

Assessment of policies, programmes and regulations relating to MSME and start-up development in Abu Dhabi

Jonathan Potter, David Halabisky, Cynthia Lavisson, Pablo Shah, Helen Shymanski,
Alasdair Reid, Kris Boschmans

Strengthening the performance and economic contribution of micro, small and medium-sized enterprises (MSMEs) and start-ups is central to Abu Dhabi's goal of creating a more diversified and competitive economy. This report provides an assessment of policies, programmes and regulations relating to MSME and start-up development in Abu Dhabi. The assessment is structured around six thematic areas: i). access to finance, ii). the availability of skills and capabilities, iii). access to markets, iv). the business environment, v). innovation and digitalisation, and vi). future opportunities for MSME and start-up development. For each thematic area, an analysis of existing issues, challenges and policy approaches is provided, in addition to policy recommendations and relevant examples of international policy practices. The report was prepared by the OECD Secretariat and external experts based on information gathered by the OECD in Abu Dhabi in the form of written documentation, questionnaire responses, stakeholder interviews and roundtable meetings as well as desk research on policy practices in other countries.

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Introduction

This report provides an assessment of current policies, programmes and regulations that impact upon the development and performance of MSMEs and start-ups in Abu Dhabi. It seeks to identify gaps and pain points for MSMEs and start-ups and examines the degree to which existing policy solutions are appropriate for addressing these issues. The policy approach in Abu Dhabi is compared with international best practices in order to identify potential transferable lessons.

The assessment is structured around the six pillars of the Abu Dhabi MSME and Start-up Strategy:

1. Ensure financing;
2. Develop capabilities;
3. Connect to markets;
4. Improve the business environment;
5. Advance innovation and digitalisation, and;
6. SME and entrepreneurship policies to seize opportunities for the future

Each pillar has a dedicated chapter in the report, which provides a review of the key challenges facing MSMEs and start-ups in this area, the current policies and programmes in place to address these issues, examples of international good practice, and areas for improvement, including policy recommendations.

Abu Dhabi has made significant strides in recent years to create an environment in which MSMEs and start-ups can flourish. This is essential to achieving the emirate's goals of boosting competitiveness and diversifying the economy. However, the MSME and start-up ecosystem is relatively young in Abu Dhabi, and further progress is needed in several areas to enhance the contribution of MSMEs and start-ups. While reviews are conducted for each of the six pillars of the Abu Dhabi MSME and Start-up Strategy, it is important to note that these pillars are closely interlinked, and measures to improve conditions in one area will often generate significant spillovers elsewhere. The policy assessments and recommendations made in this report should therefore be viewed as a collective package of measures that together can strengthen the MSME and start-up ecosystem in Abu Dhabi.

Background

Strategic context

The Abu Dhabi Economic Vision 2030, which is the long-term roadmap for the emirate's economic progress, sets out the following commitment:

“To build a sustainable and diversified, high value-added economy by 2030. This will be achieved by broadening the sectors of economic activity, enlarging the enterprise base, and growing external markets. Furthermore, Abu Dhabi will also continuously enhance competitiveness and improve productivity.”

A core part of this commitment is the target to raise the share of Abu Dhabi's real gross domestic product (GDP) accounted for by non-oil sectors to 64% by 2030. Since the vision was published in 2008, Abu Dhabi has made some progress in transitioning from an oil-dominated economy to a burgeoning hub for business and entrepreneurship. This is reflected in the share of GDP accounted for by non-oil sectors, which reached 50% in 2019 compared to a figure of 41% between 2005 and 2007. However, the diversification needs to be accelerated if Abu Dhabi is to meet the 64% target.

The ADDED, which was reorganised in 2018, is one of the key champions driving the push to transform the Abu Dhabi economy from a resource-driven economy to a knowledge-based economy. The ADDED has the mandate of regulating business activities and leading economic initiatives to help turn the Abu Dhabi Economic Vision 2030 into a reality. To this end, the ADDED has developed the Abu Dhabi Economic Strategy, which is shaped by Abu Dhabi's economic aspiration and its value proposition of being “a hub for innovations that change the world, and the home for people who bring ideas to life”.

The Abu Dhabi Economic Strategy is comprised of two pillars: competitiveness fundamentals and economic diversification. The competitiveness component focuses on improving the business environment while the diversification component focuses on developing strengths in seven key sectors: information and communication technologies, financial services, health and biopharma, tourism, agriculture technologies and services, aerospace and defence, and downstream chemicals.

An objective within the competitiveness pillar of the Abu Dhabi Economic Strategy is to enhance MSMEs' contribution to Abu Dhabi's economy. Public institutions, policies and programmes are integral to creating the support framework, incentives and business environment necessary to achieve this goal. The SMEs Sector has accordingly been established within the ADDED with the mandate of developing an MSME and start-up strategy, identifying gaps in support, measuring the impacts of policies and connecting with relevant entities in the MSME and start-up ecosystem. In the UAE, the definition of a micro, small and medium-sized business varies depending on the sector, as shown below.

Table 1. Definition of micro, small and medium-sized enterprises in the UAE

	Trading sector	Manufacturing sector	Service sector
Micro	Fewer than 6 employees or annual revenue not exceeding AED 3 million	Fewer than 10 employees or annual revenue not exceeding AED 3 million	Fewer than 6 employees or annual revenue not exceeding AED 2 million
Small	6-50 employees or annual revenue not exceeding AED 50 million	10-100 employees or annual revenue not exceeding AED 50 million	6-50 employees or annual revenue not exceeding AED 20 million
Medium	51-200 employees or annual revenue not exceeding AED 250 million	101-250 employees or annual revenue not exceeding AED 250 million	51-200 employees or annual revenue not exceeding AED 200 million

Baseline of MSME and start-up activity

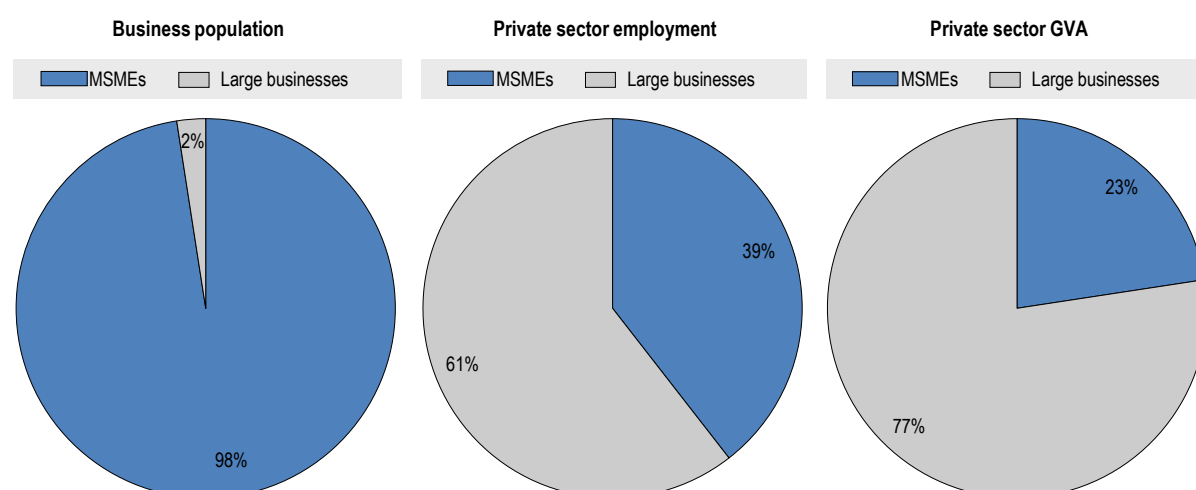
This section examines the role that MSMEs play in the Abu Dhabi economy, including their economic contribution and performance and how these compare internationally.

MSMEs

Economic contribution

The vast majority of businesses in Abu Dhabi are MSMEs. In 2020, 63% of businesses in Abu Dhabi were micro businesses. A further 30% were small businesses and 5% were medium-sized businesses. MSMEs, therefore, accounted for 98% of businesses in Abu Dhabi in 2020.

The contribution that MSMEs currently make to the Abu Dhabi economy is somewhat less than what might be expected given the share of MSMEs in the business population. In 2020, MSMEs accounted for 39% of private sector employment and just 23% of gross value added (GVA).

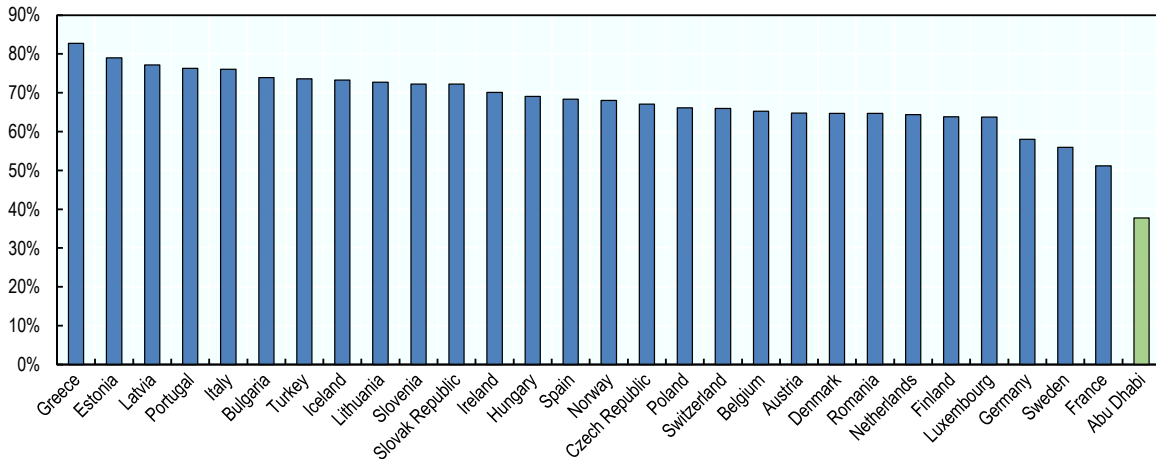
Figure 1. Economic footprint of MSMEs in Abu Dhabi, 2020

Source: (Statistics Centre Abu Dhabi, 2022^[1])

Figure 2 and Figure 3 show that the economic footprint of MSMEs is significantly smaller in Abu Dhabi than elsewhere. This points to an opportunity to expand the contribution of MSMEs to the Abu Dhabi economy in order to bring this in line with other economies. However, it is important to note that the figures are influenced by the outsized role of the oil sector in the Abu Dhabi economy. Also, the international data in Figure 2 and Figure 3 capture the share of employment accounted for by businesses with fewer than

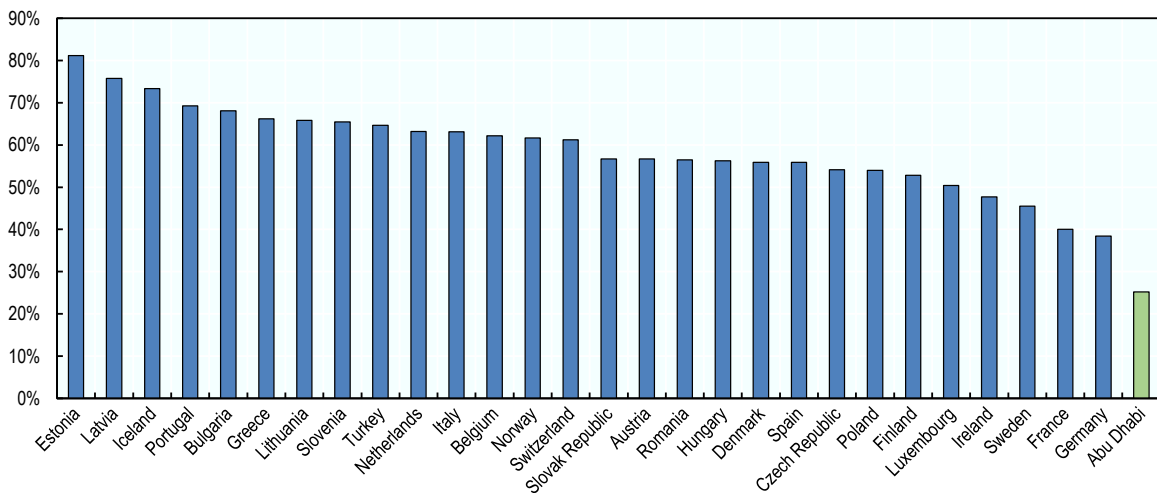
250 employees, while the figures for Abu Dhabi are based on the UAE's definition of an MSME that is detailed in Table 1.

Figure 2. Share of employment in the business economy accounted for by MSMEs, 2019



Note: The international data cover businesses with fewer than 250 employees. Therefore, it is not possible to make a direct comparison between the international data and the figures for Abu Dhabi, which are based on the definition of an MSME detailed in Table 1.
 Source: (OECD Structural and Demographic Business Statistics, 2022^[2]), (Statistics Centre Abu Dhabi, 2022^[11])

Figure 3. Share of employment in the business economy accounted for by MSMEs, 2019

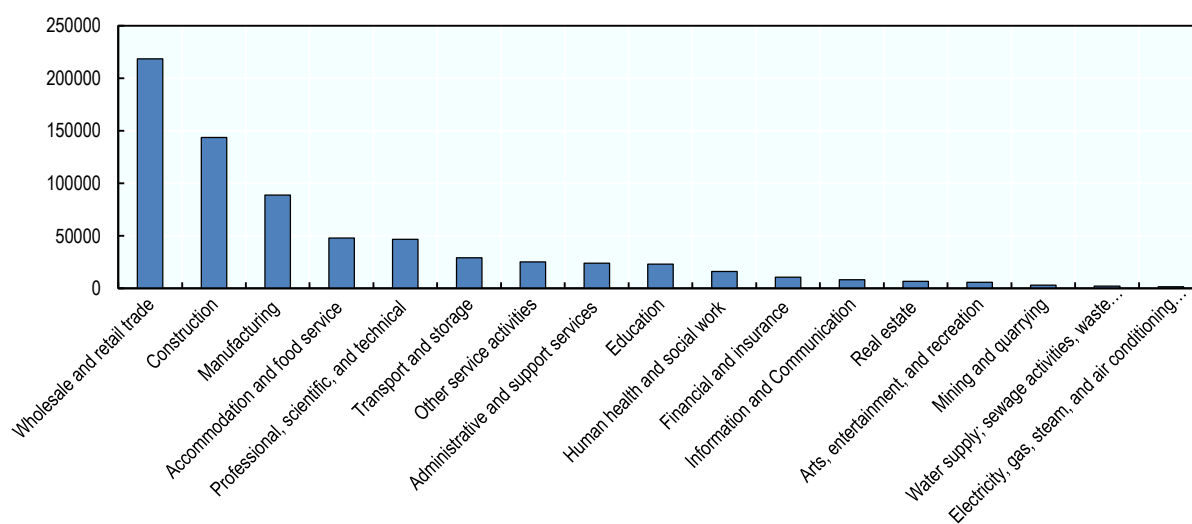


Note: The international data cover businesses with fewer than 250 employees. Therefore, it is not possible to make a direct comparison between the international data and the figures for Abu Dhabi, which are based on the definition of an MSME detailed in Table 1.
 Source: (OECD Structural and Demographic Business Statistics, 2022^[2]), (Statistics Centre Abu Dhabi, 2022^[11])

The MSME landscape in Abu Dhabi is dominated by a relatively small number of sectors. The sector where MSMEs employ the largest number of people is the wholesale and retail sector. In 2020, MSMEs in this sector employed 218 353 people, amounting to 31% of total employment by MSMEs. The next largest sectors with respect to employment in MSMEs are the construction and manufacturing sectors, which

employed 143 721 and 88 940 people in 2020, respectively. Taken together, the wholesale and retail, construction, and manufacturing sectors accounted for 64% of total employment in MSMEs in Abu Dhabi in 2020.

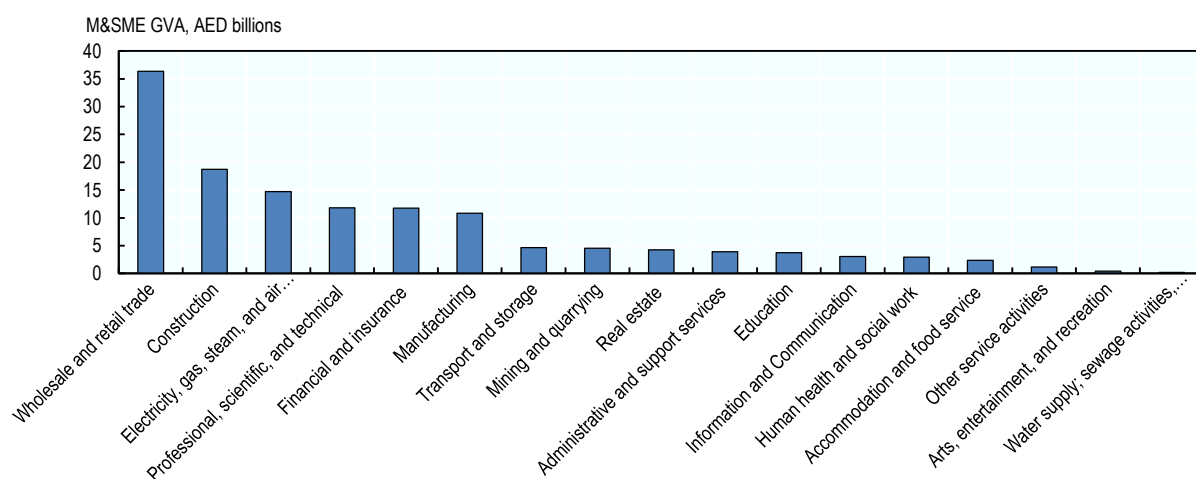
Figure 4. MSME employment, by industry, 2020



Source: (Statistics Centre Abu Dhabi, 2022^[1])

The wholesale and retail sector is also the sector where MSMEs generate the most value added. In 2020, MSMEs' GVA in the wholesale and retail sector was AED 36.4 billion, which amounted to 27% of MSMEs' total GVA across all sectors. MSMEs in the construction sector also play an important role, with GVA of AED 18.7 billion in 2020.

Figure 5. MSME GVA, by industry, 2020

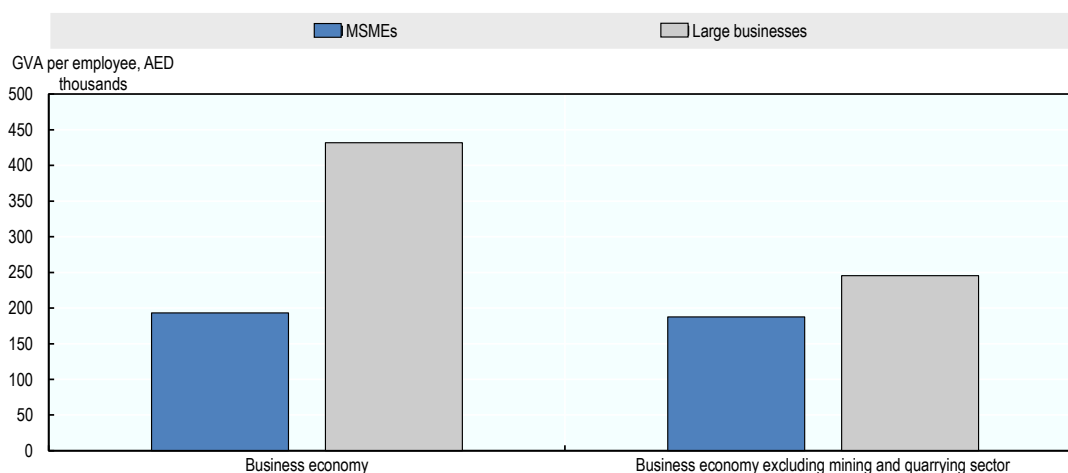


Source: (Statistics Centre Abu Dhabi, 2022^[1])

Productivity

At first glance, there appears to be a gulf in productivity between MSMEs and large businesses in Abu Dhabi. In 2020, the labour productivity (GVA per employee) in MSMEs was AED 193 271. Meanwhile, the average labour productivity in large companies was more than twice as high, at AED 432 023. However, this productivity differential is primarily due to the high productivity mining and quarrying sector, where employment is overwhelmingly concentrated within large businesses. Excluding the mining and quarrying sector, MSMEs in Abu Dhabi had an average labour productivity of AED 187 663 per employee in 2020, compared to a figure of AED 245 232 per employee for large businesses.

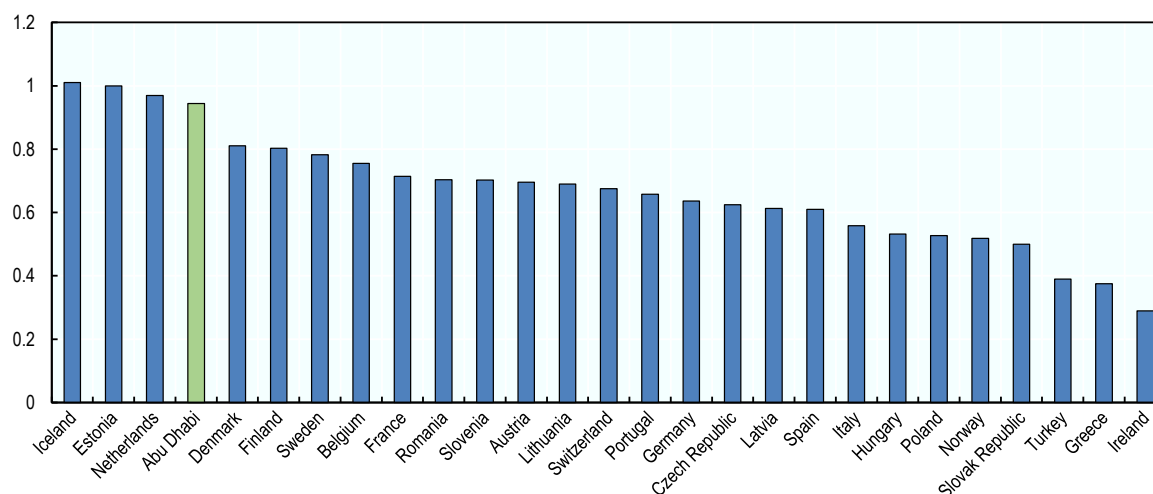
Figure 6. Productivity differential between MSMEs and large businesses, 2020



Source: (Statistics Centre Abu Dhabi, 2022^[1])

The figures presented in Figure 6 will have been distorted to some extent by the impacts of the COVID-19 pandemic. In 2019, the average labour productivity of MSMEs (excluding the mining and quarrying sector) was AED 262 799 per employee, which was higher than the corresponding figure of AED 242 801 per employee among large businesses. As shown in Figure 7, the narrow difference in productivity between MSMEs and large companies in Abu Dhabi is a relatively unusual occurrence. In most countries, MSMEs are, on average, significantly less productive than large companies. This is due to a variety of factors including more limited access to skills, finance and knowledge as well as barriers to internationalisation and technology adoption (OECD, 2019^[3]). By contrast, in Abu Dhabi, MSMEs' labour productivity (excluding the mining and quarrying and financial and insurance sectors) is largely on a par with the labour productivity of large businesses. It is important to note, however, that MSMEs still face numerous headwinds in Abu Dhabi, as described in later chapters of this strategy, and there remains considerable scope for unlocking further productivity improvements.

Figure 7. Ratio of large businesses' labour productivity to MSMEs' labour productivity, 2019



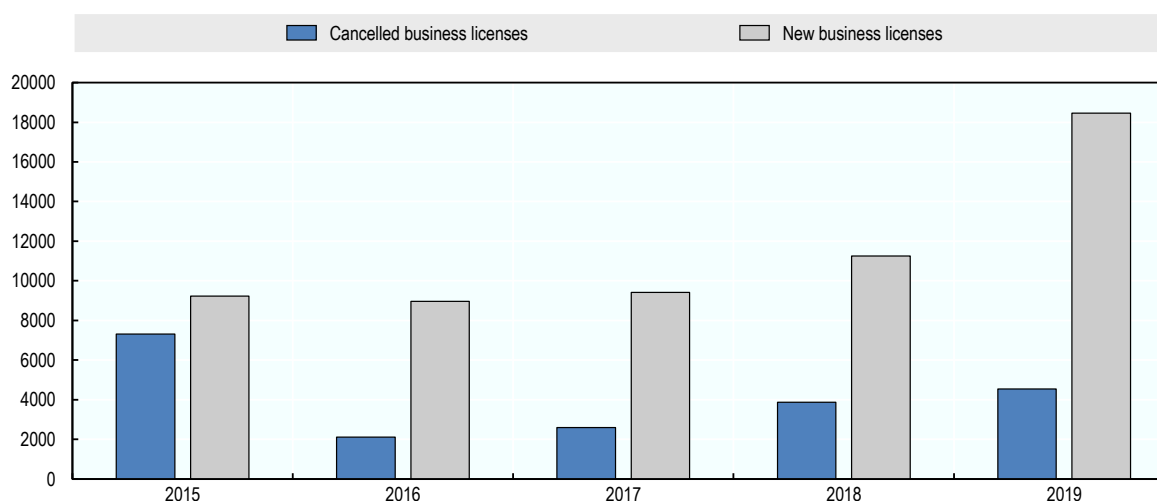
Note: Figures exclude the mining and quarrying sector and the financial and insurance sector.

Source: (OECD Structural and Demographic Business Statistics, 2022^[2]), (Statistics Centre Abu Dhabi, 2022^[1])

Start-ups

The number of new business licenses issued in Abu Dhabi has increased sharply in recent years. In 2019, there were 18 452 new business licenses registered, which is more than double the number (8 963) in 2016. This points to a significant rise in start-up activity in Abu Dhabi. Ongoing reforms to create a more supportive environment for new businesses in Abu Dhabi will reinforce this improving rate of start-up activity. With that being said, these figures do not capture the economic contribution or performance of start-ups in Abu Dhabi.

Figure 8. Number of cancelled business licences and newly registered business licences in Abu Dhabi, 2015-2019



Source: (Statistics Centre Abu Dhabi, 2020^[4])

1 Pillar 1: Ensure financing

Assessment of policies, programmes and regulations

Ensuring that MSMEs and start-ups have access to suitable sources of financing is fundamental to allowing these businesses to thrive and play a larger role in the Abu Dhabi economy. While providing access to finance for young or small businesses is a challenge for economies across the world, this issue is a particular source of weakness in Abu Dhabi's MSME and start-up ecosystem. This chapter explores these financing challenges and examines the degree to which existing policies and programmes in Abu Dhabi are addressing them.

Access to banking services is a significant bottleneck

The factor most widely reported by stakeholders as inhibiting the performance of MSMEs and start-ups in Abu Dhabi and the UAE as a whole is the limited access to bank finance and banking services more broadly. This begins with the excessive hurdles that MSMEs and start-ups encounter as they seek to open a business bank account. The process is typically time consuming and challenging, with extensive administrative requirements. Most commercial banks enforce minimum balances for business accounts. It is also reported that some banks require the trading licenses of a business to be privately insured before an account can be opened, while other banks have requested that businesses change the economic activities permitted under their license. While progress has been made in digitalising the process of opening a business bank account in Abu Dhabi, this does not offset the many other requirements that MSMEs and start-ups must fulfil in order to open an account. There are numerous potential explanations for commercial banks' reluctance to offer banking services to MSMEs and start-ups. Regulatory factors, such as strict overhead requirements, may create disincentives to holding smaller accounts. A lack of information on small firms makes it more difficult to comply with anti-money-laundering regulations, while there is also a high perceived risk of default for entrepreneurs who are not Emirati citizens. As a result of these issues, rejection rates for new accounts are high.

Policy makers recognise the importance of this issue, and efforts are ongoing to facilitate access to business bank accounts in Abu Dhabi and the United Arab Emirates (UAE) in general. The Central Bank of the United Arab Emirates (CBUAE) has recently issued guidelines encouraging commercial banks to aim to open bank accounts for MSMEs in a short timeframe (3 days), although stakeholders have noted limited changes in practice so far. In 2021, the Emirates Development Bank (EDB) launched the Business Banking App for MSMEs in partnership with YAP, a fintech firm. The app allows entrepreneurs to open a basic bank account in under 48 hours with no fees and no minimum balance requirements. It also enables them to access banking services online through the app. This initiative addresses an important gap in the market. However, awareness of the programme remains low, and achieving a widespread access to banking services among MSMEs and start-ups requires major commercial banks to follow suit and expand their product offerings. Meanwhile, the Abu Dhabi Department of Economic Development (ADDED) is planning to enable online customer identity verification (e-Know Your Customer) in order to help commercial banks serve MSME clients. However, it is not clear whether this alone will have a significant impact given the other obstacles that exist.

In the private sector, two new digital banks are expecting to start offering dedicated services to MSMEs. The Al Maryah Community Bank is actively targeting MSMEs and is planning to launch a suite of MSME specific services in 2022, including offering the option to open bank accounts quickly with no minimum balance. Another emerging online banking service, Wio, may also offer appropriate services to small firms.

The offer of loans suitable for MSMEs and start-ups is extremely limited

Even after MSMEs and start-ups successfully navigate the process of opening a business bank account, opportunities to obtain loans from banks are extremely limited. Bank loans are typically the largest source of external finance for both small businesses and entrepreneurs (Facebook / OECD / The World Bank, 2018^[5]) (Cusmano, 2015^[6]; European Commission, 2021^[7]). The limited availability of bank credit in Abu Dhabi therefore represents a highly significant gap in the MSME and start-up ecosystem.

Commercial banks in Abu Dhabi do not place a sufficient emphasis on smaller businesses. While there are banking options available that are suitable for MSMEs at certain commercial banks, the primary focus tends to be on the financing needs of large business customers. Indeed, in 2019, MSMEs received just 9% of the total value of loans issued by banks in Abu Dhabi. This means that the volume of bank lending per unit of GDP generated by MSMEs was less than half the corresponding figure for large companies. The high-risk profile of MSMEs and start-ups, particularly in comparison to state owned enterprises, discourages banks from extending credit and results in strict requirements for loans as well as high interest rates. The CBUAE's 2019 Business Survey Report found that the average interest rate charged to MSMEs for an unsecured loan was 12%, while the corresponding figure for a secured loan was 7% (Central Bank of the UAE, 2019^[8]). These borrowing costs are significantly higher than in most OECD countries.

While these financing challenges are linked to the structure and practices of Abu Dhabi's financial system, there are additional underlying factors that restrict access to bank credit. For instance, many young or small businesses are in a precarious financial position due to the high fees and other costs that businesses face in Abu Dhabi. In this area, the ongoing work to reduce business fees, which is described in detail in the chapter on improving the business environment, may also improve the ability of MSMEs and start-ups to obtain bank finance in the longer term. Many MSMEs in Abu Dhabi also lack the financial capabilities and tools needed to successfully obtain finance. Research by the CBUAE finds that having audited financial accounts significantly decreases the likelihood that an MSME will face financial constraints (Central Bank of the UAE, 2019^[8]). The CBUAE's 2020 survey also highlights the potential benefits that can come from improved financial reporting, with 50% of small businesses stating that having audited financial statements increased their access to credit (Central Bank of the UAE, 2020^[9]). The use of the Al Etihad credit register is another factor that is reported to have helped MSMEs in accessing finance. The finding that improved financial reporting enhances access to credit is consistent with results elsewhere in the literature. For instance, a study of private firms in the United States found that financial statements significantly lower the costs of debt (Minnis, 2011^[10]). With that being said, it has been reported by stakeholders in Abu Dhabi that the increased use of audited financial statements associated with the introduction of VAT was not accompanied by an increase in the availability of bank credit.

There is some evidence that the issues described above have eroded the demand for borrowing among MSMEs and start-ups. According to a survey commissioned by the CBUAE, just 17% of MSMEs sought bank financing in 2020, of which half were successful in obtaining it (Central Bank of the UAE, 2020^[9]). This is despite the fact that nearly three quarters of MSMEs in the sample considered themselves to be financially constrained. This points to a shortfall in demand for bank loans among MSMEs. Regulatory disincentives, such as the criminalisation of defaults, have weakened the appetite for bank loans until recently.

Since its establishment in 2007, the Khalifa Fund for Enterprise Development (KFED) bridged part of the gap in the availability of bank finance in Abu Dhabi by offering loans to MSMEs and start-ups in priority sectors. KFED also facilitated financing for MSMEs through commercial banks via a government-backed

credit guarantee scheme. However, its lending activities have been suspended, pending a review of the fund and a reorganisation of its structure. KFED has continued its capacity development activities for start-ups and MSMEs, but its pause on lending products has left a gap in an already underserved market. Another important actor in this area is the EDB, which provides longer-term loans with flexible repayment terms in order to fill the gap in the market for patient capital, with commercial banks' lending terms rarely exceeding 6-7 years.

Some further steps have been taken to facilitate access to loans. Since January 2022, bankruptcy is no longer a criminal offence, which is likely to increase MSMEs' and start-ups' willingness to obtain bank credit. Private sector initiatives such as the upcoming launch of two online banking services aimed at MSMEs may contribute to expanding the available offering of loans for MSMEs, but further actions are needed to address this important gap.

There is a lack of financing for early stage start-ups

Even without the specific challenges associated with accessing bank finance in Abu Dhabi, it is not uncommon for early-stage innovative entrepreneurs to lack access to debt financing due to their risk profile. As a result, these businesses require equity finance to fund their activities during the period before they are able to make a profit (the so-called “valley of death”) (OECD, 2020^[11]). However, access to equity finance for early-stage companies is often limited, since making small investments is not efficient for venture capital funds. This has led policy makers in many countries to introduce incentive programmes to bridge the “equity gap” (OECD, 2020^[11]). Start-ups also benefit from access to “smart capital”, whereby investors bring in expertise and experience in addition to financial capital. Business angels usually offer this type of investment.

It is difficult to measure the availability of venture capital in Abu Dhabi, as levels of disclosure are lower than in many OECD markets, especially for individual investors. A finding of the Global Entrepreneurship Monitor's assessment of Abu Dhabi's entrepreneurial ecosystem is that venture capital funds tend to operate in a relatively narrow range of areas, with limited focus on, for example, early-stage or hardware start-ups. Stakeholders agree that venture capital funding in Abu Dhabi has moved away from seed and pre-seed stage funding in recent years, and is instead focussed on the later stages of start-up development. As a result, there is a funding gap for early-stage start-ups, and an unmet demand for “small equity” as well as “smart capital”. This may be due to a lack of incentives for local investors to invest in smaller and riskier ventures. Furthermore, regulatory complexities may lead some start-ups to opt for incorporation in another jurisdiction to facilitate venture capital investment. These factors could cause local investors to invest in later stage enterprises and risk capital to focus on international rather than local capital markets.

While Abu Dhabi could benefit from incentives to private sector investors, the most common type of incentives, tax rebates, may not be relevant given the extremely low tax rates that are in place. In this context, a grant-based approach, such as the German programme INVEST, may be a useful alternative. Grants are also a helpful solution for MSMEs and start-ups to finance early-stage innovation and delay the need for dilutive equity financing (OECD, 2020^[11]). However, innovation grant programmes are not widely available in Abu Dhabi, representing another gap in the financing landscape.

While the issues described above represent a significant challenge in Abu Dhabi's financing landscape, there are several actors who are actively supporting access to finance for early-stage start-ups. Emirates Angels, a non-profit with around 50 members (most of whom are active investors), is promoting the development of business angel investments in the UAE and is working to connect entrepreneurs with investors. Incubators are another source of funding for some businesses, either through direct financing or support in accessing capital from elsewhere. For instance, Hub71 offers up to USD 400 000 in non-equity incentives for installation and operational costs for start-ups. In addition, the ADDED is in the process of creating a dedicated intellectual property unit to help local start-ups and MSMEs make the most

of their intellectual assets and support innovation. The topic of financing IP will be part of the remit of the unit.

Box 1.1. Accelerator 2 Programme in Lithuania

In May 2021, the Lithuanian National Development Institution for Investment and Business Guarantees and the Ministry of Economy of Lithuania announced an investment of EUR 18 million for the Accelerator 2 Programme. The programme consists of selecting two financial intermediaries to set up two Venture Capital funds (pre-seed and seed) and combines the provision of capital with mentoring, counselling and education for companies in early stages of development.

The pre-seed fund will benefit from an endowment of EUR 6.5 million and will implement two programmes:

- Pre-acceleration program: target individuals working in innovations and who wish to start a business, to form teams and generate business ideas.
- Acceleration program: designed to strengthen teams of partially or fully established companies. It includes mentor and counselling to grow competences among the participants.

All eligible companies will be provided with initial venture capital investments.

The seed fund will have an endowment of EUR 2.7 million, with at least 70% of the allocated funds to be invested in companies that have participated in the pre-seed stage of the fund's acceleration programme.

The initiatives described above are an example of how public programmes can strengthen early stage start-ups' access to capital, which is currently a significant hurdle for new businesses in Abu Dhabi. Moreover, Lithuania's approach illustrates how the provision of finance can be accompanied with the provision of mentoring and counselling in order to improve the capabilities of participating firms and increase their chances of success.

Source: (OECD, 2022^[12])

There are few to no financing options for foreign-owned MSMEs and start-ups based in Abu Dhabi, negating the impact of the strong incentives to attract talent and businesses

Abu Dhabi has been successful in increasing its attractiveness to international businesses, start-ups and workers through a number of policy initiatives at the emirate and federal level, and talent attraction remains a priority for the Abu Dhabi government. These policies have resulted in a population and an economy that is dominated by Abu Dhabi residents that are not Emirati citizens. This is particularly true in the MSME and start-up sectors, where the overwhelming majority of employers and own-account workers in Abu Dhabi are non-citizens (Statistics Centre Abu Dhabi, 2020^[4]). However, the financing landscape is bleak for these foreign-owned MSMEs and start-ups that are based in Abu Dhabi but owned or operated by non-citizens. Access to banking services is difficult due to a higher perceived risk of default. This is compounded by the fact that non-commercial lenders, such as KFED, have not historically offered funding products to foreign-owned companies. Given the unusual demographic composition of Abu Dhabi and its aspiration to be a regional hub for start-ups, expanding access to early-stage funding options to foreign-owned companies would have a significant positive impact on the overall performance of MSMEs and start-ups, and would also have implications on talent and business retention.

Recommendations

Box 1.2. Key policy recommendations on ensuring financing

Ensure broad access to basic banking services for MSMEs and start-ups

- Further raise awareness among MSMEs and start-ups of digital banking models, products and services offered by financial institutions such as the Emirates Development Bank, Al Maryah Community Bank and Wio Bank;
- Undergo a comprehensive review of the requirements for opening a business bank account to identify requirements that are unnecessary or excessively difficult;
- Encourage commercial banks to offer banking services to entrepreneurs by establishing a credit mediation scheme and advocating for the creation of enforceable targets or incentives relating to the provision of bank accounts to MSMEs and start-ups;
- Support the development of MSME specific banking products by commercial banks and fintech firms.
- Advocate for a national electronic know-your-customer (e-KYC) platform where commercial banks can access relevant data and documentation, in order to streamline the bank account opening process.

Significantly increase the availability of direct and indirect financial support for MSMEs and start-ups

- Launch a publicly funded body that issues loans and grants to MSMEs and start-ups, with dedicated schemes for targeted sectors;
- Provide incentives to private sector actors offering credit to MSMEs. This should include the re-introduction of a credit guarantee scheme to incentivise commercial banks to offer loans to MSMEs and start-ups.

Expand market-based early-stage and innovation finance

- Expand the business angel network by strengthening incentives for potential angel investors to invest in early-stage start-ups through risk-sharing mechanisms and non-financial support including training and matchmaking services;
- Launch co-investment funds using public funding to leverage private venture capital investment;

Actively support access to finance for foreign-owned MSMEs and start-ups based in Abu Dhabi

- Extend access to development finance to foreign-owned companies based in Abu Dhabi.
- Facilitate access to banking services to foreign-owned companies based in Abu Dhabi by reducing administrative burden and offering risk guarantees to commercial banks.

2 Pillar 2: Develop capabilities

Assessment of policies, programmes and regulations

Building a healthy pipeline of start-ups requires a strong base of entrepreneurship skills and capabilities within the population. Meanwhile, the performance of Abu Dhabi's MSME and start-ups is tied to their ability to find workers who are equipped with the skills these businesses need to succeed. This chapter assesses the level of entrepreneurship and workforce skills in Abu Dhabi and the effectiveness of current policies and programmes in this area.

Entrepreneurship skills and capabilities need strengthening

Efforts are being undertaken to develop entrepreneurial capabilities through training offers by actors in the private and public sectors as well as higher education institutions. However, the current system for developing entrepreneurial capabilities in the adult population remains complex and fragmented. Many initiatives are ad hoc with limited continuity in capability development offerings from year to year. Furthermore, there is limited co-ordination between support actors and more work is needed to align current offerings. These issues partially reflect the maturity level of Abu Dhabi's entrepreneurship ecosystem, which is still relatively young.

The Khalifa Fund for Enterprise Development (KFED) is very active in the development of entrepreneurship capabilities and has a suite of training programmes and initiatives available. Historically, these training programmes were only available to Emiratis. However, KFED has since expanded the outreach of these training programmes to include non-citizens. The Capacity Building Department within KFED offers 27 free workshop series on a wide variety of topics for start-ups and established businesses, ranging from the identification of opportunities to the development of ideas and business plans (Khalifa Fund, 2022^[13]). In 2020, KFED supported over 8 600 entrepreneurs through 130 training courses (Zawya, 2021^[14]). There is limited data available on the design and continuity of workshop offerings as well as on the reach and impact of the training. This lack of data prevents reliable monitoring and evaluation, which is key to ensuring the effectiveness of training programmes and maintaining strong participation rates from year to year. Another important actor in the entrepreneurship training area is the Abu Dhabi Chamber of Commerce and Industry (ADCCI), which provides consulting services and workshops for its members. This includes approximately nine weeklong workshops on topics related to start-up activities such as accounting, marketing and business planning (Abu Dhabi Chamber, 2019^[15]). A recently launched initiative at the federal level by the Ministry of the Economy is the Entrepreneurial Nation, which includes three core programmes: SkillUp, StartUp and ScaleUp. All federal programmes are available to UAE residents, including non-citizens. Programmes within the SkillUp Academy include the Entrepreneurship Internship Programme, which provides placements for job seekers and university students at organisations that support start-ups and MSMEs, and the Fellowship Programme, which is a yearlong educational programme designed for recent unemployed graduates to develop the capabilities and knowledge needed to pursue entrepreneurship. Meanwhile, the ScaleUp Platform is a one-stop shop online portal for business support and consultancy

services for MSMEs and start-ups with high growth potential. Due to the recent introduction of the programmes, data are not yet available on the programmes reach, impact and relevance.

Business incubators and accelerators represent another context in which entrepreneurial capabilities can be developed. Abu Dhabi has multiple incubators and accelerators, including Hub71 as well as those embedded within higher education institutions. For example, Abu Dhabi University, in collaboration with the Abu Dhabi Department of Economic Development (ADDED), recently launched the Sustainable Development Venture Lab. A more established initiative is startAD, which is an accelerator based in New York University Abu Dhabi (see Box 2.1).

Box 2.1. StartAD at New York University Abu Dhabi

StartAD at New York University Abu Dhabi provides an array of training programmes and initiatives to build entrepreneurial capabilities in Abu Dhabi. Among these are:

- A six-month entrepreneurship capacity-building programme (Ibtikari) for UAE nationals, which provides training, coaching, mentoring and networking opportunities. In the fifth edition of the programme, 11 start-ups were accepted into the incubator with 10 receiving grants. Moreover, 55% of the Ibtikari co-founders and CEOs are women.
- A 4-week Corporate Sprint Accelerator programme for international early-stage and seed-stage start-ups that wish to launch or scale in the UAE market. The programme includes training, mentoring and networking with corporate partners and investors. Since its launch in 2017, the programme has had six cohorts of start-ups, with more than 100 start-ups from 24 countries. Overall, the start-ups have raised more than USD 50 million in funding and have created over 250 jobs.
- An open-access innovation lab (Al Warsha), which is available to any resident of the UAE. The lab offers tools, equipment and workspace for (potential) entrepreneurs at any stage, as well as public workshops. These workshops have included 70 tech-literacy workshops, attended by more than 1 000 participants since 2017.
- A youth-focussed accelerator (the NextGen Incubator), which operates the three-month Youth Entrepreneurship Programme. This accelerator programme has been designed to support university students between 18-25 years old who are interested in launching tech-enabled start-ups. The programme offers 2-hour workshops throughout the year focussed on skill development, a 1-2 day bootcamp aimed at generating and validating ideas, an 8-10 week incubation with in-depth programming as well as follow-up support. The Youth Entrepreneurship Programme has worked with 96 entrepreneurs over 2 cycles, of whom 51% are women.

Other startAD initiatives include online workshops available to all in the UAE to deliver training and resources for starting and scaling a business. While efforts have been made to expand startAD programmes to UAE residents, not all initiatives are accessible to international students attending Abu Dhabi based universities or local residents. It is important to expand access to incubation and acceleration services to non-Emiratis as a means of attracting and retaining talent in Abu Dhabi. Developing outreach programmes for international students that encourage and incentivise them to remain in Abu Dhabi after graduation would also be beneficial for the MSME and start-up ecosystem.

Source: (startAD, 2020_[16])

Entrepreneurship training can also be delivered in more individualised formats, such as coaching, mentoring and business consultancy. Evaluations tend to show that coaching and mentoring is effective for developing entrepreneurship skills (OECD/European Union, 2014_[17]). Several actors in Abu Dhabi offer

mentoring and coaching programmes, such as the Abu Dhabi SME Hub through its “Access to Experts” programme (Abu Dhabi SME Hub, 2022^[18]). While the demand for support from this programme is high, it is reported that the mentors have limited availability. Another approach is to integrate mentoring into incubator and accelerator programmes. For example, mentoring initiatives are part of Hub71, which offers access to the global Techstars network (Abu Dhabi Startups, 2020^[19]). Although efforts to integrate mentoring into other programmes have been made in Abu Dhabi, the number of available mentoring schemes remains limited. There is a particular gap in mentoring opportunities after the initial start-up phase and for more established business owners. Creating more mentoring opportunities that address these gaps and expanding existing mentoring programmes are key to developing a stronger entrepreneurial ecosystem by facilitating peer learning, knowledge transfer and entrepreneurial spirit in Abu Dhabi. Inspiration could be drawn from Enterprise Singapore’s Leadership for Transformation programme, which has integrated mentoring into its support offering (Box 2.2).

Box 2.2. Leadership for Transformation, Singapore

Description of the approach

Enterprise Leadership for Transformation (ELT) programme is a one-year programme aimed at supporting MSMEs in Singapore. The programme focuses on providing support to promising MSME business leaders to develop scale-up and growth capabilities. ELT is administered by a network of ecosystem partners (e.g. higher education institutions, financial institutions, industry experts, professional coaches etc.) and has integrated coaching and mentoring initiatives. The programme has three themes: executive learning, development of a business growth plan and market immersion. Each unit includes a practical and modular executive learning curriculum designed to help already successful companies scale. For example, the curriculum includes training on strengthening and adapting a business strategy for long-term growth, identifying, assessing and developing new market segments to enhance competitiveness and globalisation, business performance evaluation, and boosting talent management strategies to attract and retain talent.

Success factors

The programme aims to develop growth capabilities of business owners and entrepreneurs later in the business life cycle. ELT is delivered through an in-person format and encourages networking among participating entrepreneurs and the overall ecosystem. The programme is delivered through approved programme managers, namely: Nanyang Technological University, NUS Business School, Singapore Management University and Singapore University of Social Sciences. The long-term approach of the programme allows for extended engagement between the programme participants and instructors, coaches and mentors. Mentoring support can continue after completing the programme. Moreover, the programme has developed a network of alumni and ecosystem actors.

Relevance to Abu Dhabi

Adopting this approach would help Abu Dhabi to create a holistic policy approach that takes into account all stages of enterprise development. It would also aid in the attraction and retention of talent in the Abu Dhabi workforce, as business owners and entrepreneurs would develop the skills and knowledge needed to successfully identify and manage existing talent. Moreover, this approach integrates mentoring and coaching, which helps to continue the development of successful business owners and entrepreneurs and fosters a more dynamic network of ecosystem actors.

Source: (Enterprise Singapore, 2022^[20])

MSMEs and start-ups face difficulties accessing skills

Accessing skills is a challenge for MSMEs and start-ups in Abu Dhabi. One driver of this is skills shortages in the labour force, which stems in part from a reported misalignment between the skills of educated workers and those needed by MSMEs and start-ups. This is highlighted in a recent Global Entrepreneurship Monitor (GEM) report, which identified weaknesses in the quality and quantity of skilled workers emerging from Abu Dhabi's higher education institutions (Global Entrepreneurship Monitor UAE, 2021^[21]). Another factor contributing to skills shortages for businesses in Abu Dhabi is the low rate of female participation in the workforce. The female unemployment rate has been rising significantly and consistently in recent years, from 7.6% in 2005 to 14.8% in 2019, which suggests that women are struggling to find opportunities in the labour market (Statistics Centre Abu Dhabi, 2020^[4]).

The design of educational programmes has been identified as an area for improvement due to a mismatch between the skills being developed by the education system and those needed by Abu Dhabi's MSMEs and start-ups. This is being addressed by Abu Dhabi's Lifelong Learning Programme (LLP). The priority of the LLP is to develop capabilities and upskill Emiratis, although most programmes are available to all Abu Dhabi residents. The LLP primarily targets jobseekers, recent graduates and people experiencing mid-career changes, with the overall objective of expanding participation in the private sector. A recent initiative is a new learning platform, which includes access to massive open online courses (MOOCs). There are also more curated courses that address specific skills gaps in the labour force. It will be important for the continued success of the programme to set up monitoring and evaluation mechanisms before the official launch to assess the quality and relevance of its initiatives and facilitate adjustments where appropriate.

There are also a series of lifelong learning programmes in place at the federal level to encourage the development of relevant capabilities in the labour force. The TRA Virtual Academy by the Telecommunications and Digital Government Regulatory Authority provides training services and programmes that are delivered both on-site and online. Another federal initiative is the NAFIS programme, which was launched by the Ministry of Human Resources and Emiratisation with the aim of encouraging the development of the private sector and providing the resources needed for workers to be competitive in this sector. As part of the programme, candidates can be hired for an apprenticeship or an on-the-job training position through a unified platform, which includes both private and semi-private companies. However, this training initiative narrowly targets recent graduates who are Emirati citizens and placements remain difficult to obtain due to various requirements, including a validation procedure and acquiring a training permit from the company.

An area for improvement in Abu Dhabi would be to introduce and expand vocational and on-the-job training programmes, which can help address critical skills gaps. An important actor in this area is the Abu Dhabi Vocational Education and Training Institute (ADVETI), which offers a range of certificates and diplomas and also facilitates internships and sponsorships to develop business skills. Many of the vocational training programmes require a work placement in the public or private sector. By increasing the availability of these types of training programmes, more people can gain experience in the private sector by finding work placements that are guided and supervised, which helps to foster entrepreneurial awareness and create longer term employment opportunities.

It is important to note that the challenges faced by MSMEs and start-ups in accessing skills are linked not solely to the availability of suitable skills in the labour force but also to the ability of smaller businesses to attract these skills. Emirati citizens are under-represented in the MSME labour force. They account for only 3% of workers MSME workers (2019) despite making up 14% of Abu Dhabi's working age population (2016) (Statistics Centre Abu Dhabi, 2020^[4]). This is driven in part by the difference in salaries between workers in the private sector and those in the public sector. Indeed, in 2019, the public administration and defence and compulsory social security sector accounted for 9.2% of employment but 26% of total employee compensation in the Abu Dhabi economy (Statistics Centre Abu Dhabi, 2020^[4]). This imbalance

in working conditions is being addressed in part by the introduction of a reduced pay scale for newly joined public sector workers, which is more closely aligned with salaries in the private sector.

Further steps are needed to instil an entrepreneurial culture

An entrepreneurial culture is an essential part of a strong and dynamic MSME and start-up ecosystem. The evidence is somewhat mixed when it comes to the degree to which Abu Dhabi's culture is conducive to entrepreneurship. A recent GEM report found that the entrepreneurial culture was broadly positive in Abu Dhabi (Global Entrepreneurship Monitor UAE, 2021^[21]). Similarly, at the UAE level, the majority of people believe they have the skills and knowledge needed to start a business and they perceive good opportunities in this area (Global Entrepreneurship Monitor, 2021^[22]). Despite these positive reports, the rates of entrepreneurial intention are much lower. Moreover, some entrepreneurs in Abu Dhabi have indicated that friends and family are not always supportive of the decision to start a business over more traditional career paths.

Instilling more positive perceptions of entrepreneurship is key to translating entrepreneurial opportunities into action. Promoting entrepreneurial networks is one way of inspiring potential entrepreneurs in Abu Dhabi. Networks support entrepreneurs in accessing financing and finding business partners, suppliers, employees and customers (Commission, 2015^[23]). They also facilitate experiential learning and promote entrepreneurship as a viable and desirable career option. Business owners in Abu Dhabi report networking with other owner-managers, however, few participate in networks connecting new entrants with established business owners. (Global Entrepreneurship Monitor UAE, 2021^[21]). Moreover, only about half of respondents report that start-up community networks are well known in the region and accessible (Global Entrepreneurship Monitor UAE, 2021^[21]). Efforts have been made to establish new networks for MSMEs and start-ups in Abu Dhabi. For example, KFED introduced the Abu Dhabi SME Tribe, which is an online community platform that enables business owners and entrepreneurs to connect with peers, service providers, policy makers and sector leaders (Abu Dhabi Government Media Office, 2021^[24]). While public policy can play a role in developing and linking entrepreneurship networks, it is important to avoid having too many networks that could crowd each other out (OECD, 2021^[25]).

The introduction of more role models could also benefit the entrepreneurial culture in Abu Dhabi. Role models are pivotal in stoking entrepreneurial intentions (Van Auken, Fry and Stephens, 2006^[26]) and developing and sustaining new start-ups (Bosma et al., 2012^[27]). Policies can play a role in unlocking these benefits. For instance, the Future Heroes programme in Estonia and Latvia aims to influence entrepreneurial attitudes through the provision of role models for high school girls (OECD/EC, 2021^[28]).

Peer learning can be another effective method for MSMEs and start-ups to build their networks and receive moral support (Kutzhanova, Lyons and Lichtenstein, 2009^[29]). Evidence from peer learning schemes suggests that this approach can improve entrepreneurial attitudes and business performance (OECD/EC, Forthcoming^[30]). Such schemes can be offered independently or within pre-existing programmes. They focus primarily on sharing experiences and good practices through collecting multiple perspectives on the challenges faced by other entrepreneurs (see Box 2.3 for a description of a peer learning programme in Ireland).

Box 2.3. Going for Growth, Ireland

Description of the approach

Going for Growth is a capability development programme for women entrepreneurs in Ireland. The programme uses a peer coaching method to successfully grow and scale participants' businesses, including through developing export capabilities. The initiative focuses on businesses that have operated for at least two years and aims to develop capabilities through interactive roundtable discussions among successful entrepreneurs. The programme is facilitated by women with a track record of success as entrepreneurs. These "Lead Entrepreneurs" offer their experience, knowledge and expertise to the group with the aim of fostering an entrepreneurial culture and encouraging collaboration among participants.

Success factors

The peer learning format provides support and positive peer pressure to inspire participating entrepreneurs to achieve their goals, such as scaling up or exporting. The programme highlights role models (i.e. the "Lead Entrepreneurs") and offers opportunities for successful, established entrepreneurs and more novice entrepreneurs to network and learn from each other. This helps to foster confidence among participating entrepreneurs, expand networks and develop solutions to common challenges. Moreover, the programme uses ongoing monitoring and evaluation techniques to measure its effectiveness and improve the programme from cohort to cohort.

Relevance to Abu Dhabi

Peer learning schemes, if implemented in Abu Dhabi, could assist in connecting established MSME business owners with business owners at the early stages of the entrepreneurial and self-employment journey. The model allows for the transfer of knowledge and expertise and also provides a platform to share challenges experienced by other entrepreneurs. This could aid in the establishment of a network of entrepreneurial role models in Abu Dhabi and could promote the visibility of successful entrepreneurs and business owners to encourage the next generation of MSMEs and start-ups. It is also important to establish ongoing monitoring and evaluation techniques in training schemes to measure the effectiveness of the programmes. By implementing a similar approach, the quality of programmes can be continually monitored to verify their effectiveness and enable informed adjustments to better align content with current needs.

Source: (OECD/European Union, 2016^[31])

In the longer term, entrepreneurship education has an important role in shaping social attitudes so that they are more positive towards careers in MSMEs and start-ups. Higher education institutions are integral to this. Many of these institutions in Abu Dhabi have incorporated entrepreneurship programmes and initiatives into their curricula and campuses, allowing students to access tools and resources aimed at stoking an interest in entrepreneurship and developing entrepreneurial capabilities (see Table 2.1). There are many benefits to offering entrepreneurship education to young people at an early stage. Evidence shows that entrepreneurship training can increase awareness and entrepreneurial efficacy among youth (Ho et al., 2018^[32]). For instance, a recent study in Korea shows entrepreneurship training leads to improved entrepreneurial intentions and problem-solving capabilities among young people (Kim et al., 2020^[33]). Tailoring entrepreneurship education to specific population groups is also an effective method to improve entrepreneurial intentions and capabilities. An example of this is the OzGirlsEntrepreneurship programme in Australia, which provides workshops dedicated to female secondary school students.

Table 2.1. Entrepreneurship education in Abu Dhabi

Institution	Description
Zayed University Abu Dhabi	Entrepreneurship education is embedded into the curriculum. For example, the Bachelor of Science in Marketing and Entrepreneurship aims to develop the entrepreneurial skills of students, in areas such as how to develop a comprehensive business plan or how to attract venture funding. The university also has an Entrepreneurship Club, which is an active player in encouraging entrepreneurial intention and skills development among students. The club has worked with multiple other actors in the MSME and start-up ecosystem to develop entrepreneurial capabilities, notably for the Future Founders and Future Funders Programme with Dubai SME and WOMENA. Zayed University also hosts the Innovation and Entrepreneurship Centre. The centre aims to help graduate student entrepreneurs and contribute to the larger entrepreneurial ecosystem within the university. Moreover, the centre has a mission to integrate university entrepreneurship and innovation functions throughout the university as well as further embed entrepreneurship and innovation into curricular and extracurricular activities.
Khalifa University of Science and Technology	The Khalifa University Enterprises Company acts as the business and investment arm of Khalifa University with an endowment of AED 100 million. The endowment fund will be used to allocate funds for investments and operations. This branch of the university will also include innovation, acceleration and start-up programmes and KU Ventures, which aim to provide support in establishing and operating non-IP technology companies. The university also encourages entrepreneurship and capability development through entrepreneurship bootcamps, such as the Lab-to-Market Bootcamp and the Innovation and Entrepreneurship Bootcamp. The university also has an incubator, the Khalifa Innovation Centre, which is open to all university students and researchers in the UAE. The incubator received an Innovative License through the ADDED, which allows the centre to facilitate start-ups in the validation of new technologies and business models while they remain independent and engage in business traction activities.
Abu Dhabi School of Management	The Abu Dhabi Chamber of Commerce and Industry founded the university in 2011 with the intention of focusing on innovation and entrepreneurship. Courses on entrepreneurship, innovation and business management are offered to students. Moreover, the mission of the Master of Business Administration programme is to develop entrepreneurial managers and encourage the growth of entrepreneurial ventures in the UAE. The Master of Science in Quality and Business Excellence programme also seeks to develop entrepreneurial capabilities, specifically in support of one of the pillars the Abu Dhabi 2030 Vision.
Abu Dhabi University	Abu Dhabi University is the base for the incubation programme - ADUi Sustainable Venture Development Lab, which is a hub for innovation and entrepreneurship research, education and training.
New York University Abu Dhabi	NYU Abu Dhabi offers entrepreneurship education in its curriculum as well as other measures in support of Abu Dhabi's MSME and start-up ecosystem. The university is active in hosting entrepreneurship conferences and events to foster start-up culture in Abu Dhabi (e.g. Women Empowered: Transnational Youth Entrepreneurship). Moreover, NYU Abu Dhabi partnered with the Abu Dhabi Department of Education and Knowledge (ADEK) to launch startAD, an accelerator programme anchored at the university campus.
Emirates College for Advanced Education	The Emirates College for Advanced Education hosts FABLAB Abu Dhabi, which aims to create an innovative and digital ecosystem for university students. The FABLAB offers programmes, tools and resources to support the development of capabilities among youth (entrepreneurs).

Note: Many other higher education institutions also offer entrepreneurship courses, programmes and events to help develop entrepreneurial intentions and capabilities in Abu Dhabi. These include Sysoms College Abu Dhabi, the Higher Colleges of Technology, the Emirates Institute for Banking and Financial Services and Khawarizana International College.

While universities have incorporated entrepreneurship education into their curricula, entrepreneurship education remains uncommon in primary and secondary schools. However, efforts to introduce young people to entrepreneurship have been made. At the Abu Dhabi level, KFED hosts a two-week bootcamp for 100 students aged 10 to 17 years old who are interested in developing entrepreneurial skills (Emirates News Agency-WAM, 2022^[34]). At the UAE level, the SkillUp programme aims to encourage an entrepreneurial mind-set in the UAE through initiatives in schools and universities to foster entrepreneurial motivation and ambition. Another initiative offered by the SkillUp programme is a K-12 entrepreneurship programme that uses a project-based education programme for primary and secondary school students. INJAZ UAE is a federal initiative to increase workforce readiness, financial literacy and entrepreneurship among young people, which is operated in partnership with the non-profit business education organisation Junior Achievement Worldwide. INJAZ UAE offers the JA Company programme, where high school and university students create and test start-ups with the assistance of trained corporate volunteers, entrepreneurs and a network of youth entrepreneurs. INJAZ UAE also provides entrepreneurship capacity-building workshops to middle school, high school and university students.

Embedding entrepreneurship education at the primary and secondary school level could have a positive impact on future generation's outlook on working in the private sector. This is particularly important in Abu Dhabi considering the current preference that many Emiratis have towards working in the public sector. Developing more entrepreneurship programmes for youth could also lead to a strengthening of the entrepreneurial culture and increase entrepreneurial intentions among current and future generations, aligning with the UAE's objective of becoming an entrepreneurial nation.

Recommendations

Box 2.4. Key policy recommendations on developing capabilities

Enhance capacity building programmes and their impact

- Increase awareness of existing programmes and measures by co-ordinating programmes and compiling current entrepreneurship training schemes and ecosystem information into one digital platform to ease access to information about entrepreneurship and business ownership. This one-stop shop platform should integrate signposting of capability development and training supports at all stages of enterprise development.
- Engage entrepreneurs, networks, intermediaries and other ecosystem actors in the design and delivery of training schemes to ensure that support is aligned with market needs.
- Scale up mentoring and other capacity building programmes, particularly for business owners operating in the MSME sector.
- Develop online learning materials, workshops and other supplier supports for MSMEs with the potential to participate in public tenders. This should include support in identifying procurement opportunities, submitting tenders, and promoting products and services to government purchasers. This could be complemented with capacity building activities directed towards contracting authorities, such as training facilities and the provision of clear and comprehensive guidance.

Address skills shortages by encouraging greater participation in the MSME and start-up workforce

- Create more opportunities for women and young people in Abu Dhabi to find work in the MSME and start-up ecosystem. Policy should aim to improve access and remove barriers to training programmes through reserved slots, dedicated training programmes as well as tailored content to target groups' needs.
- Attract and retain foreign talent to the MSME and start-up ecosystem by providing clarity on Golden Visa (entrepreneur) process, defining a pathway to citizenship for Golden Visa (entrepreneur) holders and developing outreach programmes for international students at Abu Dhabi universities to encourage and incentivise them to remain in Abu Dhabi after graduation.
- Initiate a review of imbalances in working conditions (e.g. salary, working hours and benefits) between jobs in the private sector and those in the public sector and establish steps that can be taken to address these.
- Create linkages between university students and strategic sectors, including through projects, work placement opportunities, internships, etc.
- Strengthen the role of vocational training.

Encourage entrepreneurial spirit and culture

- Establish a network of entrepreneurial role models to facilitate peer learning and capability development among (potential) entrepreneurs.
- Co-ordinate with the Abu Dhabi Department of Education and Knowledge (ADEK) to embed entrepreneurship education in primary and secondary school and continue to support the initiatives of higher education institutions.
- Develop MSME and start-up specific networks and communities to enable peer learning, mentoring and coaching opportunities.
- Co-ordinate with the LifeLong Learning Program to strengthen the role of entrepreneurship education and develop a public entrepreneurship apprenticeship programme to inform, upskill and encourage entrepreneurship as a career option.
- Create outreach programmes to increase awareness of and interest in the MSME and start-up sectors. This could include school visits (e.g. workshops, presentations), school projects in collaboration with actors in the field, work placement opportunities.
- Strengthen incubators and accelerators in higher education institutions (HEIs), collaborating with HEIs to provide, among other things, testing facilities, training and networking opportunities and events.

3 Pillar 3: Connect to markets

Assessment of policies, programmes and regulations

At a basic level, MSMEs and start-ups need customers in order to survive and thrive. These customers can stem from a variety of sources, including public procurement, international markets, and large companies. This chapter assesses the degree to which policies and programmes in Abu Dhabi are enabling MSMEs and start-ups to tap into these important markets.

MSMEs and start-ups face difficulties tapping into public procurement opportunities

One avenue to raise the economic contribution of MSMEs and start-ups in Abu Dhabi is to improve their access to the public procurement market. While data are not available for Abu Dhabi, public procurement accounts for 12% of GDP in OECD countries and close to one third of public expenditures on average. There is also clear evidence that smaller businesses are structurally under-represented in this area (European Commission, 2020^[35]). One reason for this is that MSMEs with the potential to supply to public authorities do not always submit an application because the procedure is perceived as being too complex or time consuming.

The Abu Dhabi government has taken important steps to encourage the participation of MSMEs in public procurement. A fully digital procurement platform – the Abu Dhabi Government Procurement Gate – has been developed, offering more transparency and removing administrative hurdles in line with international good practices. Greater transparency is of particular benefit to MSMEs and start-ups, since opaque procedures can provide an advantage to more well-connected established firms. Meanwhile, reduced administrative barriers are particularly relevant to MSMEs and start-ups, who typically struggle more with red tape.

Despite these improvements, a large proportion of tenders, especially those of smaller value, are not made public on the gateway. Instead, these are awarded in a closed procedure with only pre-selected firms able to bid. This has the disadvantage of excluding MSMEs who have the capabilities to supply but are not already known by contracting authorities. This reduces competition, possibly leading to a lower quality of goods and services and/or higher prices. In addition, this practice reduces the visibility of public contracts, which could discourage companies from becoming involved. International evidence indeed shows that non-open procedures (as well as short advertising periods) more often lead to single bidding, which in turn impedes the value for money that public authorities receive (Government Transparency Institute, 2019^[36]). The box below provides some insights from the experience of Singapore with guidelines of relevance to Abu Dhabi. One takeaway is that the contract value threshold for a competitive procedure should be specified and can be relatively low. Another is that open or public procedures (available to all on the centralised portal) should be the norm, and that non-public procedures are only appropriate in exceptional and well-motivated circumstances, as is the case in Singapore.

Box 3.1. Public and open public procurement practices: The experience from Singapore

The Singapore Government aims for fairness, openness and competitiveness for its government procurement policies, with the GeBIZ portal acting as the central gateway. The procedure varies by contract size.

- Very small purchases below SGD 6 000 (around USD 4 160) may be carried out directly by the authority by buying off-the-shelf or purchasing directly from known sources.
- For contracts with an estimated value between SGD 6 000 and SGD 90 000 (around USD 62 400), quotations will be invited. This is a statement of prices by suppliers prepared to deliver the requested services or products. At least two officials are then involved in the selection process, one to make a recommendation about which supplier is best qualified and the other to confirm this recommendation. This process is typically open to all and published on the GeBiz portal, with some exceptions (see below).
- Contracts over SGD 90 000 are called tenders, and are more formal and legally binding than quotations.

Open quotations and tenders are the default option. In some instances, a qualification of interested suppliers is carried out to exclude suppliers who do not meet the pre-defined criteria. Limited tenders and quotations, whereby tenders or quotations are invited from only a few or one pre-defined supplier and are not publicly available, are the exception. The use of limited tenders and quotations is deemed appropriate when concerns of national security are at play or open procedures are not feasible or practical, for instance because of intellectual property rights or works of art.

As of September 2022, 787 tenders were public on the GeBIZ portal, compared with 28 for its Abu Dhabi counterpart. For completeness, it should also be noted that Singapore has set up various public-private partnerships, which could be considered as an alternative form of procurement.

Source: <https://www.gebiz.gov.sg/>

The Abu Dhabi government has also set a target that 15% of procurement value is directed towards MSMEs. However, this target is still below MSMEs' share of gross value added in the Abu Dhabi economy, which was 23% in 2020. In addition, data on contracts awarded to MSMEs are not systematically collected and reported, making it difficult to enforce the 15% target and track progress over time. Another measure to expand MSMEs' and start-ups' access to public procurement is the suspension of bid bonds and waivers of performance guarantees for projects worth less than AED 50 million. Meanwhile, a framework to facilitate subcontracting – which typically involves smaller suppliers – has recently been developed. Also of benefit is the Abu Dhabi Local Content Programme, which aims to direct government spending towards local producers.

At a federal level, in 2020, the UAE government introduced measures that directed 10% of the total procurement value to MSME owners, gave a 10% price preference to MSMEs when evaluating bids, and exempted MSMEs from submitting a bank guarantee letter for contract values below AED 1 million. Discounts and fee exemptions are also offered as incentives for MSMEs to register with the Federal Supplier Register, which allows them to apply for federal public tenders. The government of the UAE also relies heavily on local content requirements as the pathway to develop linkages with private suppliers (The Economist, 2021^[37]).

The application of quotas on the share of public contracts awarded to MSMEs is an important element of the policy approach to expanding smaller businesses' access to the public procurement market. However, there is a risk that this approach reduces the cost efficiency of public expenditures. The objective in the

longer term should be that MSMEs can access a larger share of government contracts on merit rather than through preferential treatment. This requires training and support for MSMEs in the area of public procurement to level the playing field with larger companies. In Abu Dhabi, there are no formalised efforts to raise awareness among the business community about the potential to compete for public contracts. There is also a lack of supplier development programmes to assist MSMEs in becoming competitive bidders. In other countries, these activities are often conducted by the public entities in charge of public procurement policies and central purchasing bodies, sometimes in collaboration with MSME agencies or non-public bodies with a mandate for business development.

Efforts to support MSMEs and start-ups in the area of public procurement could be complemented with capacity building activities directed towards contracting authorities, such as training and the provision of clear and comprehensive guidance. Public officials, particularly in bodies who assign contracts on an irregular basis, do not always fully understand the practical application of public procurement rules and areas of consideration for MSME participation (OECD, 2018^[38]). In other words, even when the framework is favourable to MSMEs, for instance by making it possible to divide large contracts into smaller lots, allowing for subcontracting or announcing upcoming tenders well in advance to allow more preparation time, officials in contracting authorities may not always be aware of such possibilities. This is apparent in the Abu Dhabi context, where it is reported that, while there is a general desire to meet the 15% allocation of procurement value to MSMEs, many government entities lack an understanding of how to go about achieving this.

Another issue that impairs MSMEs' and start-ups' access to public procurement is frequent payment delays from contracting authorities. In 2019, the Chamber of Commerce of Dubai highlighted that payment delays, including from public and semi-public entities, represent the most pressing challenge for companies across the UAE (Abbas, 2019^[39]). While there is an ambition in Abu Dhabi for all contracting bodies to pay within 30 days, data on business-to-government payment times are not available and there are no enforcement mechanisms to ensure this target is met. Shorter payment times would benefit businesses of all sizes, but especially small and young enterprises with limited capital reserves and affordable means of accessing short-term working finance. Cash flow constraints mean that late payments can place considerable strain on MSMEs' and start-ups' growth prospects, and may even drive them out of business. For this reason, as well as not to discourage MSMEs from participating in public procurement contracts, many OECD countries, such as Australia, Chile, New Zealand or the United Kingdom have taken action in recent years to ensure timely payment from public authorities. At the EU level, a directive on late payments had a similar ambition (see Box 3.2). Its experience, however, indicates that the implementation and enforcement is important in making a difference on the ground. Abu Dhabi should ensure that its ambitious target of paying within 30 days is realised, which requires systematic monitoring and enforcement mechanisms for violations such as naming and shaming repeat offenders, administrative fines or interest on late payments.

Box 3.2. The EU Late Payment Directive may offer a learning model for Abu Dhabi policy makers

The EU Late Payment Directive was introduced in 2011 to reduce the stress on EU companies, especially smaller ones, caused by late and non-payments by clients. The directive followed in-depth research about the impact of late and non-payments on business performance and survival, which concluded that that one in four MSME insolvencies were caused primarily by late and non-payments. While many actions and provisions relate to business-to-business payments, the directive also requires public authorities to pay for the goods and services procured within a period of 30 days or, only in exceptional circumstances, within 60 days. Moreover, it stipulates the payment of a statutory interest rate for late payment of 8% (with some EU Member States setting this even higher) and compensation for recovery costs.

The experience from the EU highlights the importance of implementation and enforcement. An evaluation was conducted in 2015, four years after the directive was introduced and two years after the deadline for imposing it into national laws among the EU member states. It revealed that the average payment duration in transactions between public authorities and businesses (PA2B) declined from an average of 65 days in 2011 to 58 days in 2014. This average payment duration has fallen further in the years since. However, despite these improvements, many countries are far away from the stated goal in 2018. In Italy, the worst performing country among EU Member States, the average PA2B payment duration remained over 100 days in 2018. Ambitious reforms in the public procurement framework in Italy, introduced in 2017 and 2018, stalled because of poor implementation and capacity issues.

A related initiative is the Pan-European Public Procurement On-Line (PEPPOL), which aims (among other things) to encourage digital payments between public authorities and private suppliers in a systematic and standardised way. This facilitates even faster payments. This framework is open to non-EU member states with Australia, New Zealand and Singapore as members. Abu Dhabi (or the UAE) could adopt this framework as well or facilitate the use of e-invoicing as the default.

Source: (European Commission, 2016^[40]), (OECD, 2021^[41])

Governments can also use public procurement as a strategic tool to stimulate innovation, push for sustainability or pursue other objectives. In Abu Dhabi, this link between public procurement and innovation remains underexplored. Pre-commercial procurement (PCP) offers an avenue to raise the capabilities of the Abu Dhabi economy, while at the same time addressing public sector needs and tackling societal challenges. Participating companies may test innovations in a safe environment and, if successful, get a first customer reference that would open the door to other (private) clients. Through PCP, public procurers act as technologically demanding actors, buying solutions that do not yet exist in the commercial market (OECD, 2017^[42]). More concretely, public procurers demand an innovative solution to a challenge or problem, typically with demonstrable benefits to the contracting authority, but with much broader applications and scale-up potential. This demand is made through a portal (such as the Abu Dhabi Government Procurement Gate) and potential suppliers can then apply. As with other public contracts, the applications are assessed by the contracting authority so as to identify the best value for money solution. Different risk and benefit sharing agreements can apply. A common model among EU countries is for the supplier to retain the intellectual property rights of the resulting R&D, but the procurers have the right to usage and/or licensing.

There are barriers to foreign markets in Abu Dhabi

Exporting can deliver many benefits to businesses, including an enlarged revenue base, risk diversification, technology transfer and an improvement in standards and efficiency (OECD, 2020^[11]). Firms that are

active in foreign markets are typically more productive and innovative, which is due partly to a process of “learning by exporting” (OECD, 2019^[43]). A 2022 study conducted in the United Arab Emirates indicates that this pattern also holds true in Abu Dhabi. However, MSMEs are generally under-represented in global value chains and are less likely to export than large businesses. This is because they are disproportionately affected by tariff and non-tariff trade barriers, face more resource and skills barriers and find it harder to identify foreign business partners and deal with regulatory differences (OECD, 2018^[44]). Supporting MSMEs and start-ups to plug into international markets is particularly important in the Abu Dhabi context, where the relatively small local market means that fast-growing enterprises need to expand to foreign markets at an early stage.

MSMEs’ and start-ups’ access to international markets is bolstered by the UAE’s membership of the Gulf Co-operation Council (GCC), which has free trade agreements with Singapore and the European Free Trade Association, as well as the UAE’s participation in the Pan-Arab Free Trade Area agreement. The UAE has also reduced the time and cost to export by digitising certificates of origin and permitting the issuance of certificates of conformity that cover multiple shipments (World Bank, 2020^[45]). However, further progress is needed to reduce international trading costs. In the World Bank’s 2020 Ease of Doing Business rankings, the UAE ranks 92nd in the trading across borders sub-indicator. This reflects the high cost and time taken to export goods and services, which in turn is due to challenging documentary and border compliance procedures.

At the Abu Dhabi level, a notable initiative to facilitate trade is the Advanced Trade and Logistics Platform (ATLP). The platform includes the Abu Dhabi Single Window, which aims to make trade easier for companies based in Abu Dhabi by streamlining and digitalising procedures related to customs clearance and inspecting, airfreight services and container bookings. Abu Dhabi has also made improvements to its export procedures and physical trade infrastructure in recent years, such as through the construction of a large container terminal adjacent to the Sheikh Khalifa Port. Moreover, Abu Dhabi will be a central node in a GCC-spanning rail link that is currently under development (Abu Dhabi Chamber, 2019^[46]).

Exporting companies have the potential to support Abu Dhabi in diversifying its economy and expanding the role of entrepreneurship. This important role is reflected in a number of policy initiatives. In 2011, the Abu Dhabi export promotion agency was established to provide incentives and advice to local companies planning to export goods and services. The Emirates Development Bank (EDB) has also signed a co-operation agreement with the Abu Dhabi Exports Office (ADEX), the export-financing arm of the Abu Dhabi Fund for Development (ADFD). The purpose of this agreement is to design innovative financing solutions for exporting companies and those with export potential. One of ADEX’s financial products is a revolving credit facility, which provides loans of up to 100% of the value of the export contract, with a minimum value of USD 100 000 and a maximum loan period of five years. ADEX also provides direct loans to overseas importers of goods and services produced in the UAE, as well as guarantees to foreign buyers of UAE exports at an interest rate at market value or below.

Despite these important measures, business development services tailored to the needs of MSME exporters and those with export potential are currently missing from the policy landscape. Addressing this is important because interviews with key stakeholders indicate that MSMEs lack an awareness of exporting opportunities and do not have the knowledge to access overseas markets. For instance, MSMEs are not always aware of the free trade agreements that exist between the UAE and a number of other countries. Informational gaps also exist with respect to the legal, taxation and regulatory frameworks in overseas markets. One potential avenue to explore is to add export-focussed training modules to existing service providers. For instance, the Abu Dhabi SME Hub’s Access to Experts programme allows entrepreneurs and business owners to connect with leading industry mentors via a digital platform. The programme has three central pillars: access to the Abu Dhabi market, business expertise and industry expertise. A fourth theme, access to foreign markets, could be introduced, possibly along the lines of the Tasdeer programme in Qatar.

Non-financial advisory services could be offered in tandem with financial services already in place. This model works well in organisations such as the Business Development Bank of Canada, where the combination of support measures is particularly effective in increasing the performance of its beneficiaries. A broadly similar approach has been adopted in India (see Box 3.3), which could serve as a model to emulate for policy makers in Abu Dhabi, possibly as part of the mandate of ADEX.

Box 3.3. The Exim Bank: Combining financial and non-financial support to Indian exporters

The Exim Bank was established by the Government of India, under the Export-Import Bank of India Act of 1981. It provides a broad range of financial products to Indian firms active in foreign countries. The agency also has three different arms, complementing the financial support instruments it has at its disposal with:

- **Marketing Advisory Services:** Support to identify potential opportunities abroad and assistance in locating overseas distributors, buyers and other partners.
- **Export Advisory Services:** This consists of a diverse range of information, advisory and support services on a fee basis, such as market-related information, sector and feasibility studies, technology supplier identification, partner search, investment facilitation and development of joint ventures.
- **Research and analysis:** This department drafts insights on international economics, trade and investment developments through qualitative and quantitative research techniques, with the aim to provide useful intelligence to steer the investment and export decisions of Indian firms.

Abu Dhabi's approach to helping MSMEs and start-ups to export should build on pre-existing networks and initiatives. In particular, Abu Dhabi authorities would be advised to collaborate with the Abu Dhabi Chamber of Commerce and Industry, sector organisations and similar bodies that may help identify indigenous companies with the potential to export (more), have a good understanding of the barriers they face and can partner with the service delivery. In a similar spirit, the Abu Dhabi Investment Office's (ADIO) global representative offices, the Ministry of Foreign Affairs and embassies across the globe are all well placed to contribute to the aforementioned efforts and should be involved in the design and implementation of relevant policies as a consequence.

A final consideration, especially when it comes to gathering and disseminating (foreign) market intelligence and supporting MSMEs in finding suitable partners and interlocutors in foreign markets, is to prioritise target markets and economic sectors of particular interest to the Abu Dhabi business community. A mapping exercise of needs that is broken down by export market and sector of activity would help to focus efforts and avoid "spreading limited resources too thinly", with the potential to scale up or revise the focus as time goes by.

Large companies can do more to support MSMEs and start-ups

Large international companies tend to be more productive, research-intensive and export-intensive than their smaller counterparts. MSMEs and start-ups that supply or collaborate with these firms can therefore gain access to foreign markets, good management practices, and knowledge and technology. Realising these benefits is a two-part process that involves firstly attracting large international companies and secondly ensuring that these companies are well embedded in the local business ecosystem such that they generate spillovers for smaller companies.

Abu Dhabi has excelled in the first of these areas. The UAE has been actively promoting inward Foreign Direct Investments (FDI) through its investment office and other measures to increase the attractiveness of the country to foreign investors. These include the provision of an investment protection guarantee with

major trading partners and dispute settlement agreements in line with internationally recognised good practices. It is also possible for investors to undergo mergers, acquisitions and transfers of ownership and to transfer profits freely. Furthermore, under the FDI law, foreign investors are allowed to own up to 100% of free zone companies under certain conditions. Complementing these national efforts, the Abu Dhabi Investment Office (ADIO) was established in 2019 with the aim of raising foreign direct investments. ADIO engages in Public-Private Partnerships (PPP), including for infrastructure projects that were typically reserved for government agencies. It also provides targeted incentives for Abu Dhabi's priority sectors, and has opened offices in the major investment centres of Beijing, Frankfurt, Paris, London, New York, San Francisco, Seoul and Tel Aviv.

While Abu Dhabi has been successful in attracting foreign firms, it is less clear whether these firms have established meaningful links with local businesses, in part because a paucity of data. The abolition of the 51% local ownership requirement in 2021 very likely supports Abu Dhabi's status as a desirable destination to set up a business. However, this change also makes it even more important to create other incentives and support measures to foster collaboration between foreign-owned businesses and the local business community.

In Abu Dhabi, there is a shortage of programmes to support collaborations between MSMEs and large companies or to embed MSMEs within the supply chain of larger companies. There are a variety of measures that can be taken in this area. These include the development of databases of potential suppliers and knowledge providers, the formation of MSME consortia to supply large orders, and the development of programmes to raise awareness of collaboration opportunities and boost the capacities of potential suppliers. A survey across OECD countries indicates that two in three investment promotion agencies gather databases of local suppliers and customers as part of their aftercare services. A similar share also provide matchmaking services between investors and local companies and 39% provide capacity building programmes for local companies to raise their absorptive capacity, making them more suitable partners for multinational companies (OECD, 2018^[47]). As a possible example for policy makers in Abu Dhabi to follow, the Malaysian Investment Development Authority is an agency outside of the OECD that is active in all three of these areas. It does not appear that such measures are currently in place in Abu Dhabi. With that being said, a noteworthy policy initiative is that state-owned enterprises where the federal government holds a stake of more than 25% must ensure that at least 5% of their contracts are awarded to local MSMEs (OECD, 2016^[48]). This encourages them to find suitable local partners. This requirement for state-owned enterprises to collaborate with local MSMEs would likely be more successful if there is a larger pool of local companies with the capacity to provide goods and services competitively and if state-owned companies are more aware of this potential.

MSMEs in Abu Dhabi may also lack the expertise to meet the requirements set by large companies, in particular in relation to formal compliance with official quality standards. International evidence indicates that MSMEs who are certified to international quality standards, such as from the International Organization for Standardization (ISO), find it much easier to become suppliers to and partner with large multinational companies. In some cases, such certification even represents a prerequisite for working with a large organisation. A joint OECD-UNIDO study, for example, shows that international certification substantially raises the probability of becoming part of international value chains in South East Asia (OECD, 2019^[49]).

Recommendations

Box 3.4. Key policy recommendations on connecting to markets

Improve access to public procurement

- Initiate a consultation process among contracting authorities, the business community and other stakeholders in Abu Dhabi in order to identify the barriers to purchasing from MSMEs and start-ups and establish steps to overcome these. This consultation process should cover various contracting authorities, including some from the local and federal level of government, state-owned enterprises, as well as representatives from the business community, preferably with first-hand experience in competing for public contracts.
- Adopt and enforce rules for public authorities to pay on time.
- Develop a Pre-Commercial Procurement (PCP) programme to stimulate innovation by creating a demand for new or not yet developed technologies and solutions.
- Establish clear rules for public procurement, including the threshold contract value above which competitive tenders must be issued, and increase the proportion of tenders through the Abu Dhabi Government Procurement Gate that are fully public.
- Collect MSME specific data on public procurement by specifying reporting requirements for contracting authorities to classify their suppliers by size class, according to a harmonised classification, in order to assess the status quo and measure the impact and efficiency of policy interventions.

Improve access to foreign markets

- Provide business development services tailored to MSME exporters and would-be exporters through additions to existing business support programmes and/or as a complement to existing financial support schemes for exporters.
- Encourage selected entrepreneurial ventures and scale-ups to set up activities in Abu Dhabi through soft landing programmes, to provide a pathway for indigenous MSMEs and start-ups to adopt international practices and connect to international markets.
- Examine how regulatory obstacles faced by exporting MSMEs and start-ups can be reduced in co-ordination with the Logistics and Trade Facilitation Sector.

Increase support provided by large companies to MSMEs and start-ups

- Provide matchmaking services and foster and incentivise collaborations between local MSMEs and large companies, including multinationals.
- Encourage and support MSMEs to certify to internationally recognised standards, in co-ordination with the Industrial Development Bureau.

4 Pillar 4: Improve the business environment

Assessment of policies, programmes and regulations

The business environment refers to the system of rules and regulations that are in place to govern businesses' activities, as well as the wider economic conditions that shape the performance of MSMEs and start-ups. This chapter examines the key issues that exist in Abu Dhabi's business environment and the policy measures that have been taken to alleviate these.

MSMEs and start-ups in Abu Dhabi face a high regulatory burden

Regulations are an important factor shaping the ease with which businesses can conduct their operations. It is therefore essential that regulatory frameworks are designed in a way that does not place an undue burden on businesses. This issue is particularly relevant for MSMEs and start-ups, given that the costs of complying with regulations are proportionally higher for these businesses than they are for larger companies (OECD, 2020^[11]).

The regulatory burden is an issue in Abu Dhabi, and some entrepreneurs report that rules and regulations are more difficult and costly to comply with in Abu Dhabi than in other emirates. However, an area where significant progress has been made is in the process of obtaining a business license, which has historically been a costly and time-consuming endeavour. In 2021, the Abu Dhabi Department of Economic Development (ADDED) led discussions across the Abu Dhabi Government to remove duplication and unnecessary requirements associated with the process of starting a business. This involved consolidating requirements for business activities that were previously regulated by multiple entities, removing documentation requirements that did not have a legal grounding, and eliminating excessively difficult regulations. The process resulted in a 71% reduction in the number of requirements for a business license (Abu Dhabi Government Media Office, 2021^[50]). The ADDED estimates that over 93% of economic activities can now receive a commercial license within 6 minutes. New types of business licenses have also been made available to companies, including the Mubdia'h License for women in the creative sector who are operating their business from their place of residence and the Freelancer License for professionals providing consultancy services. Another important type of business license is the eCommerce (Tajer) License, which allows businesses to operate without the need for a physical office or commercial premises. Demand for the eCommerce License has been strong, and it is reported that the majority of new business licenses issued in Abu Dhabi no longer require a physical presence. This is significant because removing the requirement for physical premises also removes the burdens of regulatory office inspections and rental expenditures. However, it is important to note that the eCommerce license is currently only available to Emiratis, Gulf Co-operation Council Nationals or United Arab Emirates (UAE) residents in partnership with Emiratis. A further important change in the area of registering a business is the amendment of the federal Commercial Companies Law, which now allows foreigners to establish companies with 100% ownership. This removes the previous foreign ownership cap of 49%.

Despite these considerable steps forward, there are still areas for improvement. The requirement to hold a business license extends to all economic activities, rather than being limited to those that involve particularly significant environmental or societal risks. This creates an unnecessary obstacle for many groups of businesses that would not require a license in other countries. Furthermore, business licenses often permit a relatively narrow scope of economic activity. If businesses wish to expand their operations by engaging in new activities, they will be required to obtain a new business license. The need for businesses to renew their license every two years is another regulatory burden that should be addressed. Moreover, it is observed that businesses in Abu Dhabi take a relatively long time to transition from sole proprietorships to partnerships and from partnerships to limited liability companies. While this observation is likely linked to the underlying growth performance of young firms, which may be inhibited by a variety of factors described elsewhere in this report, regulatory obstacles to changing a business' legal form are also reported to be an issue. It is also compulsory for new businesses to join the Abu Dhabi Chamber of Commerce and Industry (ADCCI), which is not a common practice elsewhere. While there may be benefits to this approach through an increased reach of the ADCCI's business support offering, these are balanced by the administrative burden on businesses during the registration process and the reduced accountability associated with this arrangement.

An important activity for MSMEs and start-ups, particularly those that are in a high-growth phase, is recruitment. Hiring employees in the UAE is a relatively burdensome process. An application must be submitted to the Ministry of Human Resources and Emiratization to obtain authorisation to hire an employee. This requirement has now been waived for businesses in priority sectors, although these sectors are determined at the federal level rather than at the emirate level. Once businesses attain permission to hire an employee, they must apply for a work permit. Federal Law No. 33 of 2021 introduces a number of new work patterns that can be attached to work permits, including flexible and remote working arrangements. This introduces greater flexibility to the hiring process. There is also a new classification system for businesses. Smaller businesses that are owned by Emirati citizens and are compliant with labour market laws and cultural and diversity requirements can now benefit from reduced fees for obtaining and renewing work permits. Businesses in this group are charged a fee of AED 250 to issue and renew work permits, which are valid for six months to two years depending on the type of permit. Other businesses are charged a fee of either AED 1 200 or AED 3 450 per work permit, depending on whether they are compliant with employment laws and cultural and diversity requirements. Although these changes are a positive development and create incentives for greater regulatory compliance, the administrative hurdles that have to be overcome to recruit workers in the UAE remain significantly higher than in other countries.

Another issue with the business environment in Abu Dhabi is that companies are subject to a relatively high volume of regulatory inspections, which can be demanding and are not always well co-ordinated between different regulatory entities. These include unannounced operations inspections to verify that any activities being conducted are in line with those specified in the business license, industry-specific inspections, office inspections, inspections by third-parties (e.g. telecommunications providers) and financial inspections by the Federal Tax Authority.

Efforts are being undertaken to reduce the size of the regulatory burden for businesses in Abu Dhabi. The Competitiveness Office of Abu Dhabi (COAD) has a mandate to review government fees and regulations. It is establishing a tool for assessing the impacts of regulations on businesses, which will be accompanied by training sessions with relevant entities in Abu Dhabi to ensure that this tool can be deployed effectively. There are initial plans to conduct an in-depth assessment of 20 regulations in Abu Dhabi. COAD is also exploring a regulatory sandbox project, with the aim of reducing the costs of innovation and attracting inventors.

Divergent regulations between Emirates create regulatory borders within the UAE

In the UAE, certain regulations apply at the national level while other elements of the regulatory framework apply at the emirate level. Further to this, the UAE's numerous free zones have their own regulations. As an example, the Abu Dhabi Global Market (ADGM) has three independent authorities: the Registration Authority, the Financial Services Regulatory Authority and the ADGM Courts. In this context, a major challenge for MSMEs and start-ups in Abu Dhabi is a lack of regulatory alignment between different parts of the UAE. To take one example, entities such as the Abu Dhabi Agriculture and Food Safety Authority, the Dubai municipality's Food Control Department, and the Sharjah municipality's Food Safety Program, play a large role in setting and enforcing food safety standards in their respective emirates. These bodies will typically publish their own codes of practice, which are not necessarily aligned with those in other parts of the UAE. Another example of where this is an issue is the business licensing system. The government of each emirate is responsible for issuing business licenses in their own emirate only, meaning that MSMEs and start-ups must apply for multiple licenses via a number of different entities in order to operate throughout the country. This issue is compounded by the fact that the Abu Dhabi government only provides support to businesses in obtaining an Abu Dhabi business license, meaning there is a gap in support for businesses seeking to expand their activities elsewhere in the UAE.

For MSMEs and start-ups operating across multiple emirates, this lack of regulatory alignment makes it difficult to understand exactly which regulations apply to their operations and how they can comply with them. The need to comply with several distinct regulatory frameworks also means that the total cost associated with regulatory compliance is higher. Examples have been provided of instances in which new laws in other emirates have prohibited Abu Dhabi businesses from selling their products in these parts of the UAE, and there are also reported difficulties in transporting goods between emirates. A lack of regulatory alignment is a particularly severe issue in the UAE context due to the relatively small size of its constituent emirates. In 2016 (the latest year for which data are available), Abu Dhabi had a resident population of 2.9 million people. The limited size of the Abu Dhabi market means that successful businesses will often need to expand to other parts of the UAE, and indeed the world, in order to continue to grow. The presence of regulatory borders within the UAE represents an obstacle to this, which in turn can stunt the growth of high-potential MSMEs and start-ups. In a broader context, a lack of regulatory alignment is a barrier to competition within the UAE, which has negative implications for the overall performance of the economy.

One mechanism through which greater co-ordination can be achieved between emirates is the Economic Collaboration Committee. This comprises the leadership of each emirate's Department of Economic Development as well as the federal Ministry of Economy. The committee meets approximately every two months to discuss a variety of high-level topics, which can include regulations. The experience of other countries and regions in increasing internal regulatory alignment could be leveraged to identify solutions to the challenges existing in the UAE.

Despite recent reforms, MSMEs and start-ups in Abu Dhabi continue to face significant fees

Historically, the fees for starting a business have been extremely high in Abu Dhabi, creating a strong disincentive for business creation. A potential driver of this is the absence of a corporation tax in the UAE, which has meant that governments have had to rely upon fees to raise revenues from businesses. However, a number of reforms have significantly improved the situation. In 2021, the fee for obtaining a new business license was reduced by 94% to AED 1 000. This amounts to a reduction of more than AED 15 000. The license renewal fees were also lowered to AED 1 000. The introduction of the corporation tax in 2023 may provide further opportunities to reduce business fees by creating a new channel through which the government can raise revenues from businesses that is skewed more towards larger companies. Despite these fee reductions, the costs of obtaining and renewing business licenses are still higher in Abu

Dhabi than in other countries. For instance, at SGD 300 (approximately AED 792), the fee for registering a new business is slightly lower in Singapore than in Abu Dhabi. However, the major difference is in the cost of renewing a business license in Singapore, which, at SGD 30, is a small fraction of the cost in Abu Dhabi. It is also important to remember that the fees described above apply only to business licenses in Abu Dhabi. Many MSMEs and start-ups will face similar charges in other emirates if they wish to operate elsewhere in the UAE.

The process of registering a trademark is another source of sizeable costs for MSMEs and start-ups in Abu Dhabi. The trademark registration fee in the UAE is AED 6 500, which is significantly higher than observed in many OECD countries. For instance, in the United States, the fee charged by the Patent and Trademark Office ranges from USD 250 to USD 350 (approximately AED 918 – 1 286), depending on the selected filing option (United States Patent and Trademark Office, 2022^[51]). Registering a trademark in the UAE also requires a Power of Attorney (POA), which adds to the cost, complexity and administrative burden of the process.

Insolvency procedures have been improved but issues remain

An important development in relation to Abu Dhabi's business environment is the 2016 law on business bankruptcy, which has made the insolvency process more predictable and less costly. The law provides for three procedures, which collectively help to formalise and streamline the process through which insolvency issues are resolved (Watson Farley & Williams, 2021^[52]):

1. Preventive Composition Procedure: this procedure is designed to help struggling businesses to reach a court-supervised settlement with their creditors;
2. Rescue and Rehabilitation Process: this is a restructuring process that applies when a business is insolvent but is deemed by a court as being capable of rescue.
3. Formal liquidation and Distribution Procedure: when a company has not paid off debts for a period of at least 30 days or the value of its liabilities exceed that of its assets, the business is obliged to file for bankruptcy. A request for bankruptcy proceedings can be made by creditors with outstanding debts of at least AED 100 000.

The 2016 law on business bankruptcy also means that bankruptcy is no longer a criminal offence in the UAE, which makes the UAE a significantly more desirable location to start and operate a business. In addition to this, a 2020 amendment to the federal law on commercial transactions means that those who issue cheques that cannot be honoured will not face criminal proceedings. Also in 2020, an amendment to the bankruptcy law introduced the concept of an Emergency Financial Crisis (EFC), during which creditors cannot file bankruptcy applications and debtors are not required to file for bankruptcy if they have failed to pay off any debts for at least a 30 day period. An EFC is defined as “*A general situation that affects trade or investment in the country, such as a pandemic, natural or environmental disaster, war, etc.*” (Clyde & Co, 2021^[53]).

Since the new law came into effect, there appears to have been a rise in the rates of business creation and business closure. Indeed, the number of new business licenses in 2019 was more than twice as high as in 2016 (see Figure 8). The same is also true for the number of cancelled business licenses (Statistics Centre Abu Dhabi, 2020^[4]). These results suggest that the bankruptcy law may be streamlining the process of business exit for failing businesses. Despite this progress, there is further room for improvement. The insolvency recovery rate fell from 31.2 cents to the dollar in 2017 to 28.4 cents to the dollar in 2019, which is less than half the OECD-average insolvency recovery rate of 71.7 cents to the dollar. The UAE's insolvency recovery rate is also lower than in other countries in the region (World Bank, 2022^[54]). The UAE's low insolvency recovery rate will continue to weigh on bank lending due to the elevated risks associated with advancing credit to MSMEs and start-ups.

Businesses face difficulties accessing office space

There is a reported shortage of affordable office space in Abu Dhabi, which can cause some MSMEs and start-ups to relocate as they grow beyond a certain size. In Q1 2022, Abu Dhabi had an estimated 3.9 million square meters of gross lettable office space, compared to a figure of 9.1 million square metres in Dubai (JLL, 2020^[55]). There is also a very low utilisation rate of available office space, with estimates of the office vacancy rate in 2021 ranging from 21.7% to 26% (Knight Frank, 2021^[56]) (JLL, 2021^[57]). Even before the COVID-19 pandemic, Abu Dhabi had an office vacancy rate above 20%. For comparison, office vacancy rates in other entrepreneurial hubs such as Singapore are generally below 10% (JLL, 2021^[58]). The persistently high vacancy rate in Abu Dhabi points to structural factors that are inhibiting the utilisation of commercial spaces. Further investigation is necessary to identify these drivers, although possible factors include a lack of competition in the commercial real estate market, resulting in rental prices that are set above the market clearing level.

MSMEs and start-ups are impacted not only by the accessibility of office space in Abu Dhabi, but also by the degree to which these spaces are designed to match their needs. The COVID-19 pandemic and the associated spread of remote working has led to a surge in demand for flexible, co-working spaces. Such spaces can significantly lower the office costs faced by new businesses. However, in Abu Dhabi, it is reported that flexible working spaces are at full capacity (JLL, 2022^[59]). Based on listings on *coworker.com* – a global co-working platform – there were 30 available co-working spaces in Abu Dhabi in June 2022. This compares to a figure of 118 in Dubai, indicating that more can be done to expand the offering of flexible working facilities in Abu Dhabi. Co-working spaces are provided to MSMEs and start-ups through a number of publicly supported organisations and initiatives such as Hub71, the Khalifa Innovation Centre, the Ma’an Social Incubator and StartAD at New York University Abu Dhabi. However, these spaces are relatively limited in number and are principally targeted towards innovative start-ups rather than the broader population of MSMEs.

Recommendations

Box 4.1. Key policy recommendations on improving the business environment

Reduce the regulatory burden on MSMEs and start-ups

- Conduct a review of major existing regulations and evaluate the burden placed on MSMEs.
- Conduct “SME Tests” for all new business regulations. This process should involve identifying affected groups, engaging stakeholders, assessing the impacts and proposing alternatives or mitigation measures where appropriate. Training on how to conduct “SME Tests” should also be provided to relevant public organisations.
- Establish regulatory sandboxes in Abu Dhabi’s priority sectors where innovation and testing are constrained by regulations, in co-ordination with the Competitiveness Office of Abu Dhabi.
- Periodically review and update content on key webpages to ensure businesses are provided with accurate information.
- Initiate consultation with regulators to develop solutions to ease the burden of regulatory inspections on MSMEs and start-ups.

Support MSMEs and start-ups operating across multiple emirates

- Advocate for increased regulatory alignment between emirates. The Economic Collaboration Committee is one potential channel for this.

Reduce business fees

- Further reduce or eliminate business license fees.
- Extend business license periods to lower the administrative burden on MSMEs and start-ups.

Further improve the business bankruptcy system

- Advocate for further reforms to the business bankruptcy system to increase recovery rates and reduce the time and costs of undergoing insolvency.

Address shortages of commercial space

- Expand access to business licenses that do not require a commercial premises (i.e. the eCommerce business license) to all UAE residents.
- Create incentives for landlords to rent commercial spaces to MSMEs and start-ups.
- Increase the provision of co-working spaces in publicly funded business incubators, accelerators and other shared working environments. A further option is to explore ways in which start-ups could be matched with desks in vacant offices, in partnership with commercial landlords.
- Create incentives for developers or providers of co-working spaces.
- Consult with commercial landlords to identify barriers to offering the option of monthly (as opposed to annual) rental payments.

5 Pillar 5: Advance innovation and digitalisation

Assessment of policies, programmes and regulations

Innovation and digitalisation are key to raising the productivity of MSMEs and start-ups in Abu Dhabi, which in turn is integral to raising their overall economic contribution. This chapter examines the barriers that inhibit businesses' innovative activities and assesses the policies and programmes in place to foster innovation and digitalisation.

Ties between industry and academia are underdeveloped

Universities and research institutions are often the bedrock of a thriving entrepreneurial ecosystem, providing an important source of knowledge, skills and spin-out businesses. Collaborations between businesses and research institutions can take many forms including academic spin-off activities, collaborative research and the licensing or patenting of inventions from higher education institutions. The ultimate goals of these engagements is often to commercialise academic research. Despite this potential, research institutions and MSMEs often have little interaction (OECD, 2019^[60]).

Abu Dhabi is home to the country's three highest-ranked research institutions (Scimago, 2021^[61]). However, Abu Dhabi's higher education sector is still relatively young, and continued efforts are needed to raise the profile and output of the research base. In addition and more fundamentally, it is unclear if research institutions engage with the local business community and if there are any major programmes or policies in place that address this. While there are partnerships between the leading higher education institutions and industry, these seem to focus on large corporations. For instance, the Khalifa Fund University lists Boeing, BP, Emirates Global Aluminium, Total, Yahsat and Etihad Airways as partner companies. Partnerships with smaller enterprises appear less common.

Steps are being taken to address this. The Abu Dhabi Department of Education and Knowledge (ADEK) launched the Abu Dhabi Award for Research Excellence (AARE) in 2015. Since the inception of the programme, more than 150 research projects have been funded. The 2020 round of funding supported 47 promising research proposals for a combined amount of AED 39 million, with one of the six key award criteria being the potential to collaborate with industry.

Other notable programmes by ADEK to support research excellence include:

- The Abu Dhabi Young Investigator Award, which is a competitive funding programme for young researchers. The potential to collaborate with industry is again an award criterion. In 2020, six projects received a total of AED 1 million.
- Visiting International Professorships, which aim to foster ties between the emirate's higher education institutions and their leading counterparts in other countries by attracting researchers to Abu Dhabi on a temporary basis;

- The Virtual Research Institutes (VRI) programme, which is another competitive funding programme for centre-based research proposals in targeted areas within Abu Dhabi. Three VRIs have been supported to date in the areas of biotechnology, food security and sustainable energy production. At least 10% of the total annual budget of the VRIs must come from participating higher education institutions and industry. Funding of AED 200 million has been provided over five years. All three labs involve close collaboration with world leading higher education institutions outside of the United Arab Emirates (UAE), especially from the United States.

Box 5.1 below describes an important element of the United Kingdom's approach to strengthening connections between universities and businesses, which may be of relevance to Abu Dhabi.

Box 5.1. The Konfer tool in the United Kingdom

Konfer is the United Kingdom's smart-matching innovation tool connecting universities and business. It is smart in the sense that it harvests data from multiple sources, pools them into one central database and uses machine learning algorithms to identify possible partners based on queries from its users. As a next step, the tool sends a connection request upon agreement by its users.

153 universities and research organisations across the United Kingdom are connected to Konfer's platform, as are around 151 000 academics and 73 000 businesses of all sizes. Konfer is free of charge for all users.

The tool was developed and is operated and managed by the National Centre for Universities and Business (NCUB), a not for profit organisation promoting linkages between universities and businesses in the United Kingdom. The NCUB works in partnership with UK Research and Innovation (UKRI), a non-departmental public body, and Research England, which oversees the functions of UKRI in relation to university research and knowledge transfer in England.

The database also provides useful intelligence for policy makers, researchers and businesses to map research capabilities and identify (emerging) economic clusters across different regions in the country, as well as for other research with policy relevance. For instance, an ongoing project aims to analyse the datasets provided by the database to explore researcher mobility and the relationship between researcher mobility and research outputs in the United Kingdom. A similar project investigates the impact of research grants on the performance of its beneficiaries.

Collaborations between industry and academia hinge on the willingness of academics to engage in these partnerships. This can be constrained by limited resources, complex bureaucratic processes and narrow forms of performance evaluation (Fonseca, 2019^[62]) (Fosci and Johnson, 2017^[63]). The view that performance evaluation is excessively tied to research performance, especially in high-ranking journals, and therefore does not take sufficient account of collaborative exercises with businesses is widespread. Stakeholders in Abu Dhabi observed that engagements with the private sector are regarded as a luxury that many researchers and academics can ill afford. Abu Dhabi can alleviate this issue by providing incentives to academics who perform third mission activities (i.e. those that involve using and transferring knowledge from research to non-academic environments). While this is an issue many countries struggle with, Abu Dhabi can take the first step by mapping and evaluating the third mission activities of its higher education institutions. Following this, financial incentives can be awarded for excellence in this area.

MSMEs and start-ups need more support and incentives to innovate

All three objectives of the Abu Dhabi Economic Vision 2030 (economic diversification, enlargement of the enterprise base and higher business productivity) would benefit from more research and development

(R&D) and innovation activities among MSMEs and start-ups. The UAE ranks 33rd out of 132 countries worldwide in the 2021 Global Innovation Index of the World Intellectual Property Organisation (World Intellectual Property Organization, 2021^[64]). While this is a solid performance overall, it remains below expectations when taking into account the income per capita level of the UAE. In addition, there are several areas where the UAE scores poorly, such as knowledge creation and patenting. There is also a relatively low level of investment in R&D in the UAE. In 2020, R&D investment in the UAE amounted to 1.3% of GDP, which is below the worldwide average of 2.3%. The gap in R&D investment is considerably larger when compared with global innovation leaders such as Sweden, Switzerland and the United States. These figures indicate that the innovation output of businesses in Abu Dhabi is below its potential. Innovation is a particular challenge for Abu Dhabi's MSMEs and start-ups, who often struggle to compete for scarce human and financial resources against large, sometimes state-owned enterprises (Mohammed, 2019^[65]).

Support for innovation can come from organisations such as incubators, technology parks and similar institutions, which typically combine financial incentives with non-financial support measures. The UAE is home to more than 30 of such organisations. For instance, the Ma'an Social Incubator, which is part of Abu Dhabi's development accelerator initiative Ghadan 21, provides grant funding and other forms of support to its beneficiaries. Its main focus, however, is on projects with a social impact, including many for-profit ventures. Also as part of the Ghadan 21 initiative, the Abu Dhabi Investment Office (ADIO) set up an innovation support scheme in 2020 to provide financial and non-financial incentives to a limited number high-tech enterprises in five strategic sectors. Although the scheme has a budget of AED 2 billion, it targets foreign firms and is thus not available to MSMEs and start-ups in Abu Dhabi.

Open innovation can be defined as "a strategy that firms adopt to innovate by incorporating knowledge from both outside and inside their firms, exploiting their knowledge, and exploring the knowledge of their environment." (Carrasco-Carvajal, Castillo-Vergara and García-Pérez-de-Lema, 2022^[66]). The term was coined in 2003 and acknowledges that innovation does not only take place behind closed doors, but increasingly involves co-operation within and between firms. For small businesses and entrepreneurs, especially in the (very) early stages of their life cycle, large businesses can commit resources and a research infrastructure that they would otherwise lack. For large businesses, small and young businesses can bring fresh ideas and a novel perspective. Abu Dhabi has been successful in attracting foreign direct investments, and thus benefits from the presence of many multinational companies. In addition, it is home to many successful indigenous large enterprises. Productivity gaps between MSMEs and large enterprises are often pronounced. For instance, the average productivity of retail MSMEs stood at just 40% of the level of large retail businesses in 2018. The productivity gap was even wider in the manufacturing sector (Abu Dhabi Chamber, 2019^[67]). This strongly suggests that MSMEs and start-ups would benefit from engaging with large enterprises. Conversely, large enterprises stand to benefit from engaging in open innovation with high-potential start-ups as a potential source of innovation, especially of the disruptive kind. Policy makers can play an important role in facilitating this type of interaction. In particular, innovation labs, based on the experience from Israel, could be pioneered in Abu Dhabi as well (see Box 6.4 in the next chapter).

There is a shortage of specialised incubators and accelerators

Business incubators and accelerators are important facilitators of start-ups, acting as a vessel for the delivery of accommodation, guidance, training, contacts and funding to entrepreneurs (European Commission / OECD, 2019^[68]). Business incubators focus on nurturing businesses during their early start-up phase, while business accelerators typically take equity in companies, enrol businesses in fixed-duration programmes to develop scale-up skills and have more stringent performance requirements.

Local entrepreneurs report that Abu Dhabi has a very good network of incubators and accelerators. For instance, the Hub71 initiative was established as part of the Abu Dhabi's government's Ghadan 21 initiative. Strategic partners include Mubadala (an Emirati state-owned holding company), ADIO, Abu Dhabi Global Market, Microsoft and SoftBank Vision Fund (a large venture capital fund). It offers incentives

such as subsidies, free office space and health insurance, dependent on companies' size and maturity level. Hub71 also provides support in acquiring licenses and visas, and connects beneficiaries with venture capital funds and other providers of early-stage capital, large enterprises and leading UAE universities. In the first half of 2022, more than 35 start-ups benefitted from the Hub71 initiative. There is an ambition to increase this number to 100 by the end of 2023. The Techstars Hub71 is another example of an accelerator based in Abu Dhabi. Applications open six times a year through a competitive procedure. Beneficiaries gain funding, mentoring, and access to the Techstars network during a period of three months. As yet another example, Krypto Labs is headquartered in the rapidly growing clean-tech Masdar City, and provides a range of services in the areas of capacity building, intellectual property commercialisation, business incubation and acceleration, seed funding and entrepreneurship-focussed training.

There is, however, a shortage of industry-focussed programmes, which represents an opportunity for the future. The Abu Dhabi Economic Vision 2030 identifies 12 strategic sectors, expected to be the engines of the emirate's economic diversification: Energy; Petrochemicals; Metals; Aviation aerospace and defence; Pharmaceuticals, biotechnology and life sciences; Tourism; Healthcare; Transportation, trade and logistics; Education; Media; Financial services and Telecommunication services. The government could stimulate the development of some of these sectors, especially when there is already a critical mass of start-ups and an emerging ecosystem, by supporting or establishing dedicated incubator and accelerator programmes. For instance, the finance and insurance sector is already a large contributor to economic activity in Abu Dhabi, opening pathways to become a hub for fintech activities in the Middle East. Fintech incubators and accelerators with specific sector expertise and tailored guidance and advice exist in many other parts of the world. For instance, London, which is a global fintech hub, is home to several such programmes, including the Fintech Incubation Lab, the Start-up Fintech Bootcamp, the Barclays Accelerator and Level39. As another example, Flanders, a region in Belgium, is home to the second-largest petrochemical cluster globally, with eight of the ten largest chemical companies having a production site in the region. Part of the attractiveness of Flanders as a hub can be attributed to a tight network of dedicated research labs, R&D centres, and incubator and accelerator facilities. The petrochemical industry is singled out as a bedrock for the economic future of Abu Dhabi in its strategic plan. Adopting a similar approach as in Flanders could help to realise this ambition. As another potential candidate, Abu Dhabi could set up an incubator for advanced manufacturing. This could be loosely modelled on the Australian approach where, as part of the Industry 4.0 Taskforce, a number of Testlabs were developed to match manufacturers with like-minded teams of innovators, with the UTS Industry 4.0 Testlab in Sydney being a successful example. While there are many ways in which the government can create such programmes, BPIFrance, France's public investment bank, may offer a model that could be relatively easily replicated. The organisation partners with industrial sectors to create acceleration programmes that meet their specific needs. It adapts its common model based on a dialogue with key interlocutors in a particular industry to design a customised programme of between 12 and 24 months to companies selected for their growth potential.

Technological and digital uptake must be promoted among non-innovative MSMEs

While science, technology and innovation policy making often focuses on firms at the technological and productivity frontier, there is increasing recognition that the diffusion of knowledge and innovation to laggard firms matters a great deal. Indeed, the decline in productivity growth witnessed in many high-income countries can be attributed to shortcomings in the diffusion process as evidenced by a widening gap between firms at the productivity frontier and the long tail of low-productivity enterprises (OECD, 2015^[69]). While there is no available data on the productivity distribution of Abu Dhabi firms, it is a reasonable assumption, based on data from other countries, that innovation diffusion is an issue in Abu Dhabi as well. This means that raising MSMEs' productivity hinges not only on expanding the number of high-potential innovative ventures, but also on raising the productivity and innovativeness of other MSMEs.

This observation calls for a two-pronged policy approach. On the one hand, innovative firms with high growth potential often benefit from dedicated support measures, for example through incubation and

acceleration services, or interventions in the early-stage equity finance market. On the other hand, policies that encourage “non-innovative” businesses to adopt innovations, are also important. The adoption of digital tools and technologies is a compelling case in point. Across high-income countries there is a pronounced, and in many cases widening, gap in the adoption of cloud computing services, electronic invoicing, high-speed broadband, e-commerce, enterprise resource planning and so on between MSMEs and large businesses. This matters because digitalisation is an important driver of firm productivity. Moreover, public authorities can be particularly effective in reducing this gap by facilitating the initial transition to digital technologies, in particular through marketing and administrative functions.

While Abu Dhabi policy makers have taken substantial steps to encourage innovation and R&D activities among firms that are close to the productivity frontier, there are fewer measures for MSMEs and start-ups that lag behind. One exception (at the exploratory stage) is the Memorandum of Understanding that was signed between the Abu Dhabi Department of Economic Development (ADDED) and the enterprise business software provider SAP to explore how to support the digital transformation of Abu Dhabi companies. Programmes such as this are important, because, across high-income countries, there is a pronounced gap between MSMEs and large businesses in the adoption of digital tools and technologies. Evidence suggests that, once MSMEs have some experience in digitalising their operations, there are strong complementarities to go further along this avenue, creating a virtuous cycle (OECD, 2021^[70]). Digital diagnostic tools play an important role here in allowing MSMEs and start-ups to identify where performance gaps lie and how these can be addressed. Whereas this process used to be relatively labour-intensive with a need for intensive interactions with external experts, online self-assessment tools can automate this process, at least to some extent, thereby making it more accessible to small businesses at low costs. While some of these tools are general in nature (assessing the business performance at large), others focus specifically on digitalisation (see, for example, the online Digitalomètre developed by BPIFrance). The latter typically assesses how digital-ready the enterprise is, and compares the adoption of digital tools and technologies with benchmark enterprises. Through this process, MSMEs get tailored guidance on what they could do to improve their business performance through digitalisation. Finally, participating companies are typically directed to private and public institutions for follow-up action, again tailored to their specific needs. In Abu Dhabi, there appears to be a shortage of digital diagnostic tools.

Another untapped channel for advancing digitalisation among MSMEs and start-ups in Abu Dhabi is the establishment of digital hubs. These have been introduced in Singapore and in many EU countries, which have set up European Digital Innovation Hubs (EDIHs) as a one-stop shop to support companies. These bodies provide access to technical expertise and experimentation, so that companies can “test before they invest,” as well as the innovation services that are needed for a successful digital transformation, such as financing advice, networking with investors, training and skills development. They also have a brokering role to play, bringing together industry, businesses, research organisations and (local) public administrations. A final and important consideration is that these digital hubs act as a one-stop shop for local firms with digitalisation needs. While the institutional arrangements or ownership of the hub can vary (in the Abu Dhabi context, it would be possible to embed the hub in either the Abu Dhabi SME Hub or the Khalifa Fund for Enterprise Development), it is key that the support is centralised in one agency and not scattered throughout multiple. This is especially relevant for small and young firms who would otherwise struggle to find the suitable support agency.

Providing MSMEs and start-ups with support in funding investments in innovative and digital technologies is also an important topic that needs to be addressed. The OECD Innovation Policy Platform defines innovation vouchers as “small lines of credit provided by governments to (SMEs) to purchase services from public knowledge providers with a view to introducing innovations (new products, processes or services) in their business operations.” (OECD, n.d.^[71]). While innovation vouchers incorporate elements of grants, there are some key distinctions. Grants are typically competition-based and issued only to the projects and firms with the best application. By contrast, vouchers are usually entitlement-based with firms eligible to receiving the support if they meet pre-defined eligibility criteria. This means that voucher

schemes are easier to implement, with less administrative capacity required. In addition, innovation grants are typically reserved for innovative companies with high growth potential, while vouchers have broader applications, including for companies with few formal R&D activities (Cirera et al., 2020^[72]). Innovation vouchers, while common in OECD countries and regions (often set up by subnational governments), appear not to be (widely) employed in Abu Dhabi. This restricts innovation spending among MSMEs, including for firms that are not innovative in the traditional sense and therefore cannot qualify for incubator and accelerator programmes. Among other things, innovation vouchers can be a tool to incentivise MSMEs to adopt digital tools and technologies, as illustrated by the experience in Slovenia (see Box 5.2).

Box 5.2. Voucher schemes in Slovenia

Slovenia is a moderate innovator in Europe according to the methodology of the European Commission. However, the country, which has a population roughly similar to Abu Dhabi's, has ambitions to become an innovation leader. Voucher schemes play a large role in Slovenia's policy landscape to realise these ambitions.

Slovenia previously had a relatively broad innovation voucher scheme in place, but in more recent years it has replaced the general voucher programme with a range of voucher schemes with specific beneficiaries and goals in mind. These schemes are managed and distributed by the Slovene Enterprise Fund (SEF), which is fully government-owned and is responsible for other support schemes in the country. In every instance, the fund co-finances up to 60% of the incurred costs. The most notable voucher schemes are:

- Vouchers for raising digital competencies. The fund co-finances for an amount between EUR 600 and EUR 10 000 for training costs of employees and management staff to acquire digital competencies.
- Vouchers for the preparation of a digital strategy. The fund co-finances for an amount between EUR 1 000 and EUR 10 000 to prepare a digital strategy, including an assessment of the status quo by external service providers.
- Intellectual Property Protection Voucher. The fund co-finances for an amount between EUR 500 and EUR 3 000 for the preparation of patent or design applications, trademark registrations, the dissemination of applications abroad and the translation of applications.
- Prototyping voucher. The fund co-finances for an amount between EUR 500 and EUR 3 000 to develop a prototype (in physical or digital form) for a new product or service in order to validate the business idea for the market or financial instruments like venture capital managers.
- Voucher for quality certificates. The fund co-finances for an amount between EUR 1 000 and EUR 10 000 for quality management systems and environmental validation declarations obtained on the basis of European standards.

As of November 2019, 2 142 projects received support from the various voucher schemes for a total amount of more than EUR 10 million.

Source: (Ministry of Economic Development and Technology, 2021^[73]), (OECD Publishing, 2020^[74])

Empowering MSMEs and start-ups to participate in the digital transition also requires the development of infrastructure, skills and processes that are conducive to the uptake of digital technologies. There are several notable efforts to embrace e-government in Abu Dhabi, with an increasing number of public services that are already, or are in the process of being, automated. This is part of the UAE Digital Government Strategy 2025, and follows the OECD Digital Government Policy Framework. This strategy

also entails getting some framework conditions right for businesses in the UAE and hence Abu Dhabi. Consequently, the UAE scores well on the Network Readiness Index (published by the World Economic Forum, together with INSEAD, a business school), which measures the impact of ICT on societies and economies across the globe. In the 2021 report, the UAE ranked 35th out of 130 countries worldwide, with the best score among the 12 Arab countries in the database. The high-quality digital infrastructure, for example as measured by the number of businesses that have access to fast broadband internet, contributes to this score and is an enabler for innovation diffusion and ICT adoption among MSMEs. In similar spirit, a relatively high share of the workforce in Abu Dhabi possesses crucial digital skills (Portulans Institute, 2021^[75]).

Recommendations

Box 5.3. Key policy recommendations for advancing innovation and digitalisation

Foster ties between industry and academia

- Establish a centralised digital hub to broker collaborations between businesses and universities, with the role of matching businesses with academic expertise that can support them in developing products or services. This hub should include a digital database where businesses can search for university patents available for licensing or commercially relevant research.
- Create incentives for researchers at public institutions to engage with MSMEs through third mission activities.
- Set up of a “Young Graduate Programme” to facilitate the knowledge exchange between higher education institutions and Abu Dhabi businesses.
- Support industry internships for university researchers.

Strengthen support and incentives for innovation

- Create an inventory of the testing and piloting facilities available to MSMEs and start-ups in Abu Dhabi and identify existing gaps in these facilities.
- Combine financial and non-financial support measures for innovation.
- Create incentives for open innovation between large enterprises and start-ups.

Expand network of sector-specialised incubators and accelerators

- Support the establishment of sector organisations, not-for profit support centres or cluster organisations for high-tech enterprises.
- Develop sector specific incubator and accelerator programmes based on Abu Dhabi’s priority sectors.

Promote digitalisation and technological uptake

- Expand access to innovation vouchers among MSMEs and start-ups. As a starting point, a limited number of pilot schemes could be set up, with the impacts evaluated and the schemes adjusted accordingly.
- Design online diagnostic tools for MSMEs, allowing them to identify their performance gaps in digital-readiness, innovation and other dimensions.
- Take action to encourage MSMEs, especially in traditional sectors, to adopt digital tools and technologies, mainly through digital hubs.

6 Pillar 6: MSME and entrepreneurship policies to seize opportunities for the future

Assessment of policies, programmes and regulations

SMEs and entrepreneurs hold great potential for driving economic diversification and finding solutions to critical long-term societal challenges such as climate change. To tap into this potential, policy makers will need to take steps to support entrepreneurs that operate green and sustainable businesses and also open-up entrepreneurship to more people. This will require investing more in policies that ensure that youth become the next generation of business owners and leverage the entrepreneurial potential of women who can help to commercialise innovations, create jobs and diversify the economy away from oil and gas. Policies and regulations also need to create new pathways to entrepreneurship by adapting to new forms of work and business and different routes into business creation. This chapter assesses current policy approaches to supporting young entrepreneurs, green entrepreneurs, women entrepreneurs, emerging forms of entrepreneurship and new pathways to business creation. It recommends how policies and initiatives could be strengthened in these areas.

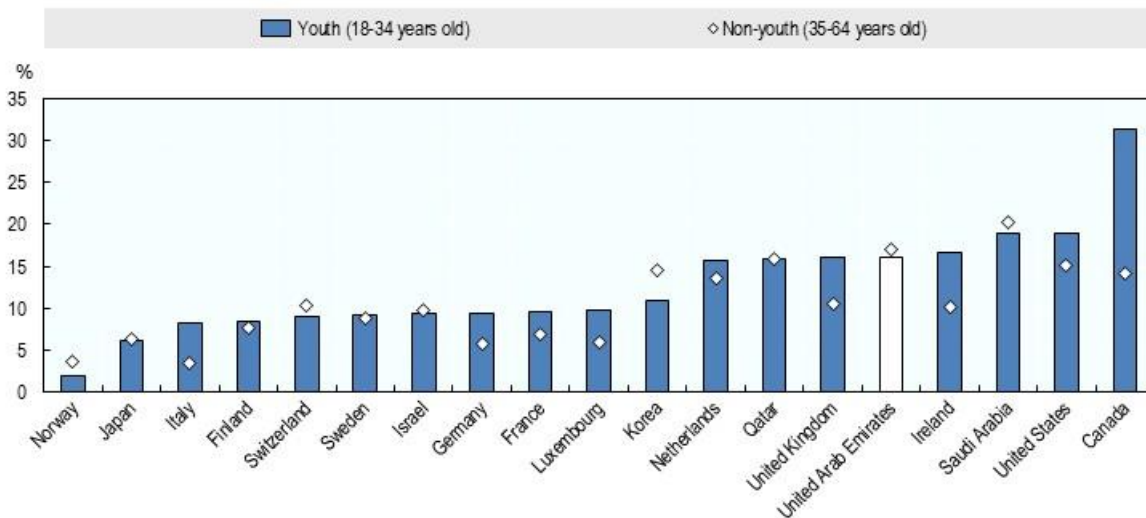
Support for young entrepreneurs is in the early stages of development

Involving youth in entrepreneurship can be an important driver of economic diversification because this group displays a strong interest in addressing socio-economic challenges, innovation and working as entrepreneurs. For example, a survey of students at the College of Business at Zayed University (United Arab Emirates) found that 81% would not exclude the possibility of creating their own business in the future (Sandybayev, 2017^[76]). This high level of interest in entrepreneurship among young people appears to translate into high levels of early-stage entrepreneurship. The proportion of young people engaged in starting and managing new businesses in the United Arab Emirates (UAE) ranked fifth in 2022 among high-income countries (Figure 6.1).

Overall, there is substantial political support for youth entrepreneurship in Abu Dhabi. It is widely recognised that youth entrepreneurship has strong potential for stimulating innovation and driving economic diversification, largely due to the relatively large size of youth in the population. Among Abu Dhabi citizens, those aged between 15 and 35 years old account for 46% of the population (Abu Dhabi Statistics Centre, 2020^[77]).

Figure 6.1. Youth entrepreneurship rates are high relative to other high-income countries

Total early-stage entrepreneurship rates, 2022



Note: The Total early-stage Entrepreneurial Activity (TEA) rate is the percentage of adults (aged 18-64 years old) who are working towards starting a new business or managing one that is less than 42 months old. This figures reports TEA rates for countries with a GDP per capita of more than USD 40 000.

Source: (GEM, 2022^[78])

Young entrepreneurs in Abu Dhabi are supported primarily through entrepreneurship education programmes offered in universities and high schools (see Chapter 2 for further details). These are complemented by a small number of dedicated schemes that are largely offered through non-government actors. Traditionally, the Khalifa Fund for Enterprise Development (KFED) has been a strong supporter of young entrepreneurs by offering dedicated support initiatives, funding youth entrepreneurship organisations and providing entrepreneurship programmes at the Khalifa University. This mission for supporting young entrepreneurs is visible on the Khalifa Fund’s website, which frequently references young entrepreneurs. One of the notable initiatives for young entrepreneurs is the Khalifa Fund Venturist Entrepreneurship Summer Camp for students in grades 7 to 12, which teaches them to develop a business idea and construct a plan (Chabrak et al., 2021^[79]). However, nearly all dedicated activities for young entrepreneurs have been stopped since about 2021 while KFED establishes its new strategic direction. This has left a considerable gap in the entrepreneurship ecosystem. Similarly, the Abu Dhabi Chamber of Commerce and Industry (ADCCI) operated dedicated initiatives for young entrepreneurs, notably the well-known Future Entrepreneurs initiative. The initiative aimed to build an entrepreneurial culture by providing youth with an entrepreneurship experience that helps them develop the values of creativity and innovation. It was aimed at two age groups – 8 to 13 years old and 14 to 25 years old – and offered workshops, online training and an award programme (Abu Dhabi Chamber of Commerce, 2020^[80]). However, the initiative has not operated since 2020.

Universities offer substantial support for young entrepreneurs, both through a growing number of courses and extra-curricular structures such as incubators. The startAD incubator at NYU Abu Dhabi has a flagship initiative for youth called the NextGen Incubator. To date, four cohorts of young entrepreneurs (18 to 29 years old) have been supported with training, coaching, mentorship and small cash prizes (AED 8 000) (startAD, 2022^[81]). The initiative focuses on business ideas that address UN Sustainable Development Goals related to climate action, responsible consumption and production, quality education, good health, and well-being. The initiative did not operate in 2022. Previously, it was supported by the UAE Ministry of Climate Change and the Environment and several corporate partners. Meanwhile, Abu Dhabi University

supports young entrepreneurs through “The Young Entrepreneur Competition: “Step Up Shabab”, which is aimed at high school students. The competition offers student teams a mentor who helps them prepare for the business pitch competition (Abu Dhabi University, 2022^[82]). However, like many youth entrepreneurship initiatives, the competition did not operate in 2022.

The main strength of the youth entrepreneurship support offers is that they effectively leverage private sector expertise. Many of the business incubation and acceleration schemes use a combination of paid professional support and experienced volunteer mentors. This offers youth an opportunity to receive both high quality training and a longer-term relationship with an experienced entrepreneur who acts as a mentor. This combination of professional training and mentoring is in-line with good practice approaches in OECD countries (OECD/European Commission, 2021^[83]; OECD/European Commission, 2020^[84]).

Another strength is that funding is awarded to young entrepreneurs through competitive mechanisms. This ensures that investments are concentrated in those youth entrepreneurs who are most likely to succeed. However, most schemes use a “winner take all” approach that awards funding to a small number of entrepreneurs. The financial support could reach more young entrepreneurs by awarding a small amount to many young entrepreneurs and then awarding progressively more support to fewer young entrepreneurs as they demonstrate success. The Prince’s Trust Enterprise scheme demonstrates how this can be accomplished effectively (see Box 6.1).

However, youth entrepreneurship support in general is less developed in Abu Dhabi relative to OECD countries. While substantial investments have been made in entrepreneurship education, these have been concentrated in universities and stakeholders from the education sector report that the availability and quality of support is highly variable. Initiatives for high school students have only recently been launched and despite growing interest in entrepreneurship from students in technical and vocational education and training (TVET), there are very few entrepreneurship programmes offered in training centres (Alhajeri, 2021^[85]). Another significant gap in the youth entrepreneurship support system is that there are few support offers available to young people outside of education. In particular, there are gaps in the areas of access to finance and entrepreneurship networks. Current initiatives often offer prize money to competition winners but the range of dedicated start-up financing instruments for young entrepreneurs (e.g. grants, microfinance or loans) are not available in Abu Dhabi. There do not appear to be any significant efforts to help young entrepreneurs build networks and there does not appear to be any representative organisation or network for young entrepreneurs in Abu Dhabi. This is an important missing resource for young entrepreneurs. It is also a gap in the policy making process, since there are no mechanisms for engaging young people in the development of entrepreneurship support.

A second pressing issue is that nearly all of the youth entrepreneurship schemes appear to face challenges with their own sustainability. The vast majority of the youth entrepreneurship schemes identified through desk research and stakeholder interviews stopped operating in 2021 or 2022 for various reasons related to the strategic objectives of the funder (in the case of KFED) or resource constraints (in the case of the ADCCI, which reported a substantial reduction in revenue due to the reduced cost of business licences). This could be addressed by a longer-term vision for supporting youth entrepreneurs and an appropriate allocation of resources beyond one-year cycles.

Box 6.1. Prince's Trust Enterprise Programme, United Kingdom

Description of the approach

The scheme seeks to support young job seekers (18-30 years old) in creating their own job by starting a business. Young people are provided with mentoring and financial support with increasing intensity as they move through the programme. The programme is delivered in four stages:

1. *Meet the team*: This is an information session where interested youth can learn about the programme.
2. *Explore*: This is a four-day workshop about setting goals, finance, legal structures, marketing, pricing, taxation and business plans.
3. *Building your business*: This stage is about developing business and financial plans with support from a mentor. Completed business plans may receive a small "Will it Work" grant of up to GBP 250 to test the business idea.
4. *Launch*: After an initial testing of their business idea, participants present their business plans to the Business Launch Group for feedback on the viability of the business plan. Young entrepreneurs can receive individual mentoring for up to two years and can also benefit from discounted business services for three years. In addition, participants can access a low interest start-up loan of up to GBP 5 000 (approximately EUR 5 840) and small start-up grants.

Prince's Trust has supported more 80 000 young people in starting a business since 1983. An evaluation found 76% of those who received full start-up support in 2012-13 were still running two years later, and 73% three years later. This survival rate is greater than the "typical" start-up (Wavehill, 2016^[86]).

The Enterprise Programme has two unique features relative to other youth entrepreneurship programmes. First, the programme now offers the four-day programme as online modules that are accompanied by e-mentoring. Second, participants that start the programme but decide that entrepreneurship is not a suitable activity can access services to identify other employment and/or learning opportunities.

Success factors

Evaluations often point to the use of coaching and mentoring as an important success factor (Wavehill, 2016^[86]). Participants who received business mentoring but not a loan or grant were overall as likely to report their business was still surviving (74%) compared to those who received both (71%). Business mentors are volunteers who commit 4 to 6 hours per month to supporting participants and support the scheme for a minimum of two years. Their role is to act as a sounding board and to provide feedback and advice. Mentors are identified through open calls on the programme website and the strong reputation of the programme appears to be sufficient to attract a sufficient number of high quality mentors.

Relevance to Abu Dhabi

This model demonstrates how small amounts of finance could be disbursed to many young entrepreneurs and larger amounts to those that demonstrate success.

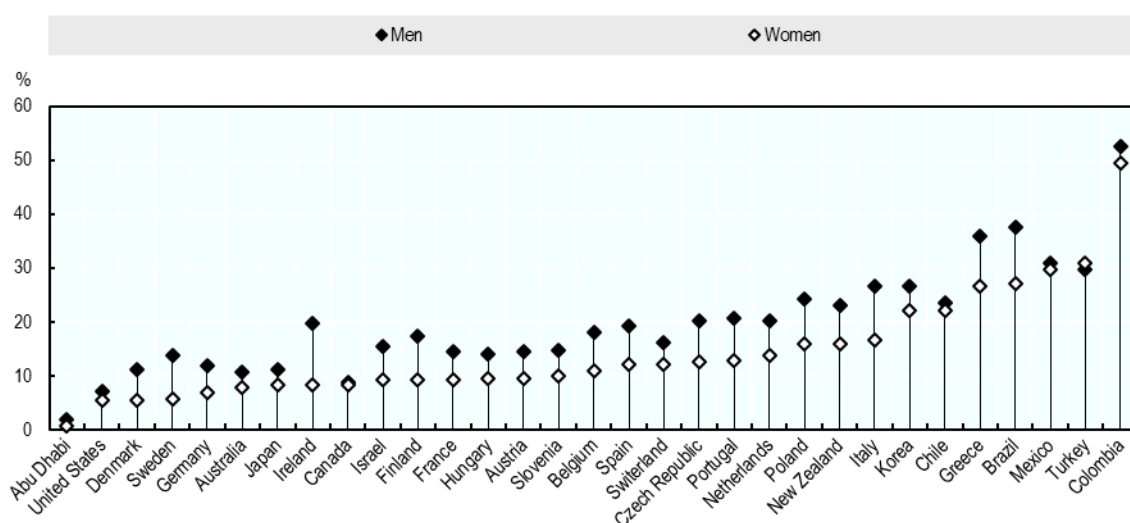
Source: (Prince's Trust, 2022^[87])

More is needed to unlock the talents of women entrepreneurs

The share of self-employed women in Abu Dhabi is well-below the share in OECD countries. In 2019, 0.8% of active women in Abu Dhabi were employers or own-account workers (Figure 6.2), which was well below even the lowest proportion among OECD countries (5.5% in Denmark and the United States). Men were about 2.4 times more likely to be self-employed than women, which is a greater gender gap than in all OECD countries. Female business creation could be limited by a range of potential obstacles, including economic, legal or cultural factors. However, female employers in Abu Dhabi outnumber female own-account workers by seven times, which is remarkably different from OECD countries where women are about three times more likely to be own-account workers than employers.

Figure 6.2. There are very few self-employed women in Abu Dhabi

Self-employment as a percentage of employment (15-64 years old), 2020 or most recent available year



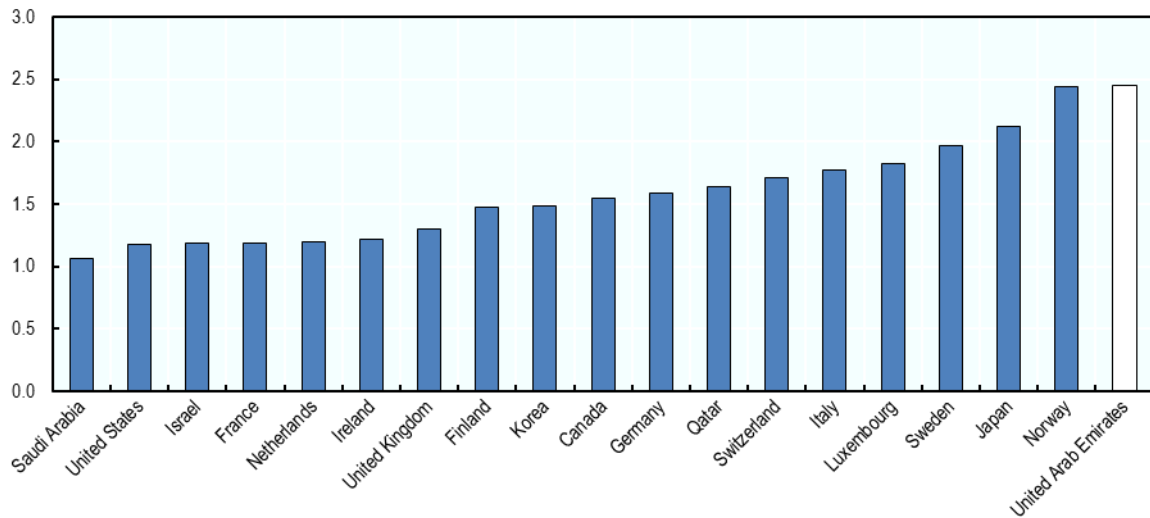
Note: The most recent available data is for 2019 for Abu Dhabi, Germany and Korea, 2018 for Portugal and 2017 for France.

Source: (OECD, 2022^[88]; Abu Dhabi Statistics Centre, 2020^[77])

However, the Global Entrepreneurship Monitor suggests that many more women are involved in business creation in the UAE, with data from 2022 indicating that around 8.2% of women are working on a new start-up or managing a new business (less than 42 months old). Nonetheless, this proportion is substantially below the corresponding figure for men (20.1%) and the gender gap in early-stage entrepreneurship is the highest among high-income countries (Figure 6.3). Closing this gender gap in entrepreneurship can help stimulate economic activity, innovation and job creation. Indeed, a recent estimate suggests that boosting women's participation in the labour market in the MENA region could boost the region's GDP by USD 2.7 trillion by 2025 (McKinsey & Company, 2020^[89]).

Figure 6.3. The gender gap in early-stage entrepreneurship is the greatest in UAE

Ratio of total early-stage entrepreneurship rate for men relative to women, 2022



Note: The Total early-stage Entrepreneurial Activity (TEA) rate is the percentage of adults (aged 18-64 years old) who are working towards starting a new business or managing one that is less than 42 months old. This figures reports TEA rates for countries with a GDP per capita of more than USD 40 000.

Source: (GEM, 2022^[78])

Women entrepreneurs in the UAE tend to operate different businesses to those operated by men. Early-stage female entrepreneurs were more than twice as likely as early-stage male entrepreneurs in the UAE to report having a graduate education in 2021 and more than half report introducing innovative products (GEM, 2021^[90]). This was the highest proportion among early-stage female entrepreneurs across all countries participating in the survey. However, women entrepreneurs operate much smaller firms than men. Women entrepreneurs in the UAE were twice as likely as men to have no employees in 2021 (GEM, 2021^[90]). While these results are for the UAE overall, many stakeholders report the same characteristics in Abu Dhabi. There therefore appears to be untapped potential for women entrepreneurs to drive economic diversification and innovation in Abu Dhabi.

Barriers faced by women entrepreneurs in Abu Dhabi include difficulties accessing finance, as well as cultural factors, such as the need to balance multiple roles in society. The access to finance challenge is not unique to Abu Dhabi as it is one of the most commonly reported challenges by women entrepreneurs (OECD/European Commission, 2021^[83]). This challenge is compounded by lower levels of skills and self-confidence (GEM, 2022^[78]), which affect a woman entrepreneur's ability to identify potential funding sources and successfully pitch their business idea. Many stakeholders in Abu Dhabi also point to the lack of female representation on the supply-side of the sector as a major barrier to improving access to finance for women entrepreneurs. Other important challenges include the need for women to balance multiple roles within society such as family responsibilities, which reduces their ability to undertake the necessary networking activities (Barakat, 2022^[91]).

There does not appear to be a clear policy on women's entrepreneurship in Abu Dhabi but there are a number of publicly supported initiatives that seek to increase the number of women entrepreneurs and support them in creating a sustainable business. The Abu Dhabi Businesswomen Council is one of the longest standing organisations that supports women's entrepreneurship. Launched in 2001, it seeks to lead the development of women's role in the private sector and to enable them to be a key player in Abu Dhabi's sustainable economic development (Abu Dhabi Businesswomen Council, 2022^[92]). The

organisation offers a range of support, including training, consultancy and support accessing finance. It receives high-level political support since it is sponsored by H. H. Sheikha Fatima Bint Mubarak. However, the Council appears to have been inactive for more than a year since the website has not been updated since the beginning of 2021.

KFED has been another important source of public support. This support has been offered through dedicated initiatives such as “She means business”, which is a mentorship programme organised in partnership with Facebook that has assisted about 1 300 women entrepreneurs (Godinho, 2020^[93]). KFED also reports strong female participation in its entrepreneurship workshop and training programmes. Indeed, in 2020, more than 65% of workshop participants were women (Chabrak et al., 2021^[79]).

Another key policy development to support women entrepreneurs has been the launch of the Mubdi'ah Business Licence. The licence allows some business activities to be undertaken at home during normal working hours. This new opportunity should allow more women to start businesses and operate them out of their home, especially considering the significant decrease in the cost of business licences. However, retail sales are not permitted and there are restrictions on how the business displays its products and stores goods and equipment (Abu Dhabi Businesswoman Council, 2022^[94]).

Non-government actors are also actively offering a range of dedicated supports for women entrepreneurs. Some initiatives are run out of universities such as the Academy for Women Entrepreneurs (AWE), which is hosted by the startAD Accelerator at NYU Abu Dhabi (startAD, 2022^[95]). The initiative operates with financial support from the United States Bureau of Educational and Cultural Affairs, which is part of the US Department of State. The initiative has supported two cohorts of 20 women over the past two years. The six-month programme helps women strengthen their business through professional training and consultancy as well as support from student interns. There are also a number of women's entrepreneurship networks managed by the private sector and philanthropic organisations. These include, for example, WEADS Women Entrepreneurs Abu Dhabi, which has nearly 3 000 members (WEADS, 2022^[96]).

Although the government has taken steps to address the gender gap in entrepreneurship, the current scale of support is much less than it was 2-3 years ago. This points one of the main challenges in women's entrepreneurship support, namely that support initiatives struggle with sustainability. This could be addressed by developing a policy framework for women's entrepreneurship to anchor support initiatives and secure longer-term resources for women's entrepreneurship support organisations. The Women Entrepreneurship Strategy in Canada offers a blueprint for developing an ecosystem for women entrepreneurs (see Box 6.2).

Box 6.2. Women Entrepreneurship Strategy, Canada

Description of the approach

Canada's first Women Entrepreneurship Strategy (WES) was launched in 2018 by Innovation, Science and Economic Development Canada. The overall objective of the initiative is to double the number of women-owned businesses by 2025 and add CAD 150 billion to GDP. After an initial investment of CAD 2 billion, the WES has received an additional CAD 4 billion in funding (ISED, 2022^[97]).

The WES is built on four pillars (ISED, 2022^[98]):

- The WES Inclusive Women Venture Capital Initiative, which will fund projects to strengthen and build a more inclusive venture capital market for women.
- The Women Entrepreneurship Loan Fund, which will provide loans of up to CAD 50 000 so that women can start and scale up their businesses.
- The WES Ecosystem Fund, which will fund organisations that support women entrepreneurs.
- The Women Entrepreneurship Knowledge Hub, which will support research, development of gender-disaggregated data and the creation of a collection of best practices for women entrepreneurs.

Success factors

The WES is unique among OECD countries in that it offers direct support for women entrepreneurs, invests in building a women-friendly ecosystem and strengthens knowledge about women entrepreneurs by funding research and data collection. One of its strength is that it helps connect the wide range of federal programmes into a cohesive support system. The WES has strong partnerships with the core federal support programmes for women entrepreneurs, including Women in Technology Venture Fund (Business Development Bank of Canada), Venture Capital Catalyst Initiatives (Innovation, Science and Economic Development Canada), Women in Trade (Export Development Canada), Business Women in International Trade (Global Affairs Canada) and the Women Entrepreneur Program (Farm Credit Canada).

Relevance to Abu Dhabi

Adopting such a strategy would provide a policy framework to connect support initiatives for women entrepreneurs. It would also signal the political importance of addressing the gender gap in entrepreneurship and help secure additional resources to boost the sustainability of schemes. This blueprint also creates an opportunity to strengthen metrics and research on women's entrepreneurship

Another challenge is that many of the dedicated initiatives to support women entrepreneurs are relatively small. Few of the current initiatives support more than 20 entrepreneurs per year. While some initiatives such as AWE have a strong impact on individual women entrepreneurs, they are not of the scale necessary to have a significant impact on addressing gender equality in entrepreneurship.

Investments in green innovation have been substantial but could be scaled-up

The UAE government has announced an objective to join the many countries who are working towards reaching net zero emissions by 2050, which will require economic diversification and substantial investments in clean energy. While the scale of the challenge is large, there is great potential for green

entrepreneurship to help drive economic diversification to meet climate change objectives, especially since Abu Dhabi has already made substantial investments in renewable energy and food security.

The UAE government is attempting to rapidly transform its economy by investing in sustainable initiatives such as “green” buildings, energy efficiency and more across all emirates. These actions are guided by high-level documents such as the “UAE Green Jobs Program: Jobs & Skills for the UAE’s Green Economy Transformation” (UAE, 2019^[99]). These federal initiatives to support the green transition include measures for green entrepreneurship that are enhanced in Abu Dhabi by the Department of Economic Development (ADDED) and non-government donors.

After leading the Middle East region with the launch of the Technology Innovation Pioneers (TIP) Initiative, the green entrepreneurship policy landscape in Abu Dhabi is currently quite empty. The TIP initiative was launched in 2018 as an integrated innovation and funding platform by the UAE Ministry of Economy and the ADDED (TIP, 2019^[100]). The purpose was to attract innovative ideas to accelerate the development of an entrepreneurship ecosystem in Abu Dhabi and the UAE. The initial focus was on the healthcare sector, but this was expanded in the second year to cover the energy and environment sectors. In 2018, the TIP supported 24 innovators from 34 countries, rising to 40 innovators from 22 countries in 2020. The initiative is completed and a follow-up initiative has not yet been announced.

The primary hub for green entrepreneurship activity in Abu Dhabi is currently taking place in Masdar City, a sustainable living project that includes eco residences as well as research institutes and businesses that are focussed on addressing climate change (see Box 6.3). Many of the green entrepreneurship support actors such as the accelerator Catalyst are based in the Masdar City Free Zone. The Catalyst incubator offers funding, training, mentorship and access to research facilities to green start-ups that are one to three years away from bringing their products or services to market (Catalyst, 2022^[101]). There appear to be eight start-ups based in the accelerator programme, meaning that while this is a leading programme, the overall impact is limited.

Box 6.3. Masdar City Sustainable Living Project

Masdar City is a planned city project in Abu Dhabi. It was built largely by Masdar, a subsidiary of Mubadala Development Company, with funding from the Government of Abu Dhabi. The city is a demonstration of sustainable living, with one of the largest clusters of low-carbon buildings in the world. About 4 000 working-age people live in eco-residences alongside a number of organisations aimed at addressing climate change and improving sustainability:

- International Renewable Energy Agency (IRENA): the first intergovernmental organisation in the region;
- Masdar Institute of Science and Technology: a graduate-level research university focussed on alternative energy, environmental sustainability, and clean technology;
- Mohamed bin Zayed University of Artificial Intelligence: the world’s first university for artificial intelligence;
- The Catalyst: the region’s first clean technology start-up accelerator; and
- A tech park constructed from recycled shipping containers.

Masdar City also offers a full innovation ecosystem that includes R&D and pilot testing facilities in the areas of solar energy, energy storage, green buildings and urban sustainability. Specific projects include:

- Masdar Solar Hub;
- Masdar City Solar Photovoltaic Plant;

- Seawater Agriculture and Energy System; and
- Electrical Energy Storage Solutions Hub.

Source: (Masdar City, 2022^[102])

Despite a number of high-level strategies and policies, there is little support available to green entrepreneurs outside of Masdar City. The ending of the TIP scheme without a replacement has left a hole in the support system. The Environment Agency is working on a follow-up scheme focussed on supporting green entrepreneurs and attracting new green entrepreneurs into the marketplace. However, demand-side policies such as procurement measures or regulations and labels that influence the behaviour of firms and consumers will not be introduced in the short-term.

With that being said, there are a number of small-scale schemes that support green entrepreneurs such as Youth 4 Sustainability (Masdar, 2022^[103]). This initiative is managed by Masdar with support from the Abu Dhabi Department of Energy and a range of additional public and private sector partners. The initiative seeks to prepare the next generation of entrepreneurs and to provide learning experiences to up to 1 million youth by 2030 with a strong focus on sustainability. The initiative includes a range of training programmes for university and high school students, mentors, challenges, online learning portals and research on the attitudes of young people towards climate change. These efforts need to be scaled-up to achieve the broader impact needed to achieve overall climate change objectives.

There also appears to be untapped potential for commercialising research undertaken in specialised universities and research centres in Abu Dhabi. The Innovation Labs Program, which is operated by the Israel Innovation Authority, could offer a model of how this research capacity can be used by green entrepreneurs to address challenges faced by industry (see Box 6.4).

Another significant policy gap is that there are no dedicated public funding mechanisms to support early-stage green entrepreneurs. Green start-ups typically face higher risk than other technology start-ups due to greater levels of regulatory, policy and marketplace uncertainty. Therefore, many OECD countries have established dedicated funding instruments to support green start-ups such as the system of grants and investments made by Sustainable Development Technology Canada and the Business Development Bank of Canada (OECD, 2022^[104]).

Box 6.4. Innovation Labs Program, Israel

Description of the approach

The Innovation Labs Program offered by the Israel Innovation Authority (IIA) seeks to facilitate collaboration between industry and entrepreneurs. The labs aim to assist early-stage entrepreneurs who would benefit from access to technological infrastructures and expertise from large corporations, researchers, regulators and the financial sector. They seek to attract start-ups with global potential and provide assistance through a model of open innovation.

Start-ups and corporations that are selected for the innovation labs can participate in collaborations with research institutions and other companies in the industry. The IIA will fund 33% of the costs to establish the necessary technological infrastructure up to ILS 4 million, as well as 50% of the lab's ongoing operating expenditure up to ILS 500 000 per year. In addition, entrepreneurs can receive a grant of up to 85% of their project's approved budget up to ILS 1 million for their first year and 50% for the second year.

Innovation labs are operated by leading corporations within a particular industry, which provide entrepreneurs and start-ups with access to technological infrastructure and market expertise. An example of an innovation lab that supports green entrepreneurs in Israel is the Environmental Sustainability Innovation Lab (ESIL), located in Haifa. It aims to accelerate the growth of start-ups that use commercially viable technological solutions that support the green transition, through the provision of financial assistance, technological infrastructure and marketing expertise. The lab was founded by the IIA and is operated with the support of three large companies: EDF Renewables, Bazan Group and Johnson Matthey (ESIL, 2022^[105]).

Success factors

The main success factor for this programme is that it brings together actors from all sectors to work collaboratively on projects that simultaneously address climate change challenges and obstacles faced by industry.

Relevance to Abu Dhabi

This model shows how the research capacity in renewable energy and climate technologies could be commercialised by entrepreneurs in Abu Dhabi. The approach could also help to align research activities with the needs of industry.

Source: (Israel Innovation Authority, 2022^[106]; OECD, 2022^[104])

Promoting greater energy efficiency can reduce costs faced by MSMEs and start-ups

Energy is a significant source of expenditure for MSMEs and start-ups in Abu Dhabi. This is due principally to the amount of energy consumed rather than the unit cost of energy, which, due to large government subsidies, is significantly cheaper in Abu Dhabi than elsewhere. While data are not available at the Abu Dhabi level, the UAE economy has a high energy intensity. In 2019, the UAE's energy supply per capita was 46% higher than the average across OECD countries. This indicates that there is considerable scope to reduce energy consumption in Abu Dhabi, which would alleviate the cost pressures faced by MSMEs and start-ups.

Energy efficiency measures can deliver reduced costs for businesses as well as greater alignment with the demands and expectations of their customers. However, MSMEs often face numerous barriers that

inhibit them from realising these benefits. One such barrier is a lack of information and awareness of opportunities, regulations, and available support options (OECD, 2021^[107]). Abu Dhabi Energy Services (ADES), which is a subsidiary of the Abu Dhabi National Energy Company, works with building owners and Energy Services Companies (ESCOs) to identify and implement energy savings technologies. The cost of these investments is charged back to building owners through their utility bills over time. This initiative has the potential to be of particular benefit to MSMEs and start-ups, many of whom do not have the resources necessary to fund large capital investments upfront. However, it is reported that ESCOs principally work with government entities and large companies, since it is difficult to achieve the necessary economies of scale when working on smaller projects. To address this issue, the Energy Efficiency and Climate Protection Networks established by the German Energy Agency could be a model to consider.

Another important actor in this area is the Abu Dhabi Distribution Company (ADDC), a subsidiary of the Abu Dhabi National Energy Company, which owns and operates Abu Dhabi's electricity network. ADCC sets electricity tariffs for different users and implements schemes and incentives surrounding businesses' electricity consumption. These electricity tariffs are heavily subsidised in Abu Dhabi, even compared to other emirates such as Dubai. This discourages energy efficiency investments. In partnership with the Al Ain Distribution Company (AADC) and the Industrial Development Bureau of ADDED, ADDC has launched the Electricity Tariff Incentive programme. This provides discounted electricity to businesses in the manufacturing sector that fulfil a range of criteria relating to their contribution to the Abu Dhabi economy, their productivity and their energy management approach. This considers businesses' energy and environmental certifications, policies, targets or investments. An objective of this initiative is to help companies in the manufacturing sector to become more energy efficient. However, an issue with the design of the current scheme is that, by reducing the cost of electricity for qualifying businesses, the financial incentives to further lower energy consumption may be diminished.

A challenge with promoting energy efficiency investments is that building owners do not always have a financial incentive to fund these measures when they are not liable for paying energy bills for the premises. Energy performance certificates are a way of addressing this issue, by providing prospective tenants with information on the energy efficiency and likely energy costs of operating in a certain building. At present, there do not appear to be requirements for building owners in Abu Dhabi to obtain such energy performance certificates, which may disincentivise energy efficiency enhancing investments.

Regulations need to keep pace with new forms of entrepreneurship

As economies and labour markets evolve, new forms of entrepreneurship are emerging along with new routes into business creation. These include hybrid entrepreneurship, where self-employment or business ownership is combined with employment and/or education, as well as new forms of digital entrepreneurship. Digital entrepreneurship has accelerated rapidly over the past three years due to COVID-19 pandemic. The UAE has established several projects such as the UAE Centennial Plan to not only embrace these structural economic changes, but also to be an international leader in its ability to attract global talent and investors (UAE, 2022^[108]). To accomplish this objective, Abu Dhabi and the other emirates will need to continue to modernise their business licencing system and develop new forms of entrepreneurship support. More could also be done to create additional pathways into entrepreneurship, for instance by offering an entrepreneurship leave for employees.

Initial steps have been taken through the creation of new types of business licences. These new licences include the Freelancer Licence, which covers 48 types of business activities and allows for some business activities to take place in the home. A key characteristic of this licence is that professionals can apply without a company sponsor (Department of Economic Development, 2022^[109]). It is expected that the Freelancer Licence will allow more professionals to work, create more opportunities for women and increase the potential for part-time freelance activities.

Similarly, a new virtual business licence was launched in October 2021 (Abu Dhabi Government Media Office, 2021^[110]). This is a digital business licence for investors and companies from outside of the UAE and does not require a physical residency in the country. A number of OECD countries have launched or considered launching a digital nomad visa for employees and entrepreneurs. Countries that have launched these schemes, such as Italy, note that they can deliver the twin benefits of generating economic activity as well as substantial revenue from the license fees. However, there is no evidence on the impact of such schemes and many argue that the costs of administering such visas and licences are unjustifiably high. Abu Dhabi should carefully monitor those receiving virtual business licences and measure the impacts of their businesses' activities.

There have also been efforts to make it easier for foreign nationals to come to Abu Dhabi to work as entrepreneurs without the need for national sponsorship through the Golden Visa scheme, which is managed by the Abu Dhabi Resident's Office (Abu Dhabi Department of Economic Development, 2022^[111]). These efforts include increasing the number of eligibility categories and strengthening support for newcomers. While this scheme appears to be effective at attracting entrepreneurs, it is unclear whether they stay beyond their initial visa period.

The benefit of these new types of business licences is that they provide legal status for a greater range of economic activities. This provides greater freedom to entrepreneurs in how they organise and manage their business activities. This greater flexibility also creates opportunities for more people to explore entrepreneurship, including people from groups that are under-represented such as women. However, there are also downsides to increasing the number of different types of business licences, namely that it can be more difficult for entrepreneurs to identify the most appropriate licence for their business. The ADDED has established online help centres to support new entrepreneurs in registering a business but the number of licences remains relatively high. This challenge is amplified by the need to secure a licence in each emirate that a business operates in. The alternative approach of expanding the types of activities covered by a licence should be considered. In parallel, there is a need to also update the entrepreneurship support system to account for these new forms of work. This includes embedding modules on new forms of entrepreneurship within entrepreneurship education programmes so that students are aware of the various forms of business activity that are possible. Similarly, business support providers could go further in making their offers more flexible to the needs of different types of businesses, potentially including new offers for home-based businesses, virtual businesses and businesses operated by people abroad.

Recommendations

Box 6.5. Key policy recommendations

Boosting youth entrepreneurship

- Establish an Abu Dhabi youth entrepreneurship network to act as a hub for youth entrepreneurship support.
- Establish a youth entrepreneurship task force to co-ordinate support for young entrepreneurs, including entrepreneurship education.
- Expand support for youth entrepreneurs, including broadening the range of dedicated financial instruments offered to young entrepreneurs and creating youth entrepreneurship networks.
- Develop entrepreneurship programmes in TVET centres and expand entrepreneurship education in high schools.

- Go further in engaging youth in the design and development of youth entrepreneurship initiatives.

Empowering women's entrepreneurship

- Develop a women's entrepreneurship strategy to provide a policy framework for dedicated initiatives.
- Invest in building a women's entrepreneurship ecosystem by providing more dedicated resources to women's entrepreneurship networks and organisations.
- Scale up women's entrepreneurship initiatives that can demonstrate a positive impact.
- Create a dedicated fund for high-potential women entrepreneurs.
- Invest in developing gender-disaggregated data on self-employment and entrepreneurship.

Enabling green start-ups

- Support green entrepreneurship with mechanisms that foster collaboration between entrepreneurs, researchers, industry and government.
- Embed green entrepreneurship modules in entrepreneurship programmes in higher education so that students and young researchers learn about how to commercialise research related to climate change.
- Create dedicated financial measures to support green entrepreneurship.
- Create regulatory sandboxes for testing innovative green technologies.

Support MSMEs and start-ups in reducing energy consumption

- Create energy efficiency networks to reduce the burden of energy costs by facilitating the sharing of knowledge, experience and resources between groups of MSMEs.
- Develop digital diagnostic tools for MSMEs and start-ups to assess how they can improve their energy efficiency.
- Create a grant scheme for commercial building owners to invest in improving energy efficiency.
- Create incentives for energy efficiency measures through reforms to electricity tariffs.

Allowing new forms of entrepreneurship to flourish

- Train start-up and business support organisations on new forms of entrepreneurship and how to support these activities.
- Create a new pathway to business creation through entrepreneurship leave.
- Establish a tracking and reporting system for the different types of business licenses granted.
- Conduct an impact evaluation on the business licenses that permit new forms of business activity (e.g. freelancer license, home-based business license, virtual business license).
- Limit the creation of new types of business licences in favour of expanding the criteria of existing business licences.

Conclusions

The key findings from each of the six pillars of this policy and regulation canvas assessment are summarised below:

- **There is a chronic shortage of financing opportunities for MSMEs and start-ups in Abu Dhabi**, particularly for foreign-owned companies based in Abu Dhabi. Small and young businesses face major difficulties in opening accounts and obtaining loans from commercial banks, while the suspension of lending activities from the Khalifa Fund for Enterprise Development has severely restricted funding opportunities from the public sector. Actions must be taken to increase the support provided by commercial banks and strengthen other financing options from both the public and private sector.
- **More can be done to raise awareness of the training programmes that are in place to develop entrepreneurial and workforce capabilities** in Abu Dhabi. The promotion of entrepreneurial networks, mentoring and role models could help build entrepreneurial capabilities and instil a more entrepreneurial culture. Policy also needs to address the difficulties that MSMEs have in attracting skilled workers in competition with large companies and the public sector.
- **Public procurement, international markets and large companies' supply chains are sources of untapped potential for MSMEs and start-ups** in Abu Dhabi. Important first steps have been taken to make public procurement more accessible to smaller businesses, although these measures need to be reinforced by training and support to contracting authorities and MSMEs as well as further reforms to the procurement system. Access to international markets would be bolstered by more tailored training for exporting MSMEs and start-ups, while there is also a shortage of programmes to foster collaborations between local businesses and the array of large multinational companies that Abu Dhabi has successfully attracted.
- **Abu Dhabi has implemented a series of reforms that have significantly improved the business environment** in recent years, including major reductions in business license fees and a simplification of the business licensing process. However, the regulatory burden remains a significant issue, and continued progress is needed to further reduce fees and compliance costs, including through assessments of the impacts of new and existing regulations on MSMEs.
- **Strengthening innovation and digitalisation among MSMEs and start-ups in Abu Dhabi is key to boosting their productivity**. Supporting connections between businesses and research institutions, promoting open innovation linkages between large enterprises and start-ups, and developing sector-specific incubation and acceleration programmes are all measures that can stimulate innovation among high-tech businesses. It is also important to raise the level of technological adoption and digitalisation within the broader population of MSMEs and start-ups. This can be achieved through the creation of digital hubs, digital diagnostic tools and schemes that provide financial assistance to businesses that invest in productivity-enhancing technologies.
- **Efforts need to be accelerated for stimulating youth, female and green entrepreneurship and facilitating new forms of entrepreneurship**. There appears to be great untapped entrepreneurial potential among youth in Abu Dhabi, who indicate a high interest in

entrepreneurship, innovation and addressing societal challenges. Support for young entrepreneurs increased over the past decade but many initiatives stopped over the past two years and there are few dedicated financial instruments available to young entrepreneurs. Similarly, women entrepreneurs are under-represented among business owners and unlocking their entrepreneurial potential can help drive economic diversification and innovation, because early-stage women entrepreneurs are highly educated and more likely than men to report introducing innovation. Investments have been made in supporting green entrepreneurs but more financial support is needed, particularly for seed and series A funding. More support is also needed for emerging forms of entrepreneurship including hybrid entrepreneurship and digital entrepreneurship, for example through new types of business licenses and adapting existing entrepreneurship support programmes.

An additional issue that cuts across the six pillars of the assessment is the lack of available data on the performance and outcomes of different policies and programmes. This inhibits reliable and high-quality evaluation of the impacts of policies, which is needed in order to direct resources towards the most effective policy measures and justify the use of public resources (OECD, 2023^[112]). It is recommended that this is addressed by establishing a unit within the ADDED's SMEs Sector with responsibility for the monitoring and evaluation of SME and entrepreneurship policies. The activities of this unit should include the specification of key performance indicators for policies and programmes, the design of data collection strategies and the development of an evaluation framework for SME and entrepreneurship policies in Abu Dhabi.

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