversely, interviewees noted that while Abu Dhabi offers substantial funding for early-stage and mature companies, there is a notable gap for mid-stage companies, making it difficult for them to secure financing. Interviewee 12 even pointed out that some companies that graduated from Hub71 in Abu Dhabi relocated to Silicon Valley. As Abu Dhabi's non-oil ecosystem evolves, with hedge funds establishing in the city (1), this could broaden the financial sector and potentially fill existing funding gaps.

4.3.2. Talent Pool

Silicon Valley benefits from a deep talent pool bolstered by nearby top academic institutions integral to the ecosystem. It is home to major tech companies, R&D clusters, and top founders and advisors (1,2,5,6,7,10,11). Conversely, interviewees identified a talent shortage in Abu Dhabi due to its small population and the UAE being a relatively young country. To address this, the Emirate attracts experts with competitive salaries, bringing external knowledge and innovation to the region (2, 6, 11, 12).

4.3.3. Legal Framework

According to interviewees, many regions are evolving into startup hubs, but replicating Silicon Valley is nearly impossible due to differing needs and economic contexts (1, 5, 6). They noted that while Silicon Valley evolved organically, Abu Dhabi is heavily influenced by government strategy. This strategy tremendously impacts innovation and entrepreneurship, creating a highly efficient and business-friendly legal framework. Key factors include tax exemptions, total foreign ownership allowances, and free zones with specific legal jurisdictions. Additionally, entrepreneurs are attracted to Abu Dhabi because of the zero income tax and easy visa acquisition. Interviewees emphasized that while Abu Dhabi's entrepreneurial ecosystem is still young, strong government support, favorable legal frameworks, and strategic initiatives drive rapid development, positioning it as a burgeoning startup hub with the potential to rival established regions like Silicon Valley.

4.3.4. Physical Infrastructure and Tech

Silicon Valley offers access to the latest technology, research facilities, and top infrastructure (Adams, 2021). Conversely, Abu Dhabi is committed to developing a robust technological

base, increasing investments in technology acquisition and research and development (Low, 2012). Interviewees highlighted that this push stems from a government strategy to diversify industries and protect the economy against potential downturns in the oil and gas sector.

4.3.5. Broad Startup Base

Interviewees agreed that Silicon Valley's dense startup base creates a highly competitive environment where only the best ideas thrive. This success generates a flywheel effect, attracting more entrepreneurs to launch businesses and setting a paradigm for success. This culture is entrepreneurial, characterized by a willingness to take risks and try new things, with failure viewed as a learning opportunity, which is crucial for the ecosystem (5, 6, 11).

Conversely, Interviewee 3 noted that Abu Dhabi's culture does not encourage this trial-and-error process as a learning method, with little acceptance of failure in the region. However, Interviewee 6 highlighted that government initiatives drive Abu Dhabi's entrepreneurial ecosystem to develop rapidly, potentially surpassing Silicon Valley's pace. Interviewee 3 mentioned that Abu Dhabi's culture does not support a trial-and-error learning approach and has a low tolerance for failure. However, government initiatives rapidly advance Abu Dhabi's entrepreneurial ecosystem, potentially outpacing Silicon Valley (6).

4.3.6. Reputation

Interviewees noted that a unique aspect of Silicon Valley is its storied reputation for "creating a dream" (2, 5, 6). This narrative, dating back to the previous century, continues to resonate and contributes to Silicon Valley's allure. The region is viewed as a blend of idealism, with aspirations to change and save the world and strong commercial ambitions, aiming to profit from these innovations (6).

Starting a business is a significant life decision due to its inherent risks, and founders typically avoid additional uncertainties like moving to a new environment without social ties. However, Silicon Valley is a notable exception; its strong media-promoted appeal attracts many entrepreneurs and professionals despite the risks (10). Interviewees agreed that Abu Dhabi has successfully marketed itself internationally as an attractive business destination. It has transitioned from offering high compensation packages to attracting talent to being a place where people actively seek to relocate. This increased demand has pushed up salaries, making

it easier for startups to hire talent. However, Interviewee 4 said that Abu Dhabi still needs a more substantial marketing push.

Whether Abu Dhabi should try to emulate Silicon Valley or create its distinct entrepreneurial ecosystem remains a question. With its unique background, Interviewees concurred that Abu Dhabi should develop a tailored approach that aligns with its market and cultural specifics. “Abu Dhabi has evolved. It is evolving. So we are not Silicon Valley yet, but I promise you, all of the critical ingredients are here. Pretty soon, we’re going to learn how to make the best cake” (6).

4.3.7. Making the private sector more competitive

Interviewees highlighted the need for Abu Dhabi’s private sector to become more competitive, which is challenging due to the local culture prioritizing good relations and cooperation. One approach to fostering competition is reducing government involvement in the private sector. This would allow private companies to address market needs and compete more effectively, driving innovation and achieving a sustainable competitive advantage (3). Currently, private entities face significant disadvantages when competing with government-backed companies.

Additionally, the government should reduce fees on small enterprises. High costs for services, telecommunications, registration, and rent burden smaller businesses. Allowing businesses to grow before imposing taxes will enable more people to register their companies, develop their businesses, and eventually succeed, at which point they can be taxed (3, 12).

Furthermore, Abu Dhabi should continue promoting private-sector employment through initiatives like Emiratization and attracting global talent. Addressing monopolistic structures, high costs, and reliance on government jobs is essential for Abu Dhabi to become a global innovation hub.

4.3.8. Focusing on mid-stage

The lack of funding for mid-stage companies needs to be addressed, as many interviewees highlighted that most support is targeted at early-stage and mature companies (8, 9, 10, 12). To fill this gap, the government should encourage B2B transactions and partnerships and ensure mature companies know how to collaborate with startups. This can be achieved by mobilizing

corporate partnerships, international grant funding, prizes, and fellowships. Additionally, Abu Dhabi could focus more on national mandates related to food security, climate, AI, and cybersecurity (5).

Interviewees noted that many businesses lack corporate innovation and the mindset to buy from startups. This situation slows career progress and causes startup cash flow crises due to slow and cumbersome procurement, tendering, RFP closing, and billing cycles. B2B and B2G transactions should be made easier and faster to improve this. Solving actual pain points for businesses can fundamentally change how the economy operates, making it crucial for startups to have a better path to market through streamlined processes (5).

4.3.9. Increasing university inegration

There should be a stronger push for university integration in Abu Dhabi to foster talent and innovation further. This can be achieved by encouraging more universities to open campuses in Abu Dhabi and making it easier for students to study there (1, 7). While interviewees acknowledged the high costs and complexities involved, they believe this step is crucial for enhancing the ecosystem. They also suggested that university acceptance criteria should be less selective, as innovation is not limited to candidates with the highest GPAs.

Furthermore, integrating students into the ecosystem can be enhanced by offering more entrepreneurship programs, specializations, student consulting projects, and internships in private companies. It is also essential to support students in generating and developing their startup ideas (11). These initiatives will help bridge the gap between academia and industry, creating a more dynamic and innovative environment.

5. Implications, Limitations & Future Research

5.1. Implications

The research offers various implications, particularly those that could be addressed through government intervention. The findings suggest that small enterprises are overly burdened with various fees. While it is understandable that the government needs to collect revenue, it would be more beneficial to allow small enterprises to grow first and tax them later when they are fully developed. One interviewee aptly noted, "You cannot harvest fruits from seedlings; you must let them grow into trees and then harvest the ripe fruits." This approach would encourage more people to develop businesses, leading to more successful enterprises that can later be taxed.

For example, one solution is to break down the monopolistic structures of the real estate and telecommunications industries. These commodities are essential for enterprises and should be made more accessible. Additionally, the government should continue to phase out of the private sector while offering support for mid-stage companies. Although some of these companies received initial support from accelerators, they now struggle to attract funding. Providing ongoing support would help them grow and innovate and prevent them from relocating to seek international funding. Furthermore, a solution for B2B transactions needs to be developed. According to the interviewees, the current lack of collaboration between corporations and startups is due to unfamiliarity, lengthy procurement, and bureaucratic processes.

Moreover, Abu Dhabi should address its overly commercial and artificial “feel” when trying to attract more international talent, especially from Europe. Introducing more green spaces, cooled areas, walking paths, and cultural events would encourage people to spend more time outdoors. This is particularly important for young families, as even an excellent relocation package or other monetary incentives may not be enough if they cannot raise their families comfortably in Abu Dhabi.

The second part of the implications focuses on educational institutions in Abu Dhabi. There should be a stronger emphasis on developing entrepreneurship skills in schools. Universities should offer more entrepreneurship courses, specializations, and programs focused on helping students generate ideas. Lowering acceptance criteria to increase the talent base could also be beneficial, as innovation is not exclusive to A-level students. A-level students often focus on perfect execution and may struggle in the startup environment, where acting fast and iterating

based on user feedback is crucial. By fostering a culture that embraces failure as a learning opportunity, more students will be encouraged to try setting up companies, leading to more success stories and innovations.

We recommend launching more projects or contests that challenge students to solve specific problems in partnership with companies and the government. For example, the government could address a waste management issue by incentivizing students to propose ideas and collaborate with companies to implement them. This approach leverages private-sector innovation to solve public problems, commercializes solutions for companies, and gives students valuable entrepreneurial experience.

Moreover, this thesis recommends that founders consider Abu Dhabi as a base due to its significant opportunities. Abu Dhabi provides a supportive environment, financial incentives, a well-connected network of entrepreneurs and companies, access to a growing talent pool, integration with global markets, and a high standard of living.

Academically, this research contributes to understanding entrepreneurial ecosystems, particularly in regions with distinct economic contexts like Abu Dhabi. It emphasizes the need for tailored approaches rather than attempting to replicate models like Silicon Valley. Each geography is *sui generis* and needs to leverage its strengths, while still trying to replicate key factors that are the building blocks of an effective entrepreneurial ecosystem. This study also provides a foundation for future research on strategic initiatives necessary to build sustainable innovation environments and develop knowledge-based economies.

5.2. Limitations

The research is subject to several limitations. Firstly, Abu Dhabi is developing extremely rapidly, with new initiatives emerging even during the course of this research. For instance, the Blue Visa was introduced just a few days ago, limiting staying up-to-date with the latest changes. Additionally, the literature review primarily relies on peer-reviewed academic papers. There may be relevant studies that have not yet undergone peer review, which could have been beneficial for this study.

Secondly, the research is limited by a small sample size. More significant insights could have been gained with more interviews and a broad survey involving startups, entrepreneurs, and other entrepreneurial entities. Obtaining secondary data was also challenging due to inconsistencies across different government institution websites.

Moreover, psychological factors are inherently difficult to evaluate and gather data on. Finally, the research was constrained by a tight timeframe, as it was conducted over a span of two months.

5.3. Future Research

Further research is needed to gain a more comprehensive understanding of the factors affecting the success of entrepreneurial ecosystems, particularly in Abu Dhabi. Conducting a longitudinal study to track the ecosystem's development would be beneficial, given its rapid changes. Future research should include both qualitative and quantitative analyses of startups outside Abu Dhabi to investigate their location choices and reasons for not establishing themselves in Abu Dhabi.

Additionally, while our research focused on successful individuals already established in Abu Dhabi, it is crucial to study startups and founders who attempted but failed to establish themselves in the city. This could reveal ecosystem gaps that hinder innovation and mitigates the issues associated with survivorship biases. Comparing the innovativeness of founders in Abu Dhabi with strong financial bases to those who started with limited resources would also be insightful. This comparison could help determine whether necessity or financial availability drives change and innovation.

6. Conclusion

Global markets and customer needs are evolving unprecedentedly, and competition is intensifying. Individuals, companies, and governments need to be innovative to maintain a competitive edge. Abu Dhabi exemplifies this with its dynamic capabilities that adeptly balance exploiting existing resources with exploring new opportunities. Recognizing the finite nature of its natural resources, Abu Dhabi has strategically diversified, transitioning from an oil-based to a knowledge-based economy to ensure long-term prosperity. The region has established top-tier infrastructure and launched numerous initiatives to accelerate the development of its entrepreneurial ecosystem, fostering entrepreneurship and attracting international talent.

This thesis assesses Abu Dhabi's advantages and identifies potential areas for improvement by comparing it with Silicon Valley's entrepreneurial ecosystem. Silicon Valley is distinguished by its exceptional reputation and culture, which is extraordinarily welcoming to risk and open to new ideas. This culture nurtures a broad base of successful enterprises, inspiring more entrepreneurship and perpetuating a flywheel effect.

The research explored the business landscape and critical factors in Abu Dhabi, comparing them with Silicon Valley to highlight commonalities and unique aspects. Abu Dhabi's approach is marked by a niche, tailored strategy to its market dynamics.

The study collected qualitative data from primary and secondary sources using a mixed research method that integrates inductive and deductive reasoning. Through triangulation, comparing literature reviews with insights from expert interviews, the study enhanced the credibility and validity of the findings. Interviews with key stakeholders in Abu Dhabi's entrepreneurial ecosystem—including startup founders, angel investors, VCs, and legal and financial advisors—provided a deep understanding of the regional challenges and opportunities.

The findings indicate that Abu Dhabi has achieved significant development in a short period. The region has fostered infrastructure, special business zones with unique regulations, accelerators for nurturing new ideas, and supportive initiatives for startups and founders. As an emerging ecosystem, it naturally has areas needing enhancement. The study suggests reducing government involvement in the private sector to boost competitiveness, focusing on mid-stage companies to scale their solutions with funding and streamlined B2B processes, and increasing collaboration with universities to develop projects, expand entrepreneurship programs, and

enlarge the talent pool. Encouraging a culture of risk-taking and providing a safe environment for experimentation could further propel the creation of startups and generate a self-reinforcing cycle of growth.

The thesis recognizes certain limitations and proposes directions for future research that could help improve innovation strategies. We are confident that Abu Dhabi, equipped with all the necessary resources and capabilities, should serve as a model for other developing ecosystems and is on the verge of becoming a leading global entrepreneurial ecosystem.

7. References

Abu Dhabi Global Market (Ed.) (2024): ADGM, Abu Dhabi's International Financial Centre. ADGM. Available online at https://www.adgm.com/, updated on 5/14/2024, checked on 5/14/2024.

Abu Dhabi Residents Office (2024): Abu Dhabi Golden Visa. Available online at https://adro.gov.ae/Visas/Types-of-Visas/Abu-Dhabi-Golden-Visa, updated on 5/31/2024, checked on 5/31/2024.

Adams, Stephen B. (2005): Stanford and Silicon Valley: Lessons on Becoming a High-Tech Region. In *California Management Review* 48 (1), pp. 29–51. DOI: 10.2307/41166326.

Adams, Stephen B. (2021): From orchards to chips: Silicon Valley's evolving entrepreneurial ecosystem. In *Entrepreneurship & Regional Development* 33 (1-2), pp. 15–35. DOI: 10.1080/08985626.2020.1734259.

Adner, Ron (2006): Match your innovation strategy to your innovation ecosystem. In *Harvard business review* 84 (4), 98-107; 148.

Adner, Ron; Kapoor, Rahul (2010): Value creation in innovation ecosystems: how the structure of technological interdependence affects firm performance in new technology generations. In *Strat. Mgmt. J.* 31 (3), pp. 306–333. DOI: 10.1002/smj.821.

Aftab Alam, Muhammad; Rooney, David; Taylor, Murray (2022): Measuring Inter-Firm Openness in Innovation Ecosystems. In *Journal of Business Research* 138, pp. 436–456. DOI: 10.1016/j.jbusres.2021.08.069.

Autio, Erkko; Kenney, Martin; Mustar, Philippe; Siegel, Don; Wright, Mike (2014): Entrepreneurial innovation: The importance of context. In *Research Policy* 43 (7), pp. 1097–1108. DOI: 10.1016/j.respol.2014.01.015.

Bakry, Dana Sami; Daim, Tugrul; Dabic, Marina; Yesilada, Birol (2024): An evaluation of the effectiveness of innovation ecosystems in facilitating the adoption of sustainable entrepreneurship. In *Journal of Small Business Management* 62 (2), pp. 763–789. DOI: 10.1080/00472778.2022.2088775.

Barney, Jay (1991): Firm Resources and Sustained Competitive Advantage. In *Journal of Management* 17 (1), pp. 99–120. DOI: 10.1177/014920639101700108.

Barreto, Ilídio (2010): Dynamic Capabilities: A Review of Past Research and an Agenda for the Future. In *Journal of Management* 36 (1), pp. 256–280. DOI: 10.1177/0149206309350776.

Baumol, William J. (2010): The Microtheory of Innovative Entrepreneurship: Princeton University Press.

Bougie, Roger|Sekaran Uma (2016): Research Methods For Business : A Skill Building Approach. A Skill Building Approach: Wiley-Blackwell.

Cetindamar, Dilek; Phaal, Robert; Probert, David (2009): Understanding technology management as a dynamic capability: A framework for technology management activities. In *Technovation* 29 (4), pp. 237–246. DOI: 10.1016/j.technovation.2008.10.004.

Chen, Tao; Kenneth Cheng, Hsing; Jin, Yong; Li, Shengli; Qiu, Liangfei (2021): Impact of Competition on Innovations of IT Industry: An Empirical Investigation. In *Journal of Management Information Systems* 38 (3), pp. 647–666. DOI: 10.1080/07421222.2021.1962590.

Cherian, Jacob; Pech, Robert (2017): The Impact of Corporate Social Responsibility on the Workforce of Selected Business Firms in the United Arab Emirates: A Nascent Economy. In *Sustainability* 9 (11), p. 2077. DOI: 10.3390/su9112077.

Chesbrough, Henry William (2003): Open innovation. The new imperative for creating and profiting from technology. Boston Mass.: Harvard Business School Press.

Ciesielska, Malgorzata; Boström, Katarzyna W.; Öhlander, Magnus (2018): Observation Methods. In Malgorzata Ciesielska, Dariusz Jemielniak (Eds.): Qualitative Methodologies in Organization Studies. Cham: Springer International Publishing, pp. 33–52.

Dezi, Luca; Battisti, Enrico; Ferraris, Alberto; Papa, Armando (2018): The link between mergers and acquisitions and innovation. In *MRR* 41 (6), pp. 716–752. DOI: 10.1108/MRR-07-2017-0213.

Dixon, Sarah E. A.; Meyer, Klaus E.; Day, Marc (2010): Stages of Organizational Transformation in Transition Economies: A Dynamic Capabilities Approach. In *J Management Studies* 47 (3), pp. 416–436. DOI: 10.1111/j.1467-6486.2009.00856.x.

Duncan, R. B. (1976): The ambidextrous organization: Designing dual structures for innovation. In R. H. Kilmann, L. R. Pondy, & D. Slevin (Ed.): The management of organization design: Strategies and implementation (pp. 167-188). New York: North Holland, pp. 167–188, checked on 4/28/2024.

Eisenhardt, Kathleen M.; Martin, Jeffrey A. (2000): Dynamic capabilities: what are they? In *Strat. Mgmt. J.* 21 (10-11), pp. 1105–1121. DOI: 10.1002/1097-0266(200010/11)21:10/11<1105::AID-SMJ133>3.0.CO;2-E.

Ewers, Michael C. (2017): International knowledge mobility and urban development in rapidly globalizing areas: building global hubs for talent in Dubai and Abu Dhabi. In *Urban Geography* 38 (2), pp. 291–314. DOI: 10.1080/02723638.2016.1139977.

Feldman, Maryann; Siegel, Donald S.; Wright, Mike (2019): New developments in innovation and entrepreneurial ecosystems. In *Ind Corp Change* 28 (4), pp. 817–826. DOI: 10.1093/icc/dtz031.

Feng, Nanping; Fu, Chao; Wei, Fenfen; Peng, Zhanglin; Zhang, Qiang; Zhang, Kevin H. (2019): The key role of dynamic capabilities in the evolutionary process for a startup to develop into an innovation ecosystem leader: An indepth case study. In *Journal of Engineering and Technology Management* 54, pp. 81–96. DOI: 10.1016/j.jengtecman.2019.11.002.

Flick, Uwe (2002): Qualitative Research - State of the Art. In *Social Science Information* 41 (1), pp. 5–24. DOI: 10.1177/0539018402041001001.

Flick, Uwe (2009): An introduction to qualitative research. 4th ed. Los Angeles: Sage Publications.

Galbreath, Jeremy (2005): Which resources matter the most to firm success? An exploratory study of resource-based theory. In *Technovation* 25 (9), pp. 979–987. DOI: 10.1016/j.technovation.2004.02.008.

Gawer, Annabelle (2014): Bridging differing perspectives on technological platforms: Toward an integrative framework. In *Research Policy* 43 (7), pp. 1239–1249. DOI: 10.1016/j.respol.2014.03.006.

Gomes, Leonardo Augusto de Vasconcelos; Facin, Ana Lucia Figueiredo; Salerno, Mario Sergio; Ikenami, Rodrigo Kazuo (2018): Unpacking the innovation ecosystem construct: Evolution, gaps and trends. In *Technological Forecasting and Social Change* 136, pp. 30–48. DOI: 10.1016/j.techfore.2016.11.009.

Guerrero, Maribel; Siegel, Donald S. (2024): Schumpeter meets Teece: Proposed metrics for assessing entrepreneurial innovation and dynamic capabilities in entrepreneurial ecosystems in an emerging economy. In *Research Policy* 53 (5), p. 104984. DOI: 10.1016/j.respol.2024.104984.

Guerrero, Maribel; Urbano, David (2019): Effectiveness of technology transfer policies and legislation in fostering entrepreneurial innovations across continents: an overview. In *J Technol Transf* 44 (5), pp. 1347–1366. DOI: 10.1007/s10961-019-09736-x.

Hallami, Mariam Omran Al; van Horne, Constance; Huang, Victor Zengyu (2013): Technological Innovation in the United Arab Emirates: Process and Challenges. In *Transnational Corporations Review* 5 (2), pp. 46–59. DOI: 10.1080/19186444.2013.11668678.

Helfat, Constance E.; Peteraf, Margaret A. (2009): Understanding dynamic capabilities: progress along a developmental path. In *Strategic Organization* 7 (1), pp. 91–102. DOI: 10.1177/1476127008100133.

Hill, Charles W. L.; Rothaermel, Frank T. (2003): The Performance of Incumbent firms in the Face of Radical Technological Innovation. In *AMR* 28 (2), pp. 257–274. DOI: 10.5465/AMR.2003.9416161.

Hill, Stephen; Ionescu-Somers, Aileen; Coduras, Alicia; Guerrero, Maribel; Menipaz, Emeritus Ehud; Boutaleb, Fatima et al. (2023): Global Entrepreneurship Monitor 2023/2024 Global Report. Global Entrepreneurship Research Association, London Business School. Regents Park, London NW1 4SA, UK.

Hub71 (2024): Abu Dhabi's Unique Global Tech Ecosystem. Available online at https://www.hub71.com/, updated on 5/12/2024, checked on 5/12/2024.

Ilie, Livia; Budac, Camelia (2023): Entrepreneurial Ecosystems and the Catalytic Role of Universities. In *Studies in Business and Economics* 18 (3), pp. 163–175. DOI: 10.2478/sbe-2023-0052.

Jamshed, Shazia (2014): Qualitative research method-interviewing and observation. In *Journal of basic and clinical pharmacy* 5 (4), pp. 87–88. DOI: 10.4103/0976-0105.141942.

Jiang, Hong; Yang, Jingxuan; Liu, Wentao (2022): Innovation ecosystem stability and enterprise innovation performance: the mediating effect of knowledge acquisition. In *Journal of Knowledge Management* 26 (11), pp. 378–400. DOI: 10.1108/JKM-04-2022-0275.

Krippendorff, Klaus (2004): Content analysis. An introduction to its methodology. 2nd ed. Thousand Oaks Calif.: Sage.

Kuckartz, Udo; Rädiker, Stefan (2019): Analyzing Qualitative Data with MAXQDA. Cham: Springer International Publishing.

Kushida, Kenji (2015): A Strategic Overview of the Silicon Valley Ecosystem: Towards Effectively "Harnessing" Silicon Valley. SVNJ Working Paper. Edited by FSI Publications. Stanford University.

Low, Linda (2012): ABU DHABI'S VISION 2030. An Ongoing Journey of Economic Development. NEW JERSEY: World Scientific.

Madar City (2024): Masdar City. UAE. Available online at https://masdarcity.ae/, updated on 5/4/2024, checked on 5/12/2024.

Magaldi, Danielle; Berler, Matthew (2020): Semi-structured Interviews. In Virgil Zeigler-Hill, Todd K. Shackelford (Eds.): Encyclopedia of Personality and Individual Differences. Cham: Springer International Publishing, pp. 4825–4830.

Mayed, Alrashdi (2024): UAE: FDI Report 2023. UAE: Greenfield FDI exceeded USD 15bn in 2023. Emirates NBD. Available online at https://www.emiratesnbdresearch.com/-/media/uae-fdi-report-2023.pdf, checked on 4/28/2024.

Ministry of Economy UAE (2024): Khalifa Fund for Enterprise Development - Ministry of Economy UAE. Available online at https://www.moec.gov.ae/en/khalifa-fund-for-enterprise-development, updated on 5/14/2024, checked on 5/14/2024.

Moore, J. F. (1993): Predators and prey: a new ecology of competition. Harvard business review. 71 (3), pp. 75–86.

O'Reilly, Charles A.; Tushman, Michael L. (2008): Ambidexterity as a dynamic capability: Resolving the innovator's dilemma. In *Research in Organizational Behavior* 28, pp. 185–206. DOI: 10.1016/j.riob.2008.06.002.

O'Reilly, C. A. & Tushman, M. L. (2004): Harvard Business Review. The ambidextrous organization, pp. 74–83.

pwc (2024): United Arab Emirates - Corporate - Other Taxes. Available online at https://taxsummaries.pwc.com/united-arab-emirates/corporate/other-taxes, updated on 5/11/2024, checked on 5/11/2024.

Qu, Sandy Q.; Dumay, John (2011): The qualitative research interview. In *Qualitative Research in Accounting & Management* 8 (3), pp. 238–264. DOI: 10.1108/11766091111162070.

Rothaermel, Frank T.; Hess, Andrew M. (2007): Building Dynamic Capabilities: Innovation Driven by Individual-, Firm-, and Network-Level Effects. In *Organization Science* 18 (6), pp. 898–921. DOI: 10.1287/orsc.1070.0291.

Rowley, Jennifer (2012): Conducting research interviews. In *MRR* 35 (3/4), pp. 260–271. DOI: 10.1108/01409171211210154.

Salunke, Sandeep; Weerawardena, Jay; McColl-Kennedy, Janet R. (2011): Towards a model of dynamic capabilities in innovation-based competitive strategy: Insights from project-oriented service firms. In *Industrial Marketing Management* 40 (8), pp. 1251–1263. DOI: 10.1016/j.indmarman.2011.10.009.

Sanders, Drew (2023): Global VC Ecosystem Rankings. Introducing our new location-based VC Ecosystem Rankings. PitchBook Data. Available online at https://pitchbook.com/news/reports/q4-2023-pitchbook-analyst-note-global-vc-ecosystem-rankings, checked on 1/5/2024.

Saxenian, AnnaLee (2000): Regional advantage. Culture and competition in Silicon Valley and Route 128. 8th printing. Cambridge, Mass: Harvard University Press.

Shadab, Saima; Alam, Firoz (2024): High-Technology Exports, Foreign Direct Investment, Renewable Energy Consumption and Economic Growth: Evidence from the United Arab Emirates. In *IJEEP* 14 (2), pp. 394–401. DOI: 10.32479/ijeep.15188.

Tan, Khee Giap; Kaur, Sujata (2016): Measuring Abu Dhabi's liveability using the global liveable city index (GLCI). In *World Journal of Science, Technology and Sustainable Development* 13 (3), pp. 205–223. DOI: 10.1108/WJSTSD-11-2015-0054.

Teece, David J. (2007): Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. In *Strat. Mgmt. J.* 28 (13), pp. 1319–1350. DOI: 10.1002/smj.640.

Teece, David J.; PISANO, GARY; SHUEN, A. M.Y. (2008): DYNAMIC CAPABILITIES AND STRATEGIC MANAGEMENT. In David J. Teece (Ed.): Technological Know-How, Organizational Capabilities, and Strategic Management: World Scientific, pp. 27–51.

TEECE, DAVID; Peteraf, Margaret; Leih, Sohvi (2016): Dynamic Capabilities and Organizational Agility: Risk, Uncertainty, and Strategy in the Innovation Economy. In *California Management Review* 58 (4), pp. 13–35. DOI: 10.1525/cmr.2016.58.4.13.

TEECE, DAVID; PISANO, GARY (1994): The Dynamic Capabilities of Firms: an Introduction. In *Ind Corp Change* 3 (3), pp. 537–556. DOI: 10.1093/icc/3.3.537-a.

The Government of Abu Dhabi (2008): The Abu Dhabi Economic Vision 2030. Abu Dhabi.

Trunina, Anna; Liu, Xielin; Hafeez, Muhammad; Chen, Jian; Sarker, Swati Anindita (2019): Network, reputation, VC-financing: SME in Zhongguancun and Silicon Valley. In *CMS* 14 (1), pp. 113–134. DOI: 10.1108/CMS-03-2019-0076.

Tushman, Michael; O'Reilly, Charles A. (1997): Winning through innovation. A practical guide to leading organizational change and renewal. Boston Mass.: Harvard Business School Press.

Waites, Robert; Dies, George (2006): Corporate Research and Venture Capital Can Learn from Each Other. In *Research-Technology Management* 49 (2), pp. 20–24. DOI: 10.1080/08956308.2006.11657365.

Wang, Ping (2021): Connecting the Parts with the Whole: Toward an Information Ecology Theory of Digital Innovation Ecosystems. In *MISQ* 45 (1), pp. 397–422. DOI: 10.25300/MISQ/2021/15864.

Weiss, Robert Stuart (1995): Learning from strangers. The art and method of qualitative interview studies. 1st Free Press pbk. ed. New York: Free Press.

whelan, jonathan (2015): Managing change in complex environments, p. 7.

Zahra, Shaker A.; Nambisan, Satish (2011): Entrepreneurship in global innovation ecosystems. In *AMS Rev* 1 (1), pp. 4–17. DOI: 10.1007/s13162-011-0004-3.

Zahra, Shaker A.; Sapienza, Harry J.; Davidsson, Per (2006): Entrepreneurship and Dynamic Capabilities: A Review, Model and Research Agenda*. In *J Management Studies* 43 (4), pp. 917–955. DOI: 10.1111/j.1467-6486.2006.00616.x.

Zollo, Maurizio; Winter, Sidney G. (2002): Deliberate Learning and the Evolution of Dynamic Capabilities. In *Organization Science* 13 (3), pp. 339–351. DOI: 10.1287/orsc.13.3.339.2780.

8. Appendices

Appendix A

Master Thesis Questionnaire - Building an Entrepreneurial Ecosystem: Factor Analysis of Abu Dhabi's Attempt to Promote an Innovation, Knowledge-Based Economy

Target: Experts in areas of innovation in Abu Dhabi

Method: Face-to-face Interview via MS Teams or Zoom

Structure:

Part A: Background Information

Part B: Entrepreneurial Ecosystems

Part C: Abu Dhabi's Entrepreneurial Ecosystem

Part D: Recommendations

Qualitative Approach: Open Questions

Purpose of the questionnaire: This questionnaire is designed to guide a semi-structured interview to uncover the critical factors contributing to the success of innovation ecosystems to determine how well Abu Dhabi replicates these conditions and what it might still need to develop.

Information about the interview

G.1	Interviewee					
G.2	Organization/Industry					
G.3	Position, Background					
G.4	Years of experience					
G.5	Years of experience in Abu Dhabi					
G.6	Date					
G.7	Interviewer	*Ana Capuder*	Start:		End:	

Part A: Background

Nr.	Questions:	*Answers:*
A. 1	**Could you briefly introduce yourself and your role in Abu Dhabi's innovation ecosystem?**	
A. 2	**What motivated you to pursue a career in Abu Dhabi?**	

Part B: Innovation Ecosystem

Nr.	Questions:
B. 1	**What makes an efficient innovation ecosystem?**
B.2	**What makes Silicon Valley successful?**

Part C: Abu Dhabi's Innovation Ecosystem

Nr.	Questions:
C. 1	**What are the main factors shaping Abu Dhabi's innovation ecosystem?**
C. 2	**What are the key economic factors driving innovation in Abu Dhabi?**
C. 3	**Evaluate the impact of government policies and regulatory frameworks on businesses in Abu Dhabi.**
C. 4	**How do sociological factors influence innovation in Abu Dhabi?**
C. 5	**What psychological attitudes are present in Abu Dhabi's business community?**

Part D: Future Outlook

Nr.	Questions:

D. 1	**How can Abu Dhabi's innovation ecosystem be improved?**
D. 2	**If you were to establish a startup today, where would you do it? Why?**

Nr.	Questions	*Answers*
E.1	**Would you be interested in receiving a summary of the findings from this research?**	Yes or No
E.2	**Can you recommend others who might provide valuable insights on this topic?**	
E.3	**Any additional comments or insights on enhancing Abu Dhabi's entrepreneurial ecosystem?**	

Appendix B – Interview Expert Interviewee 1

Interview date: 16.04.2024 – 02.00 p.m. (GMT +1), (37 min)

The interview highlights the unique elements driving Abu Dhabi's entrepreneurial ecosystem, contrasting with Silicon Valley's bottom-up approach. In Abu Dhabi, the government plays a pivotal role in directing strategy and providing substantial financial resources through sovereign wealth funds like ADIA, ADQ, and initiatives under Abu Dhabi Global Markets (ADGM). This top-down strategy has been effective, much like early US government initiatives that spurred technological advancements.

Abu Dhabi's innovation focus areas include fintech, blockchain, crypto assets, and renewable energy technology, aligning with the government's push to diversify the economy from oil. The renewable energy sector, already well-developed, supports the city's ambition to become a global innovation hub.

Culturally, Abu Dhabi's society is highly entrepreneurial and not risk-averse. Emiratis benefit from a strong social network and safety net, which encourages experimentation and new

ventures. Governmental intervention, far from being a hindrance, is seen as a supportive force that accelerates innovation.

Academic institutions in Abu Dhabi tend to follow government strategies rather than lead in innovation. However, legislative changes and high-quality government services are making the city increasingly attractive to foreign entrepreneurs and skilled talent. The Golden Visa program, offering long-term residency without employment dependency, further encourages private investment and longer-term settlement.

In the future, Abu Dhabi is expected to enhance its traditional finance sectors, including asset management and hedge funds, which will attract more talent. There will also be a focus on AI, blockchain, fintech, and energy transition sectors. Despite a smaller population base, Abu Dhabi's supportive infrastructure and available capital make it a competitive location for startups.

Appendix C – Expert Interviewee 2

Interview date: 29.04.2024 – 03.00 p.m. (GMT +1), (40 min)

The interview sheds light on the factors driving innovation in Abu Dhabi, with the government playing a central role in funding and strategy. Unlike Silicon Valley's bottom-up approach, Abu Dhabi's entrepreneurial ecosystem is driven by significant financial resources from sovereign wealth funds such as ADQ, Mubadala, and various family-owned funds.

The focus areas for innovation include climate tech and practical business-oriented innovations, although there is a tendency to adopt existing technologies rather than develop groundbreaking new ones. Significant players in the local innovation scene include startups like Pyypl and the accelerator G42, which invest heavily in technology and process optimization, particularly in sectors like oil and gas.

The cultural and social aspects contributing to this ecosystem include the government's substantial financial resources derived from oil revenues, which are invested in diverse, innovative projects to secure future economic stability. TerraVC, for example, is highlighted for its role in driving advancements in areas such as cancer treatment.

The government offers attractive salaries and tax benefits to make Abu Dhabi an appealing spot for new talent, drawing professionals from various cultural backgrounds. However, challenges such as extreme weather, limited cultural activities, and a less established educational base than in Silicon Valley persist.

Abu Dhabi's innovation environment is unique due to its heavy reliance on personal connections and in-person interactions, a practice deeply rooted in the local culture. This approach and significant investment in green energy and other sectors position Abu Dhabi as a growing but distinct innovation hub.

Abu Dhabi aims to attract more talent and investment, particularly in AI, energy transition, and other high-tech sectors. However, the local market's limited size necessitates that startups focus on solving issues for broader markets beyond the UAE. The government continues to invest in creating a better environment to attract and retain talent despite the challenges posed by the local climate and cultural dynamics.

Appendix D – Expert Interviewee 3

Interview date: 03.05.2024 – 10.00 a.m. (GMT +1), (1h 07 min)

The interview outlines the significant factors shaping Abu Dhabi's entrepreneurial ecosystem, particularly the challenges and strategies associated with diversifying away from oil dependency. The UAE's economy has historically been driven by oil, which continues to be a significant source of revenue. The "Dutch disease" complicates efforts to diversify, where reliance on natural resources leads to economic imbalances and high costs in other sectors.

A vital aspect of the UAE's economy is its heavy dependence on foreign labor, which helps mitigate some effects of the Dutch disease by providing affordable labor. However, it also creates other challenges. About 90% of Emiratis still work in government jobs or state-owned enterprises, attracted by better salaries and work-life balance than the private sector. This imbalance makes it difficult for private enterprises to compete globally while offering competitive wages.

High costs of living, expensive rents, and monopolistic practices in essential services like telecommunications further hinder the growth of startups. Telecommunications costs, for

example, are high due to monopolies, making internet access expensive and limiting competitiveness.

The government plays a crucial role in the economy through various initiatives and funds, such as sovereign wealth funds like ADQ and Mubadala and innovation hubs like Hub71. However, the involvement of government entities in sectors that could be privatized, such as hotels and salons, raises questions about their impact on private sector competition.

Despite these challenges, there are efforts to attract international talent and incentivize Emiratis to join the private sector. Initiatives like the "Project of the 50" aim to reduce the gap between public and private sector salaries. At the same time, the Golden Visa program provides long-term residency to attract foreign entrepreneurs and investors.

The UAE's innovation strategy includes significant investment in technology and process optimization, particularly in sectors like oil and gas. Companies like G42 are leading in AI and digital technologies, supported by institutions like the Mohamed bin Zayed University of Artificial Intelligence.

The interviewee suggests that for Abu Dhabi to become a global innovation hub, it must address monopolistic structures, reduce high costs, and foster a culture of competition and meritocracy. Encouraging entrepreneurship, reducing government interference, and allowing businesses to grow and fail organically are crucial steps. The UAE should tap into global talent and create an environment that supports large-scale enterprise success rather than focusing on small-scale side ventures.

Appendix E – Expert Interviewee 4

Interview date: 13.05.2024 – 10.00 a.m. (GMT +1), (41 min)

The interviewee shared insights into Abu Dhabi's entrepreneurial ecosystem, highlighting the cultural attitudes towards sustainability.

The interviewee moved to Abu Dhabi for professional opportunities and to experience a different cultural and professional environment outside of Europe.

Abu Dhabi is heavily promoting sustainability and energy transition, demonstrated by hosting COP 28, a prominent climate conference. However, the cultural mindset is still adapting to

concepts like energy conservation, with an emphasis on demonstrating wealth and prosperity through consumption, such as large homes and new cars. The society is service-oriented, with low crime rates fostering trust.

The city's innovation and business environment feature significant digital and technological advancements, including electric vehicle transport systems. Government initiatives like Masdar City focus on renewable energy and innovation. Despite these advancements, there is a conservative mindset toward new technologies, and innovations must align with cultural and societal norms. Building personal trust and connections is crucial for business success, with governmental support essential for new initiatives.

Government programs play a vital role in Abu Dhabi's entrepreneurial ecosystem. Innovations should address long-term objectives and societal needs, particularly in rapid population growth, which necessitates digitalization and efficient urban planning. Future needs include healthcare, waste management, and infrastructure.

The interviewee noted that, unlike Europe, Abu Dhabi lacks social hotspots and cultural events. There is a need for innovative solutions to create social spaces due to extreme weather conditions.

To attract innovative minds, governmental support is essential. Innovations should solve societal problems and align with cultural norms. Creating social and community spaces can enhance the quality of life for residents.

Overall, Abu Dhabi is a rapidly developing city with significant governmental support for innovation and sustainability. Cultural and societal factors are crucial in shaping the business and innovation landscape.

Appendix F – Expert Interviewee 5

Interview date: 14.05.2024 – 10.00 a.m. (GMT +1), (34 min)

The conversation centers on the potential of Abu Dhabi to become a global innovation hub akin to Silicon Valley. The discussion offers insights into Abu Dhabi's current startup ecosystem, its comparison with other regions, and strategic recommendations for improvement.

Abu Dhabi's startup ecosystem significantly differs from Silicon Valley's unique attributes, which include a dense concentration of capital and talent, strong research institutions like Stanford, and a mindset combining idealism and commercialism. Replicating Silicon Valley's model is challenging due to its unique combination of factors.

Abu Dhabi's government has strongly committed to fostering innovation through significant investments and programs like Hub 71, supported by sovereign wealth funds and subsidies. The legal framework provided by Abu Dhabi Global Market (ADGM) offers a favorable environment akin to international standards. However, the small domestic market necessitates an international focus for startups. While Abu Dhabi offers an attractive lifestyle, it requires better marketing to draw international talent. Additionally, the young ecosystem lacks experienced mentors, which hampers growth.

Several challenges and recommendations were discussed to enhance Abu Dhabi's entrepreneurial ecosystem. One major challenge is the local talent's risk-averse mindset, partly due to financial security. However, younger generations in family businesses show a greater inclination towards venture capital. Strengthening research institutions and fostering an entrepreneurial culture is essential, as the current educational focus has been preparing students for government jobs. The slow procurement processes make it difficult for startups to sell to businesses and the government. However, there is potential for startups to address government-related issues like healthcare and waste management.

Strategic recommendations include focusing on national mandates by building clusters around crucial themes such as food security, climate, AI, and cybersecurity. Utilizing international partnerships, grant funding, and prizes can attract talent. Creating a strong reputation is vital for attracting more people and businesses, and improving procurement processes can facilitate easier collaboration between startups, businesses, and the government.

In conclusion, the discussion underscores the strengths and challenges of Abu Dhabi's startup ecosystem and offers strategic recommendations to boost its potential as a global innovation hub. The focus should be leveraging government support, enhancing the legal framework, attracting international talent, and building a robust reputation around key national themes.

Appendix G – Expert Interviewee 6

Interview date: 16.05.2024 – 10.00 a.m. (GMT +1), (46 min)

The interview with an expert experienced in both Silicon Valley and Abu Dhabi sheds light on the entrepreneurial ecosystem in Abu Dhabi, highlighting key differences in development, the role of government, and lifestyle aspects.

The interviewee draws on their experiences from living in Silicon Valley. They emphasize the thoughtful and strategic leadership in Abu Dhabi. Capital availability is another crucial driver. Abu Dhabi is branding itself as the "capital of capital," attracting global talent and investment due to its substantial financial resources.

The lifestyle in Abu Dhabi is described as "completely frictionless," characterized by high safety and security, a strong service culture provided by many Southeast Asian workers, and significant investments in health, wellness, and longevity, with numerous free and subsidized fitness programs.

However, there are challenges to consider. Abu Dhabi is likened to Singapore—clean, safe, and efficient but perceived as lacking "soul." The extreme summer heat drives many expats to leave temporarily. Additionally, while there is a push to employ more Emiratis, they tend to be less ambitious due to financial security from family wealth. Emiratis often hold high-level positions, with expats filling operational roles.

In terms of the business environment, starting a business in Abu Dhabi is relatively easy, although opening a bank account can be challenging due to stringent regulations. The introduction of golden visas allows for longer-term residency and property ownership, making it more attractive for entrepreneurs. Hub 71 is crucial in supporting startups with evolving quality and support for companies.

The interview concludes with an optimistic outlook for Abu Dhabi's entrepreneurial ecosystem, noting that it has all the critical ingredients for success and continually improves its infrastructure and support for startups.

Appendix H – Expert Interviewee 7

Interview date: 20.05.2024 – 11.00 a.m. (GMT +1), (30 min)

The interview provides a comprehensive look at the entrepreneurial ecosystem in Abu Dhabi, comparing it to other regions like Silicon Valley and identifying key drivers of innovation in the region. The discussion highlights the roles of the government, universities, and the local mentality towards entrepreneurship.

Abu Dhabi has made significant strides in easing the business setup process by removing the requirement for a local sponsor and offering long-term visas. Government support is robust, with initiatives such as accelerators and incubators supporting entrepreneurs from all nationalities.

Geopolitical and geographical stability in Abu Dhabi is crucial for attracting new entrepreneurs. The region's robust legal system and secure environment make it easy for newcomers to integrate.

The younger generations, particularly those in their twenties and thirties, are more willing to take risks. Universities like NYU Abu Dhabi and Khalifa University are fostering an entrepreneurial spirit among students. There is a noticeable cultural openness, with local students increasingly teaming up with international peers to create startups, indicating a shift towards embracing different cultures and innovation.

Universities such as NYU Abu Dhabi and Khalifa University have accelerators and incubators, including StartAD and the Khalifa Innovation Center. Various government programs and funds, such as Hub 71 and the Khalifa Fund, provide substantial support and funding for startups.

Specialized free zones like Masdar City and TwoFour54 offer tax exemptions, full foreign ownership, and other benefits, making it easier for startups to establish and operate.

The local community is well-connected. Family offices provide significant financial backing to local SMEs. Leadership from the top also drives diversification and technology adoption, as evidenced by various public events and initiatives.

Increasing the number of universities and easing acceptance criteria can foster more innovation. Making it easier for students to study in Abu Dhabi will allow more aspiring entrepreneurs to benefit from the educational ecosystem.

Establishing more unicorns in Abu Dhabi can significantly boost its reputation as a global innovation hub. Success stories are vital for creating a self-sustaining ecosystem through positive reinforcement.

Abu Dhabi's entrepreneurial ecosystem is promising, supported by a favorable legal framework, robust government and institutional backing, and a growing entrepreneurial mindset among the younger population. By addressing areas such as university expansion and fostering unicorn startups, Abu Dhabi can accelerate its growth and solidify its position as a global innovation hub.

Appendix I – Expert Interviewee 8

Interview date: 21.05.2024 – 08.00 a.m. (GMT +1), (25 min)

The interview provides valuable insights into the factors driving innovation and the supportive environment for startups in Abu Dhabi. The interviewee moved to Abu Dhabi for several strategic reasons, including its central location, favorable time zones that offer a better work-life balance compared to Singapore, and the regulatory environment, specifically the Financial Services Regulatory Authority (FSRA) in Abu Dhabi. Personal reasons such as proximity to Europe and a better quality of life also influenced their decision.

Abu Dhabi Global Market (ADGM) and Hub 71 have created a supportive environment for startups, assisting companies in getting set up, fast-tracking visas, and providing networking opportunities through monthly events. The community and facilities in Abu Dhabi offer a good living and working environment for expatriates.

The social and workforce dynamics are favorable, with a large expat community making Abu Dhabi accommodating for foreign workers. The local people are friendly and proactive.

Abu Dhabi's government is highly supportive and proactive in attracting talent and investment, focusing on environmental sustainability, renewable energy, and blockchain technology. Learning from Dubai's experiences, the controlled growth strategy aims for sustainable development.

Significant funding is available for promising ideas, particularly in environmental and carbon capture projects. Future trends strongly emphasize renewable energies, sustainable cities, and hydrogen projects, with efforts to scale domestic projects in these areas.

Consumers in Abu Dhabi are open to new and innovative products, and many startups focus on improving existing concepts rather than entirely disruptive innovations. Given the supportive ecosystem, government initiatives, and available funding, the interviewee would choose Abu Dhabi as the location for a hypothetical startup.

In conclusion, Abu Dhabi offers a strategic advantage for startups with its central location, proactive government support, and a conducive environment for innovation. Regulatory bodies and initiatives like ADGM and Hub 71 are crucial in fostering a thriving entrepreneurial ecosystem.

Appendix J – Expert Interviewee 9

Interview date: 21.05.2024 – 04.00 p.m. (GMT +1), (39 min)

The interviewee emphasizes the importance of key components of an entrepreneurial ecosystem, such as idea generation, financing, and successful exits in fostering an efficient innovation environment.

In Abu Dhabi, the availability of talent and the competitiveness of entrepreneurship against traditional roles are crucial. The city offers essential tools for company creation, including incubators, accelerators, and technical resources, which play a significant role in fostering innovation. Investment stages from seed funding to Series A and growth stage are well-supported, with a notable presence of local and international investors. However, there is a gap in the financing for mid-stage companies, with more significant investments typically coming from sovereign funds.

Successful exits are vital for the growth of Abu Dhabi's entrepreneurial ecosystem. Current examples like Kareem, Property Finder, and Tabi highlight the importance of strategic buyers and IPOs in creating a cycle of success that attracts more entrepreneurs. Nonetheless, the small market size of the UAE limits the potential for creating unicorns, necessitating that companies scale globally to achieve significant growth.

Government interventions, while beneficial, could potentially limit the organic growth and disruptiveness of startups. Finding the right balance between regulation and innovation is crucial. The UAE is making strides in attracting international talent through initiatives like golden visas and fostering local talent with specialized AI and computer science programs at universities such as NYU.

The quality of life in the UAE is a significant draw for international talent, with plans for urban development and improved living conditions further enhancing its attractiveness. Remote work is generally accepted, especially during the hot summer, allowing expatriates to maintain productivity and flexibility.

Abu Dhabi is on the right path with its current initiatives, though it needs time to see its full impact. Long-term strategies involving local and international talent are essential for sustainable growth. The city's entrepreneurial ecosystem benefits from substantial government support, a high standard of living, and significant investment opportunities. However, challenges such as the small market size and the need for more strategic exits remain. By continuing to attract international talent and developing local educational programs, Abu Dhabi can strengthen its position as a global innovation hub.

Appendix K – Expert Interviewee 10

Interview date: 21.05.2024 – 01.00 p.m. (GMT +1), (40 min)

The interview delved into the critical aspects of Abu Dhabi's entrepreneurial ecosystem, emphasizing government involvement, quality of life, and the broader context of innovation in the UAE.

A key factor for an efficient entrepreneurial ecosystem is talent attraction. The ecosystem must attract diverse talent, including founders, advisors, and corporate service providers. This creates a flywheel effect, where the interaction between various talents fosters a self-sustaining environment. Additionally, having a low barrier to entry is crucial for a destination ecosystem like Abu Dhabi. This includes easy visa processes, straightforward company setup, and accessible housing, making it friendly for business.

Government initiatives play a significant role in creating initial momentum for the entrepreneurial ecosystem. These initiatives can include funding, regulatory changes, and

establishing free zone areas with specific jurisdictions. However, it is essential for the government to eventually phase out its involvement to allow private actors to sustain the ecosystem. The government has made significant efforts in revamping the legal framework, making it easier to start and run businesses. While sovereign funds have been crucial in the ecosystem, private actors are increasingly becoming involved, aiming to leapfrog the development phase to establish a highly developed ecosystem quickly.

The quality of ideas and innovation in the region is notable. While there is some replication of successful business models from elsewhere, the unique market conditions in the Middle East make these adaptations significant. There are substantial innovations in various sectors, including oil and gas, shipping, manufacturing, and 3D printing. The region has produced high-quality startups and unicorns, contributing to a dynamic ecosystem.

Abu Dhabi offers a high quality of life, making it an attractive place for families. This includes excellent education, diverse activities, and a cosmopolitan environment. Personal and professional networks play a crucial role in the decision to move and start a company in Abu Dhabi.

The interview concluded with optimism about the future of Abu Dhabi's entrepreneurial ecosystem. The participant highlighted the importance of government initiatives, the quality of life, and the unique market conditions that make the UAE an attractive place for innovation and entrepreneurship.

Appendix L – Expert Interviewee 11

Interview date: 22.04.2024 – 04.00 p.m. (GMT +1), (39 min)

The interview sheds light on the dynamic factors shaping Abu Dhabi's entrepreneurial ecosystem, highlighting the roles of educational institutions, government initiatives, and cultural influences.

The interviewee moved to Abu Dhabi, attracted by NYU Abu Dhabi's international exposure and substantial scholarships. NYU Abu Dhabi offers a comprehensive experience that covers living costs and provides personal use funds. The university recently introduced a business major focusing on entrepreneurship and collaborates with Start AD, an accelerator program

based on campus. Student organizations like Violet Ventures foster entrepreneurship and organize events like Slash Abu Dhabi, helping students develop their innovative ideas.

Several key entities support the entrepreneurial ecosystem in Abu Dhabi. Start AD provides resources and support for startups. At the same time, Hub 71, located in the Abu Dhabi Global Market (ADGM), is a government-sponsored entity offering office space, funding, mentorship, and acceleration programs. Free zones in Abu Dhabi also create a conducive environment for startups by providing various benefits.

Collaboration and networking are integral to Abu Dhabi's startup culture. There is significant interest in student entrepreneurship across the UAE, with students from Dubai attending events in Abu Dhabi. Violet Ventures collaborates with high schools and other incubators to foster a startup culture. Numerous social events and a diverse population facilitate networking in Abu Dhabi.

Culturally, while the UAE is entrepreneurial, much of its innovation is driven by international influences. Emirati entrepreneurs often engage in traditional businesses and large corporations. However, there is a significant government push to encourage young Emiratis to engage in entrepreneurship.

Despite these advancements, the interviewee acknowledges that Abu Dhabi's ecosystem is still developing and less integrated than Silicon Valley. The UAE offers unique opportunities due to its strategic location and diverse population. The interviewee believes gaining experience in the UAE is valuable and can provide competitive advantages.

The interviewee sees tremendous potential in the UAE's startup ecosystem and expects significant growth in the coming years. The UAE's role in connecting different markets globally and providing international exposure is emphasized as crucial for prospects.

Appendix M – Expert Interviewee 12

Interview date: 24.05.2024 – 08.15 p.m. (GMT +1), (30 min)

The interview highlights key aspects of Abu Dhabi's entrepreneurial ecosystem, focusing on the regulatory environment, talent attraction, capital access, and medium-scale firms' challenges.

Abu Dhabi Global Market (ADGM) was the first to regulate carbon credits under a commodities framework, showcasing the city's innovative regulatory environment. The openness to talent in Abu Dhabi is another significant advantage, making hiring and bringing in talent easier than in more restrictive environments like Singapore.

For an efficient entrepreneurial ecosystem, access to capital is crucial. While Abu Dhabi has substantial capital and robust support for early-stage startups through initiatives like Hub 71, there is a notable lack of support for medium-scale firms. These companies often struggle to raise capital once they outgrow the startup phase but are not yet self-sufficient, leading some to move to the US for better access to venture capital.

Additional burdens for companies include hidden fees for trade licenses and other business costs, high real estate costs due to the expense of office space in free zones, and high telecom costs because of a lack of competition. Despite these challenges, there is strong governmental support for transitioning from oil and gas to more sustainable industries, coupled with a cultural openness and a can-do attitude that fosters innovation.

The decision-making process, particularly for new asset classes like carbon credits, lacks transparency, which poses a challenge for innovation. Balancing the need for innovation with maintaining social stability is another crucial aspect, reflecting the delicate social contract in the region.

Abu Dhabi is praised for its safety and convenience, especially for families, although it lacks natural spaces and walkable areas compared to Europe. There is a noticeable difference in energy levels between startup workers and those in government or the oil sector, affecting the overall dynamic of the workforce.

For startups, industry-specific considerations are essential when choosing a location. For example, London is a leader in climate-related startups but faces similar funding issues for middle-scale companies. The UAE's ease of importing talent remains a significant advantage for startups.

In conclusion, the interviewee emphasized the importance of addressing medium-scale companies' challenges and the need for a more transparent decision-making process in Abu Dhabi. They expressed interest in the final findings of the research project, highlighting the potential for growth and improvement in the city's entrepreneurial ecosystem.